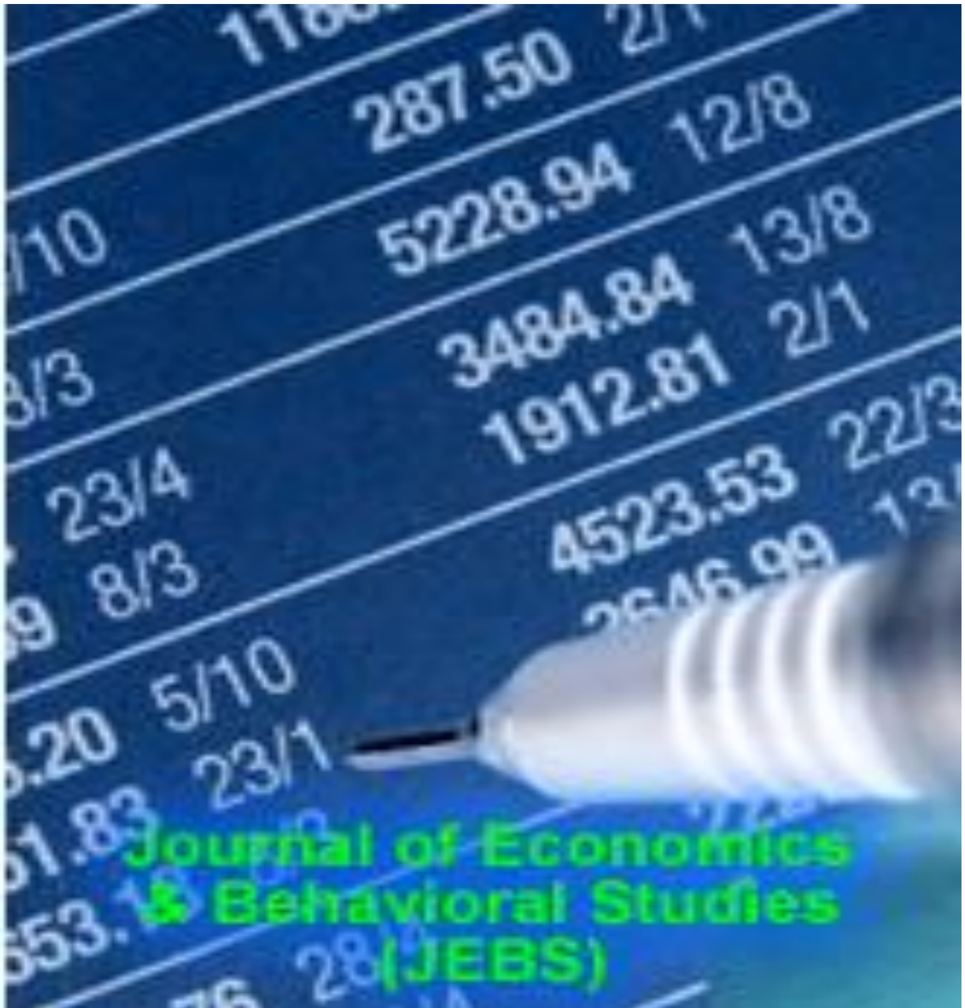

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Editorial

Journal of Economics and Behavioral Studies (JEBS) provides distinct avenue for quality research in the ever-changing fields of economics & behavioral studies and related disciplines. Research work submitted for publication consideration should not merely limited to conceptualization of economics and behavioral developments but comprise interdisciplinary and multi-facet approaches to economics and behavioral theories and practices as well as general transformations in the fields. Scope of the JEBS includes: subjects of managerial economics, financial economics, development economics, finance, economics, financial psychology, strategic management, organizational behavior, human behavior, marketing, human resource management and behavioral finance. Author(s) should declare that work submitted to the journal is original, not under consideration for publication by another journal, and that all listed authors approve its submission to JEBS. Author (s) can submit: Research Paper, Conceptual Paper, Case Studies and Book Review. Journal received research submission related to all aspects of major themes and tracks. All submitted papers were first assessed by the editorial team for relevance and originality of the work and blindly peer-reviewed by the external reviewers depending on the subject matter of the paper. After the rigorous peer-review process, the submitted papers were selected based on originality, significance, and clarity of the purpose. The current issue of JEBS comprises of papers of scholars from South Africa, Nigeria, Zimbabwe and USA. Management of work-stress, factors affecting the perceptions of small-scale farmers, impact of labour force reduction on financial performance, trade liberalization and performance of the textile industry, basic business skills development, effect of work-life balance on job satisfaction, work-family stressors and work-family satisfaction, perceptions of generations regarding managerial competencies, incentivized time preferences & financial literacy, time-variation in asset correlations, website quality model & loyalty of customers, national culture & development, employment relations, service quality & professionalism, dynamic capabilities as determinants of supply chain performance, organisational factors influencing e-business adoption, causes of poor service delivery & outsourcing to improve services, talent management predictors that adversely affect job satisfaction, impact of skilled labor on output growth, moderating role of job satisfaction on workplace absenteeism, impact of fiscal policy on economic growth, rural and urban tourism experiences, challenge's impeding regional integration were some of the major practices and concepts examined in these studies. Current issue will therefore be a unique offer where scholars will be able to appreciate the latest results in their field of expertise, and to acquire additional knowledge in other relevant fields.

Prof. Sisira R N Colombage, Ph. D.
Editor In Chief

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PAPERS

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Role of Psychological Capital in Effective Management of Work-stress among Tertiary Institutions' Staff in Nigeria

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Abstract: Work-stress is synonymous to occupational stress. It is a common form of strain that is usually experienced by employees, in the course of performing their official duties and responsibilities. In the contemporary world of work, including the Nigerian work environment, work-stress is identified as a 'corporate epidemic'. Its symptoms are mostly observed physically, psychologically and socially in the lives of affected employees, while the negative effect of occupational stress is specifically, measured on employee performance and organizational effectiveness. It is for the above-described nature and effect of work-stress that this study examined the role of psychological capital in effective management of work-stress among the staff of tertiary institutions in Nigeria. It adopted the explanatory survey research design, purposive and convenience sampling techniques in sampling a total number of 202 (male = 116, 57.4% and female = 86, 42.6%) academic and administrative staff of five (5) public and private tertiary institutions, in the western region of Nigeria, who served as participants in the study. All participants were Nigerians English speakers. Research participation eligibility was strictly based on the current enlistment of employees on the payroll of the institutions as at the time of the study. A structured, validated questionnaire was used as an instrument. Hypotheses were stated and analyzed based on the data collected. Results revealed that the four psychological capital states jointly influenced work-stress management $F(4,197) = 8.375$; $R^2= 0.128$; $p<.05$; resilience ($\beta=0.145$; $t=1.983$; $p<.05$) and optimism ($\beta=0.294$; $t=3.756$; $p<.05$) independently influenced work-stress management; optimism ($r=.224$, $P(.001)<.01$), resilience ($r=.350$, $P(.000)<.01$) and hope ($r=.247, P(.000)<.01$) significantly correlated with work-stress management. The study concluded that psychological capital is one of the important factors that effectively helps in managing work-stress, and suggested that the management of institutions or organizations should sensitize employees on the importance of psychological capital in effective management of work-stress through seminars, trainings and conferences.

Keywords: *Work-stress, psychological capital, management, tertiary institution, staff*

1. Introduction

In the recent time, work-related stress has stimulated scientific research interest in Africa, because among life situations, the work or occupation stands out as an important source of stress, perhaps due to the amount of time spent at the work setting (Ekienabor, 2016). Hence, it is an unavoidable consequence of the modern life. Work-stress is a condition of strain that has a direct bearing on emotions, thought process and physical conditions of a person (Beheshtifar & Nazarian, 2013). For two reasons, the study investigates the role of psychological capital in effective management of work-stress. First, because work-stress is a negative phenomenon that is associated with professions, which requires a positive state of the minds of employees, to effectively cope with and perform desirably at work. Secondly, the world of work is becoming more complex every day giving to diversification, innovation, globalization, customer satisfaction and legal issues arising continually. These among others make it imperative for this study, to see to a strategic psychological intervention, which could effectively help in managing work-related stress. Scientists have linked poor job satisfaction and challenge retaining employees in current employment to high levels of work-stress (Laschinger, 2011). The World Health Organization has also reported work-stress to be a global epidemic (WHO, 2010). Obviously, the consequence of an increasingly strenuous work environment is evident in the Nigerian Academic Sector, as cases of psychological breakdown and relapse remain elusive among Nigerian employees (Adetayo, Ajani & Olabisi, 2014; Arogundade & Lawal, 2016). Yet, extensive research over the years has focused more on identifying the stressors (Paillé, 2011; Brynien & Igoe, 2016) but little scientific investigation has been conducted in the area of management of work-stress.

In view of the above, the aims of the present study are twofold. The primary goal is to empirically examine the role of psychological capital (comprises of hope, self-efficacy, resilience and optimism) as a composite variable in effective management of work-stress. The secondary goal on the hand is to enlighten the general public about the importance of psychological capital in the management of stressful situations. In other words, the study's objective is to specifically investigate if hope, self-efficacy, resilience and optimism will independently and jointly influence work-stress management among employees of academic institutions in Nigeria. The study is significantly important to diverse areas of human endeavors. It will, therefore, benefit humanity in the following areas:

- The study will further promote the capacity of the psychology of positivity in solving some existing human problems, through the means of psychological capital, which is a potent instrument of the positivists, to help the people out of their behavioral challenges most especially, in the corporate sector.
- Occupation stress is encompassing in effect and nature. It therefore, cannot be effectively managed or tackled with only the chemotherapeutic approach. It is for this reason that the present study investigates the effectiveness of psychotherapy (psychological capital) in managing work-stress. Hence, positive findings in this study will yield practical suggestions by recommending psychological capital as a form of psychological coping mechanism to employee stress.
- Outcomes of the study will definitely evoke more attention of scholars into this innovative area of investigation.
- Consequently, the study will increase the volume of literature on work-stress.

Defining Terms

Work-Stress Management*:* Work-stress management is defined in the present study as a strategic psychological intervention for coping with the perceived negative work conditions called stressors, which have negative mental and physical health-related consequences. Research shows that organizational and personal resources may facilitate employees' adjustment to the professional work environment (Laschinger, Grau, Finegan, & Wilk, 2011).

Psychological Capital: Psychological capital is a composite variable, which comprises four basic variables to be specific, optimism, resiliency, hope and self-efficacy. It refers to a person's positive mental state of advancement that is characterized by: (1) having confidence (self-efficacy) to require on and invest important push to prevail at testing undertakings, (2) making an encouraging ascription (optimism) about succeeding now and later on,(3) driving forward toward objectives (hope) and when fundamental diverting ways to objectives with a specific end goal to succeed and (4) at the point when assailed by issues and affliction, maintaining and ricocheting back and even past (resiliency) to accomplish achievement. Although, the over four componential variables of psychological capital have distinctive hypothetical points of view and definitions, taken together these four has been hypothetically created and generally tried as a state like positive centre develop (Avey, Luthans & Jensen, 2009).

2. Literature Review

Research on the effect of psychological capital on stress is very few. However, in an empirical investigation of psychological resources and strategies to cope with work-stress among 554 employees of different organizations in Israel, Rabenu and Yaniv (2017) sampled opinions of the study participants using a structured questionnaire and analyzed the collected data accordingly with the Structural Equation Modelling. The outcome of the study shows that psychological resources (self-efficacy, resilience, hope and optimism) positively related to coping with change and by acceptance and negatively related to withdrawal. Similarly, Hee-Yun, Hyun-Ju, Yoonhyung and JinHee (2017) conducted a cross-sectional descriptive survey on the mediating role of psychological capital in the management of occupational stress among 457 nurses, in four veteran hospitals, South Korea. A structured questionnaire was used as a data collection instrument in the study, and the data gathered were analyzed using regression analysis, whose results indicate that psychological capital played a partial mediating role in the management of occupational stress. Similarly, Karmakar (2016) examined the concept of psychological capital through the following query: Does psychological capital promote the use of functional and dysfunctional coping strategy? According to the findings of Karmakar (2016)'s study, the senior and junior executives' employees vary with respect to their

Coping strategy. The study reported further that there are some significant differences between senior and junior employees with respect to their positive psychological capital. Positive psychological capital has a significant positive correlation with the functional coping strategy (Karmakar, 2016). The study concludes that training and developing positive psychological capital among employees help them to deal with stressful situation assertively rather than avoiding it in order to promote positive attitude at the workplace.

Liu, Ren and Zhao (2016) conducted a related study on the connection between work-related stress and wellness among the junior administrative staff in universities from the perspective of social network (otherwise known as social capital and being the closely related to psychological capital). The study found that occupational stress has a noteworthy negative effect on their work-related well-being. However Social network produces a certain negative effect on occupational stress but a positive effect on occupational well-being (Liu, Ren & Zhao, 2016). The conclusions got in this investigation give a reference for the junior administrative staff in colleges to adequately assuage the work-related stress and upgrade the professional well-being (Liu, Ren & Zhao, 2016). Furthermore, Chou, Lee, & Wu, (2016) found in their study of the relationship between resilience, emotion and work stress that there is a significant relationship between resilience and work stress. Based on the research findings, it is suggested that teachers should engage in more activities to raise resilience level and lower work stress. Kesari (2012) investigated the relationship between occupational-stress and psychological-capital among teachers in Durban, Kwazulu Natal Region of South Africa. The study found that there is a significant relationship between work-stress and psychological capital. Kesari (2012) reports further that psychological capital significantly stimulates positive practices in hectic occupational environments. The study also reports that psychological capital is a predictor of pleasure and meaning amongst teachers despite their stressful occupational field.

In addition, Kumar and Deo (2011) investigated work life of college staff and discovered that there was a significant difference in the perception of male and female participants. Kumar and Deo (2011)'s findings further uncovered that junior university staff experienced fundamentally more weight on the vast majority of the measurements of strain in contrast to the senior staff. However, female staff experienced more roles burden and inter-role distance stress as compared to their male colleagues. Based on the above literature, researchers stated the following hypotheses:

- Self-efficacy, resilience, optimism and hope will jointly and independently influence work-stress management.
- Psychological capital will significantly correlate with work-stress management.
- Female respondents will score significantly higher on work-stress management than their male counterparts.

3. Methodology

Research Design: The study adopted the explanatory survey research design because it measured variables that are not directly observable, for which a survey was considered appropriate, and none of the variables was actively manipulated. The independent variable was psychological capital (comprises of self-efficacy, resilience, optimism and hope) while work-stress management was the dependent variable.

Participants and Procedure: A total number of two hundred and two (202) male=116 (57.4%) and female=86 (42.6%) academic and administrative staff of the below mentioned tertiary institutions participated in the study. All participants were Nigerians English speakers and were all employees of five (5) academic institutions (University of Ibadan, Lead City University, The Polytechnic, Ibadan, Federal College of Education (Special) and Emmanuel Alayande College of Education) in Nigeria. Participation eligible for the respondents was based on enlistment of employees on the payroll of the institutions. Researchers officially sought and obtained approvals and permissions of the management of the institutions through the registrars, before the commencement of the fieldwork. Furthermore, participants were approached individually in their various offices and their consents were sought through an informed consent form. This was accompanied by a brief explanation by the researchers, about the importance of the study. Hence, all the participants participated voluntarily. Moreover, the identity of participants was confidentially managed, because researchers instructed participants not to divulge their names or staff numbers in the course of the data collection. In the same vein, the Convenience and Purposive sampling techniques were adopted in sampling the participants. A questionnaire was given to each of the participants to fill at their convenience. Some took the form home, filled and submitted to the researchers when visited again for a follow-up while others filled the questionnaire immediately in their offices and equally submitted directly to researchers. The process of administration and retrieval of questionnaire lasted for five (5) weeks. Among the two hundred and thirteen (217) questionnaire forms that were distributed, two hundred and two were perfectly completed and retrieved respectively. The remaining fifteen questionnaires were excluded on account of missing data or information and lost. Hence, a total of two hundred (202) completely filled questionnaires were subjected to data analysis.

Participant Characteristics: Statistics revealed that sixty-five (65) (32.2%) of the participants were academics while the other 137 (67.8%) were non-academic staff. One hundred and seventy-nine (179) (88.6%) were permanent staff while the remaining twenty-three (23) (11.4%) were temporary (contract) staff. Participants' ages ranged from 20 years – 70 years: fifty-nine (59) (29.2%) were within 20-30 years, sixty-three (63) (31.2%) were within 31-40 years, sixty-eight (68) (33.7%) were within 41-50 years, eleven (11) (5.4%) were within 51-60 years and one (1) (0.5%) was above 60 years old.

Measurements: A26-item modified version of Luthans, Avolio, Avey, and Norman (2007) psychological capital questionnaire by McGee, (2011) was used in measuring psychological capital. The construct consists of self-efficacy, hope-state, optimism-state and resilience-state sub-scales, with a 5-point response format ranging from 1/ (Strongly disagree) to 5/ (Strongly agree). Participants who indicated strongly agreed to a positive statement scored 5 while those who indicated strongly agreed to negative statements scored 1. Hence, a high total score represents a high level of psychological capital while a low total score represents a low level of psychological capital. McGee (2011) reports the following Cronbach Alpha coefficients for the scale: self-efficacy =.91, hope=.86, optimism=.75 resilience =.76 and .93 for the whole scale while this study reports Cronbach Alpha coefficients of (self-efficacy 0.82, hope 0.81, optimism 0.85 resilience State 0.68) .79. Similarly, a 4-item scale of occupational-stress management that was developed by Hansen, (1997) was used in measuring work-stress management. The response format of the scale consists of a 5-point Likert-type scale ranging from 1/ (strongly disagree) to 5/ (strongly agree). Participants who indicated strongly agreed to a positive statement scored 5 while those who indicated strongly agreed to negative statements scored 1. Hence, a high total score represents a high level of work-stress management while a low total score represents a low level of work-stress management. The author reported alpha-coefficient of 0.75 for the scale while the present study reports a Cronbach Alpha coefficient of .79.

Statistical Analysis: The two hundred and two (202) screened questionnaires were analyzed using the Statistical Package for Social Sciences (SPSS) software. Multiple regression analysis was used in analyzing hypothesis one. Pearson correlation analysis was used for hypothesis two while hypothesis three was analyzed using T-test of independent groups.

4. Results

Hypothesis one, which stated that self-efficacy, resilience, optimism and hope would jointly and independently influence work-stress management was analyzed using Multiple regression analysis. The results are presented in table 1 and 2 below:

Table 1: Multiple Regression Analysis Showing the Joint influence of Self-efficacy, Resilience, Optimism and Hope on Work-Stress Management

R	**R Square**			**Adjusted R Square**	**Std. Error of the Estimate**	
.381	.145			.128	2.0804	
ANOVA						
Model	Sum of Squares	DF	Mean Square	F	Sig.	Remark
Regression	144.992	4	36.248	8.375	.000	Sig.
Residual	852.657	197	4.328			
Total	997.649	201				

Results in table 1 above shows that the four psychological capital sub-constructs jointly influenced work-stress management. The table also shows a coefficient of multiple correlation (R = .381 and a multiple adjusted R^2 of .128). This means that 12.8% of the occurrence of work-stress management is accounted for by the four psychological states when considered as a whole psychological capital. Furthermore, the other possible variables, which were not included in the study may have accounted for the remaining 87.2% variance. The significance of the composite contribution was tested at $P < .05$. The table also shows that the analysis of variance for the regression yielded F-ratio of 8.375 (significant at 0.05 level). This implies that the joint contribution of self-efficacy, resilience, optimism and hope to the work-stress management is significant.

Table 2: Multiple Regression Analysis Showing the Relative Contribution of the Self-efficacy, Resilience, Optimism and Hope on Work-Stress Management

Model	Unstandardized Coefficient		Stand. Coefficient	T	Sig.	Remark
	B	Std. Error	Beta Contribution			
(Constant)	8.608	1.321		6.516	.000	Sig.
Self-efficacy	-3.032E-02	.043	-.051	-.708	.480	Not sig.
Resilience	9.244E-02	.047	.145	1.983	.049	Sig.
Optimism	.173	.046	.294	3.756	.000	Sig.
Hope	3.644E-02	.048	.060	.759	.449	Not sig.

Table 2 above reveals the independent contributions of the four psychological states to work-stress management, expressed as beta weights, viz: self-efficacy (β = -.051, P >.05), resilience (β = .145, P <.05), optimism (β = .294, P <.05) and hope (β = .060, P >.05) respectively. Hence, while resilience and optimism significantly and independently influenced work stress management in the study, self-efficacy and hope did not. Based on the results in tables 1 and 2 above and the interpretations, hypothesis one is partially confirmed. Hypothesis two, which stated that psychological capital will significantly correlate with work-stress management was analyzed using Pearson Correlation Analysis. The results are presented in table 3 below:

Table 3: Pearson Correlation Analysis Showing the Relationship between Work-Stress Management, Self-Efficacy, Optimism, Resilience and Hope

	Work-stress management	Self-efficacy	Optimism	Resilience	Hope	Mean	S.D
Work-stress Management	1					14.62	2.23
Self-efficacy	.095	1				24.00	3.75
Optimism	.224**	.349**	1			24.57	3.49
Resilience	.350**	.271**	.263**	1		21.35	3.78
Hope	.247**	.268**	.327**	.520**	1	21.03	3.69

** Sig. at .01 level

From table 3 above, results show that there is a positive significant relationship between work-stress management and optimism (r = .224, P (.001) < .01), resilience (r=.350, P (.000) <.01) and hope (r=.247, P (.000) <.01). But there is no significant relationship between work-stress management and self-efficacy (r=.095, P (.177)>.05). This implies that optimism, resilience and hope are significantly relevant in the management of work-stress. Based on the results and interpretations, hypothesis two is partially accepted. Hypothesis three, which stated that female respondents will score significantly higher on work-stress management than their male counterparts were analyzed using T-test of Independent Groups. The results are presented in table 4 below:

Table 4: T-test of Independent Groups Showing the Difference in the means (x) of Male and Female Respondents on Work-Stress Management

Work-stress	N	Mean	Std. Dev.	Crit-t	Cal-t.	DF	P
Male	116	14.3448	2.1553				
				1.96	2.046	200	.042
Female	86	14.9884	2.2829				

Table 4 above shows that there is a significant difference in the work stress management of male and female respondents (Crit-t = 1.96, Cal.t = 2.046, DF = 200, P < .05 level of significance). Hence, female (x=15.00) respondents scored significantly higher on work-stress management than their male (x=14.35) counterparts in the study. The hypothesis is therefore accepted.

Discussion: The main purpose of this study was to examine the role of psychological capital in effective management of work-stress. Based on the outcomes of the statistical analysis, results showed that the four elements of psychological capital (self-efficacy, resilience, optimism and hope) jointly influenced work-stress management among the staff of tertiary institutions in Nigeria. This implies that psychological capital as a concept of positivism, is a great asset and weapon that can help mankind to cope with and effectively manage stressful situations most especially, the stress that employees encounter at work. The results further explain that even though human activities are stressful generally, yet achievement of individuals' or organization's goals requires a person to unlock and develop the naturally endowed potentials in him, so as to constantly prevail over constraints and ensure of enduring psychosocial well-being. Furthermore, the results revealed that among the four components of psychological capital, resilience, optimism and hope are the most significantly effective and relevant in the management of work-related stress while self-efficacy is not. This implies that the state of self-confidence alone is not reliable, hence, it can collapse suddenly. Rather, individuals' resistance, perception or thought and faith levels count a lot when one is faced with challenges and strains. In other words, the quantity or level of such positive state-like potentials, which is possessed by a person, determines how able he or she will cope with and manage stressful situations at work effectively. It also explains that an employee who has a positive view and proactive approaches to life will easily cope with the dynamic environment of work.

The above results are supported with the findings of Rabenu and Yaniv (2017)'s study, which that psychological resources (self-efficacy, resilience, hope and optimism) positively related to coping by change and by acceptance and negatively related to withdrawal. Similarly, Hee-Yun, Hyun-Ju, Yoonhyung and JinHee (2017)'s study of the mediating role of psychological capital in the management of occupational stress among 457 nurses, in four veteran hospitals, South Korea shows that psychological capital played a partial mediating role in the management of occupational stress. The results further revealed that there is a significant difference in the work-stress management of male and female respondents. Hence, female respondents scored significantly higher on work-stress management than their male counterparts in the study. A critical thought over this result informs us that personal factors such as differences in the physical and biochemical compositions as well as the social responsibilities between male and female employees could have accounted for the variations in the management of work-related stress between the two genders. When an employee perpetually encounters physically and cognitively demanding situations at work, with the pressure to deliver within a limited time frame, specified qualities and budget, such employees will continue to strive with his or her given targets, without minding the fact that, there is a limit to the amount of the physical resources, which the nervous system can supply at a time. Hence, having achieved a given target today, for example, the next day another target is given and the trend continues throughout the week or month, it will result to accumulated stress. The work-stress, in turn, will stimulate some sense organ(s), from where adjacent sensory neurons are stimulated. The resultant neural impulse is carried to the brain through the appropriate sensory pathway(s). As the message gets to the hypothalamus (a brain structure and an endocrine gland), it causes the hypothalamus to release suitable releasing factors into the bloodstream. The hypothalamus would secret such releasing factors as the thyrotrophic-releasing factor and the corticotropic-releasing factor. These would be carried in the blood until it gets to the anterior pituitary gland, where it will cause the release of a thyrotrophic hormone (TTH) and adrenocorticotrophic hormone (ACTH). These two hormones will individually stimulate their particular target organs (thyroid and adrenal cortex, respectively) leading to, among other results, increased energy production in the body so that the individual is more ready to cope with the demanding situation.

Moreover, if the work pressures continue beyond the normal, which the body can cope with, then external supplementary resources are required for an individual to sustain his or her focus. However, when the body system reaches its threshold, it becomes weak and unresponsive. At this point, fatigue will set in and the affected individuals will begin to experience a negative related psychological state of burnout. The main point here is that, the capacity of the hypothalamus differs across genders. Male individuals are more aggressive in managing stressful situations. They may not be patient enough to fully exploit their natural and normal behavioral coping mechanisms before resulting to external alternatives, which most times do not effectively work, as against their females' counterpart approaches inform of relation therapy that keeps hope alive, sustains resistance and positive thoughts over situations. The present finding however, contrasts the findings from the study of Kumar and Deo (2011), which investigated work life of college staff and discovered that there was a significant difference in the perception of male and female participants. Kumar and Deo (2011)'s findings further revealed that junior college staff experienced significantly more stress on most of the dimensions of stress in comparison to the senior staff. However, female staff experienced more roles overload and inter-role distance stress as compared to their male counterparts.

5. Conclusion

In conclusion, evidence from the findings and discussions above showed that an effective management of work-stress partly depends on the possession of psychological capital. The study therefore, submits the following conclusions that:

- The ability of employees to effectively manage work-stress is a consequence of the collective influence of self-efficacy, hope, optimism and resilience.
- The amount or levels of hope, optimism and resilience possessed and exhibited by affected individuals determine how well the person will cope and manage work-stress effectively.
- Gender is not a strong factor in determining the effectiveness of stress management factor
- Psychological factors play effectively in stress-intervention programs than demographic factors.

Recommendations: Based on the above findings, discussions and conclusions, the study makes the following recommendation that:

- The human resources development practitioners should proactively work to ensure that individual employees initiate, nurture, develop and sustain a positive state of their minds throughout the period of service.
- Governments at all levels, employers and scholars should play a more leading role in broadcasting the message of self-management through the approach of the positivist. The system of operation in organizations around the world today has drastically changed from routine to dynamism. It has now embraced technology, innovation, creativity and teamwork for better services. Hence, employees who really want to grow to the peak of their careers need to be positive in thought, approaches, practices, skills and knowledge in order to minimize work-stress and effectively cope with the changing work environments.
- The management of academic institutions around the world, directors and managers of the organization should design more effective manpower training programs, seminars, conferences and short-courses, to sensitize employees on the role of psychological capital in effective management of work-stress.
- It is also recommended that similar studies should be conducted in other sectors and countries. Hence, further studies in this area can be extended to private organizations, for comparative analysis. Applying the above recommendations will significantly help in effective management of work-related stress.

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Factors Affecting the Perceptions of Small-Scale Organic Farmers in South Africa: An OLS Approach

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Abstract: Much investments have been tailored towards organic farming by several stakeholders in recent years. Reasons for these are poverty mitigation, income generation as well as food security and good dietary diets. Unfortunately, there are no significant improvements in those areas where organic farming has been funded and encouraged. The study aims at identifying factors affecting the perceptions of small-scale organic farmers using ordinary least squares regression model (OLS). One hundred and sixty structure questionnaires were administered on 160 small-scale organic farmers in Amathole District Municipality to gather data for the study. The results revealed that gender and educational level are the major factors affecting the perceptions of small-scale organic farmers in South Africa. Nevertheless, to open the perspective of small-scale organic farmers, the study suggested that these farmers should have greater access to extension services and support. This will go a long way in assisting the farmers to diversify and improve their production, thus enhancing livelihoods and creating markets for organic foods.

Keywords: *Food security; livelihood; OLS regression model; organic farming; perception.*

1. Introduction

The persistent of floods, recurrent droughts, land grabbing, water shortage, and soil degradation are some of the teeming challenges confronting agriculture in developing countries (Fasona & Ogunkunle, 2018). The frequent occurrence of these factors poses a serious challenge to food security and rural livelihoods. Although agriculture has been known to be the backbone for rural development and poverty mitigation, the twin challenges of food insecurity and environmental degradation remains a global phenomenon (Cole, Bailey, & New, 2014). To combat these environmental challenges, organic farming is thus required. It is worth mentioning that the importance of organic farming in South Africa is to produce quality food in an environmentally friendly way, suitable for consumption with little or no effect on the environs. Surprised, this goal has not been fully actualized by the modern farming practices, (i.e. inorganic farming) which is the prominent farming activity in South Africa. Thus, it is essential to encourage the adoption of sustainable organic agriculture in the country which is proficient of providing lasting solutions to the existing agricultural difficulties and aid to attain optimum productivity of nutritional and quality food (Madhavan et al., 2012). To achieve this goal, sustainable organic agriculture is thus necessary. Under Food, Agriculture, Conservation, and Trade Act of 1990 (FACTA, Washington, DC,), termed the word “sustainable agriculture” as a unified method employed in plant, and animal production practices, encompassing all successful management of agricultural goods to meet human wants, enhance the quality of life for farmers while maintaining or enhancing environmental stability of all natural resources. All definitions of sustainable agriculture lay emphasis on retaining a stable agricultural development rate, which can meet the demand for food of all living organisms without degrading the elementary resources of the environment. Organic farming has been identified as one of the several methods found to meet the goals of sustainable agriculture (Roychowdhury et al., 2013). Reasons are; organic farming prohibits the use of man-made inputs such as synthesized manure, insecticides and herbicides. The foregoing is associated with modern agricultural practices specifically the use of artificial manures and pesticides in farming. The negative effect of this is on the environs through soil erosion, soil adulteration and bioaccumulation resulting in food poison and environmental degradation (Hardy, 2014).

Organic farming is therefore one of the most suitable alternatives that can be considered as a sustainable approach for small-scale farmers in less developed countries because it offers a low combination of external inputs, technical know-how, friendly environment as well as efficient input/output utilisation (Augustine et al., 2013). Several literatures have defined organic farming in several ways; the United States Department of Agriculture (USDA), described the word organic farming as a technique that is planned and conserved to produce agricultural goods using approaches and materials that keep alive the ethics of organic agricultural goods until they get to the final consumer. Treadwel et al. (2010) defined organic farming as the active environmental management approaches that preserve and enrich soil micro-organism, prevent soil erosion, boost and improve biodiversity, and lessen the risk to human and animal health and natural resources. Similarly, Yadav et al. (2013) defined organic farming as a method of production which excludes, or basically prohibits the use of artificial manures, growth regulators, livestock feed additives, and pesticides. The most universally acknowledged definition of organic farming was given by Codex Alimentarius Commission (2010) "as holistic production management systems (for crops and livestock) emphasizing the use of organic management practices in preference to the use of off-farm inputs". This is achieved by using biological, cultural and mechanical techniques of controlling weeds in preference to artificial substances (Van Driesche, & Hoddle, 2009).

Moyer (2013) highlighted that organic farming is often advanced efficiently in terms of net income and thus reduces poverty affecting smallholder farmers as well as making them more food secured. Several studies have also shown that socio-economic features of farmers could play a major role in determining farmers' perception on organic farming adoption (both technical and economic). For example, a study conducted by Kafle (2011) while investigating factors that affect the adoption of organic vegetable farming in Chitwan District of Nepal, the results reveal that farm size, farmers' involvement in organic farming related training and visits and compatibility of organic farming to their situations were among the factors affecting adoption of organic farming among farmers. Similarly, Pinthukas (2015) findings revealed that age, educational level, household size, labour and extension visit were among the socio-economic variables that contributed significantly to farmers' perception on organic vegetable production for sustainable livelihood in Chiang Mai Province.

According to Borges et al. (2015), a perception is an act of decision to adopt an innovation. These scholars further stressed that farmers' decision to adopt an innovation is guided by variables such as farmer socio-economic factors, farm characteristics and acquisition of information/process of learning about organic farming. The decision to adopt an innovation relies on these factors. Nonetheless, these variables influence farmers' perception towards the adoption of organic farming practices. This can be seen in South Africa, where organic farming is growing gradually and is found suitable for small-scale farmers. These farmers produce for subsistence and sell their excess produce in nearby markets. There is a huge prospect in practicing organic farming because it is productive and sustainable (Herath, & Wijekoon, 2013). This system is best suited for the rural farmers, the majority of who are resource-poor. This is a practical example of the small farmers in South Africa, particularly in the Amathole District of the Eastern Cape Province. Although, very few studies have been done investigating thoroughly on small-scale organic crop farming, to the best knowledge of these researchers in Amathole District Municipality of the Eastern Cape Province. Hence, this paper intends to investigate the factors that determine perception of small-scale organic farmers in South Africa as a way to draw the awareness of the government, donors and development agencies to adequate empirical research on the adoption of organic farming and its importance for agricultural sector regarding promoting the growth of organic farming in South Africa.

2. Methodology

Description of the study area: The study was carried out in the Amathole District region of the Eastern Cape Province. Amathole is located between Port Alfred and Port St John's. The region extends from the Indian Ocean coastline in the South to the Amathole Mountains in the North. The region covers a land area of approximately 23,577.11km^2 and has the second largest economy in the Province, contributing to 32 percent to the provincial economy. Two-thirds of the district is made up of communal areas with high level of farming activities. The area receives rainfall throughout the year which is mainly a summer rainfall region. The mean yearly rainfall varies from 1000mm along the coast to 700mm inland above Butterworth and 1200mm in the Amathole mountains.

Sampling procedure: Organic crop farmers constituted the population of the study. A multi-stage sampling technique was used for the study. In the first stage, purposive sampling was used to select Amathole Municipality from the six District Municipalities in the Eastern Cape Province, the reason is because it's well known for agricultural practices, high population of small-scale crop farmers and potential for organic crop farming (Kisaka-Lywayo & Obi, 2014). In the second stage, simple random sampling technique was used to select Mdantsane, Fort Beaufort, Keiskamahook and Middle drift villages in Amathole District Municipality. These villages were randomly selected based on literature and information from extension officers. The third stage involved snowball technique to locate the small-scale organic crop farmers through the help of extension officers from the Department of Agriculture and Agrarian reform in South Africa. A total of 160 small-scale organic crop farmers' were chosen from the four villages which made up the sample size for the study.

Data collection: This research employed primary and secondary source of data. Primary data were collected through structured questionnaires to get information on organic crop production. The questionnaires were used for those practicing organic crop farming. This was subjected to validity and reliability tests in order to avoid unbiased data collection. The secondary data was used to gather information from journals, books and articles on organic crop farmers.

Data analysis: The study adopted inferential statistics in the form of Ordinary Least Square (OLS) regression model to examine the coefficients of the socio-economic variables affecting small-scale farmers' perception on organic crop farming in the study area. The collected data were coded and analysed using Statistics Package for Social Sciences (SPSS) version 24. To achieve the objective of this paper, the model intends to predict the association between two or several explanatory variables by multiple linear equations to analyse the set of data collected (Gujarati & Porter, 2011). Several studies have used multiple regression models to examine the relationship of several independent variables on farmer's perception on organic production (Herath & Wijekoon, 2013; Pinthukas, 2015). The functional form that gave the finest fit in terms of value of the R^2 and better F-ratio was finally selected and used for the analysis. Therefore, the implicit model is:

$Y= f(X_1, X_2, X_3, X_4, X_{5,} + U)$.
Where:
Y = Perception, which is the dependent variable, while the X's are the explanatory variables (factors influencing perception, which is the dependent variables)

X_1 = household size (Hs)
X_2 = gender
X_3 = age
X_4 = educational level
X_5= access to extension service
U = error of disturbance term.

3. Results and Discussion

Table 1: Model summary on perception

Model	R	R square	Adjusted R square	Std. Error of the estimate	R square change	F change	Sig
1	0.301[a]	0.090	0.055	3.355	0.090	2.534	0.023**

a. Predictors: (Constant), Household size, Gender, Age, Number of years in school, Access to extension service
b. Dependent Variable: Perception
Source: Results from SPSS generated from Field Survey, 2016 *where Std.*

Error = Standard Error: According to the results summarized in Table 1, R-Square (i.e. coefficient of determination) is 0.090. This means that as much as 9% of the variation in the perception of the small-scale farmers is explained by the explanatory variables included in the model. The remaining 91% is explained by other factors not included in the model. Adjusted R-Squared is lower than R square which shows a good model. This suggested that the Adjusted R-Squared value of 0.055 explains 55% of the variation in the dependent variable. It takes into account the number of variables entered into the model and did not necessarily increase as more variables are added. It further suggests that correction has been made to reflect the number of variables in the equation and estimate of variance explained and removed variability that is likely due to chance. F- Value (2.534) is significant at 5% implying that the model is statistically significant. This means that all the independent variables together predict the perception of the small-scale organic crop farmer. This result supports the findings of Adesopeet al. (2012) who reported that only two out the nine socioeconomic variables correlated significantly with the adoption of organic farming practices in River State, Nigeria.

Table 2: Test of variation in model (ANOVA)

Model	Sum of squares	Df	Mean Square	F -value	Sig
Regression	171.196	6	28.533	2.534	0.023**
Residual	1722.548	153	11.258		
Total	1893.744	159			

a. Dependent Variable: Perception
b. Predictors: (Constant), Household size, Gender, Age, Number of years in school, Access to extension service
Source: Results from SPSS generated from Field Survey, 2016 *where ** 5% significance level. Df = Degree of freedom*

Table 2 showed the analysis of variance in the perception of the small-scale organic crop farmers. The significance shows variation in the extent that small-scale organic crop farmers perceived organic crop farming. F- Value gives overall adequacy and significant at 0.023. The higher the F- Value the better the overall model of the OLS equation.

Table 3: Determinants of small-scale organic crop farmers' perception

Model	**Unstandardized Coefficients**		**Standardized Coefficients**		
Model	B	Std. Error	Beta	T	Sig
(Constant)	36.427	1.812		20.098	0.000***
Household Size	0.207	0.152	0.109	1.363	0.175
Gender	1.419	0.566	0.206	2.505	0.013**
Age	-0.042	0.027	-0.142	-1.568	0.119
Number of years in school	0.134	0.075	0.153	1.802	0.073*
Access to Extension Service	0.692	0.545	0.100	0.484	0.206

a. Dependent Variable: Perception
Source: Results from SPSS generated from Field Survey, 2016 where ***, ** and * represents significance level at 1%, 5% and 10% respectively. Std. Error = Standard Error

Table 3 presented the results of the estimation of the OLS model. The results suggested that perception of the small-scale organic crop farmers is significantly affected by the gender of the household head and number of years in school at 5% and 10% respectively. From the analysis, coefficient of gender is positive and significant at 0.013 levels suggesting that a unit change in the gender will change perception by 2.505. This implied that gender of the households' head especially female-headed household are more likely to perceive the practice of organic crop farming as a way of enhancing their livelihood and also become food secured. This result agreed with the findings by Nhemachena & Hassan (2007) which reported that female-headed households are more likely to adopt several approaches of organic practices than male-headed households. In addition, the research conducted by Palacios-Lopez et al. (2017) on women and agricultural productivity as cited by Doss et al. (2017) reported that women are more greatly involved in all aspects of agricultural productivity, accounting for about 40 percent of their involvement in agricultural productivity. Similarly, Doss (2014) concluded that women contributed to about60-80% of the food that is being produced in developing countries. This is clear evidence that women involvement in agricultural production is encouraging. The coefficient of number of years of schooling is positive and significant at 0.073 (10%) level suggesting that for every one unit change in the number of years in school, perception will change by 1.802. This could be interpreted that with an increase in number of years in school, the farmer had greater potentials to perceive and adopts the use of modern technology. This result agreed with the findings by Gido et al. (2013) that education had a positive relationship with farmers' perception towards organic farming.

4. Conclusion

The study concludes that there are several factors influencing the perception of small-scale organic farmers. These factors include gender and level of education. It was found that majority of the respondents are females. Also, it was found that most of the respondents are not educated. These two variables significantly affect the perceptions of small-scale farmers practicing organic farming. Although, several factors were tested in this study using OLS, gender and level of education proved to be the dominant factors influencing farmers' perception, whether to continue adopting organic farming or quit the practice. Thus, to secure the establishment and further growth of an organic market, it is essential to unlock the potential of small-scale organic farmers' perception to organic farming.

Recommendations: In the light of study outcomes, it is therefore recommended that there is a need for farmers' education on organic farming practices through greater access to extension services and support to help enhance their awareness and production system. This will also provide them with adequate information about global challenges and opportunities in adopting organic farming, thereby enhancing their livelihoods. There is also need for government and private sectors to collaborate on educating and enlightening small-scale farmers about the prospect of adopting organic farming as a way of attaining food security and nutritional diets, and live a life free of environmental bioaccumulation.

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The Impact of Labour Force Reduction on the Financial Performance of Manufacturing Companies

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Abstract: This study attempts to corroborate the impact of labour force reduction on the financial performance of manufacturing companies in a developing country. Despite the on-going use of labour force reduction, literature and research on this approach continues to yield mixed results. This desktop research was therefore conducted with the aim of determining the impact of employing labour force reduction initiatives on the financial performance of manufacturing companies. The study reviews the results and findings of empirical and qualitative literature on labour force reduction by previous scholars for a period of 6 years ranging from 2012 to 2017. The phenomenon of labour force reduction has facilitated the research and studies on the area in the past six years, with researchers reaching different conclusions on the practice's effect on organisations. This has prompted the researchers of this study to critically study labour force reduction methods, factors affecting their success, employees' reaction to the strategy, the practise effect on productivity and the relationship between labour force reduction and organisation performance.

Keywords: *Labour force, financial performance, manufacturing company, reduction*

1. Introduction

George (2014) defines the term labor force reduction as the process of eliminating jobs within an organization but not necessarily accompanied with the dismissal of the job incumbents with the goal of improving firm's performance. Labor force reduction is often used interchangeably with terms such as retrenchment or redundancy but, while it frequently works hand in hand with those processes, it is not limited to those processes but can be achieved through alternative restructuring activities such as outsourcing, recruitment freeze, furloughs, short time working and pay cuts (Braegger et al., 2015).This study attempts to corroborate the impact of labor force reduction on financial performance of manufacturing companies in a developing country. As already alluded to in the abstract, despite the on-going use of labor force reduction, literature and research on this approach continues to yield mixed results. This study, therefore, will explore the methods of labor force reduction implemented by organizations in order to shed more light on what literature and other scholars have found to be its effects on financial performance of a company.

2. Methodology

This study adopted a desktop research approach. Desktop research refers to secondary data or that which can be collected without fieldwork. In most cases it is the research technique which is mainly acquired by sitting at a desk. In the context of this study, the term is widened to include all sources of information that do not involve a field survey. In this study, therefore, literature was gathered from libraries, the internet., company documents and journal articles.

3. Labor Force reduction methods implemented

"To stay afloat companies have to cut costs by announcing layoffs" (Gensler, 2016). The National Social Security Authority of Zimbabwe has retrenched fifteen middle managers as it streamlines it operations (Mugabe, 2017). Air Zimbabwe retrenched 200 employees out of 424 employees (Mugabe, 2017). Statements around Labor force reduction have dominated the business papers and labor force reduction has been integrated into the life of organizations seeking survival and improved profit. Organizations take the downsizing route to reduce costs, adjusting their organizational structures making them leaner and efficient workplaces (George, 2014). George (2014) defines the term labor force reduction as the process of eliminating jobs within an organization that are often but not necessarily accompanied with the dismissal of the job incumbents with the goal of improving firm performance. Labor force reduction is often used interchangeably with terms such as retrenchment or redundancy but, while it frequently works hand in hand with those processes, it is not limited to those processes but can be achieved through alternative restructuring activities such as outsourcing, recruitment freeze, furloughs, short time working and pay cuts (Braegger et al., 2015).

Layoffs: Ivancevich and Konopaske (2013), as well as Pearce and Robinson (2015), point out that reducing the number of employees in an organization is the focal point of layoff strategy aimed at reducing the number of employees in order to stem survival in predicaments threatening the survival of an organization. Vapnek (2017) asserts that laying off employees is a quick way of cutting labor related costs when an entity is failing to be competitive. This notion is supported by organizational turnaround literature such as the work by Brauer and Laamanen (2014); Tangpong et al. (2015) who suggest that downsizing exercises such as layoffs can indeed assist an entity to restore its financial performance successfully. Yu et al. (2013) stress that timely manpower adjustment strategies such as layoffs are optimal for improving output performance for an organization facing communication difficulties. This is supported by Anderson and Lewis (2014) who emphasized the surfacing of efficient communication and diminished bureaucracy after implementing layoffs as labor force reduction strategies which disrupt the normal pattern of behavior. De Meuse and Dai (2013) aver that layoffs assist organizations to improve their financial performance in the long term.

In light of the benefits associated with layoffs as a downsizing option to resuscitate performance, Ndofor et al. (2013) reached a different conclusion emphasizing how retrenchment practices such as layoffs are detrimental to performance. Ndofor et al. (2013) are backed by Powell and Yawson (2012) and Zorn et al. (2017) who accentuate that organizations that exercise layoffs as a labor force reduction exercise are likely to exit industries through bankruptcy further adding that layoffs diminish the survival likelihood of an organisation irrespective of the configuration of the organisation involved. Habel and Klarmann (2015) assert that organizational employee reduction is correlated to decline in customer satisfaction especially in labour-intensive organizations. An additional shortfall pointed out by scholars is the fact that for layoffs to improve efficiency, it must be misunderstood by employees and this results in shattered employee (Goesaert et al., 2015; Rehman and Naeem, 2012). Richter and Konig (2017) assert that the method of labor force reduction through layoffs boils down to the employer's perception of fairness and labor legislation strictness and has no significant effect on the performance of an organisation. In the same vein, Hamed et al. (2013) and Gandolfi (2013) alluded that Labor force reduction has no significant effect on the performance of an organisation. It appears that literature and research on the outcomes of layoff strategy has found mixed results over the years.

Furloughs (Unpaid Leave): Vapnek (2017) brings to light the effectiveness of furloughs as a labor reduction strategy as it reduces expenditure by placing employees in a non-work and non-pay position when faced with discontinuous events such as natural disasters or economic calamity. Zvonicek (2012) emphasizes that having employees take unpaid leave is an effective cost-cutting measure as payroll costs constitute the bulk of operating expenditure incurred by organizations. Vapnek (2017) concurs pointing out how reducing the number of hours worked assists an organisation to ensure that hours worked are productive and to reduce labor related costs thereby enhancing profitability and competitiveness of an organisation. Employees found time off work to be beneficial and found the exercise to be reasonable in times of economic distress. Furloughed employees had job satisfaction and job meaningfulness when they returned to work after unpaid leave (Zvoniocek, 2012). Furloughs send clear messages to employees that they are valuable to the employer and the employer is doing all they can to keep them employed as opposed to the option of laying off employees. Furloughs help an organisation to avoid severance and rehiring costs associated with layoffs and retrenchment (Zvonicek, 2012).

Although the method of furloughs is implemented by organisations, it has its drawbacks. Halbesleben et al. (2013) point out how furloughs have a significant negative effect on employees as it leads to high emotional exhaustion and low performance at work. Furloughs are associated with augmenting turnover rates and lower production efficiency per employee due to employees diminished organisational commitment and organisational citizenship behaviour (Shepherd, 2017). Halbesleben et al. (2013) assent that emphasizing furloughs in organisations increases turnover intentions among high performing employees, the very employees an organisation would prefer to keep. Furloughs steer employees to distancing themselves from the organisation, shifting their identification from work directing it more towards their families. This outcome raises concerns among entities seeking to control its labour force through furloughs (Halbesleben et al., 2014).

Fraher (2013) asserts that furloughed workers experience increased stress and distraction at work leading to increased mistakes and poor performance resulting in deteriorating productivity and wastages at work. Employees stress results from worries that the employer might employ permanent labour force reduction methods such as layoffs (Shepherd, 2017). Ko and Yeh (2013) suggest that non-standard work engagements such as furloughs are associated with declined job satisfaction and motivation among surviving employees who are at the core of an organisation's success. Rehman and Naeem (2012) stress that labour force reduction practices such as furloughs destroy employee's perception of their job security and commitment to the organisation. All organisations are confronted with operational predicaments when the economy becomes challenging. Furloughs need strategic focus tied to sound HR policies as employees are crucial resources to an organisation (Bellairs et al., 2014). Researchers have also found downsizing to have no significant effect on employees and the organisation. Lee and Sanders (2013) vouch that although furloughs have financial and job satisfaction implications on employees, furloughs have no notable effect on individual employees' productivity and performance.

Outsourcing: Antonioli et al. (2015), Agrawal and Hall (2014) and Agrawal and Haleem (2013) concur that outsourcing is a labour force reduction strategy that assists an organisation to reduce costs and improve production efficiency in production and the quality of products. There is a significant positive relationship between outsourcing and industrial productivity and innovation process performance. The positive relationship is accompanied with cost savings and cost efficiency (Arvanitis and Loukis, 2012). This is supported by Antonioli et al. (2015) who emphasized that externalisation of high value-added activities such as research and development and HRM results in productivity growth. Oke and Onwuegbuzie (2013) emphasized that outsourcing ameliorates an organisation's product innovativeness as externally contracted service providers seek to advance and differentiate their services to maintain their service contract. Despite the benefits associated with outsourcing, scholars have uncovered the costs associated with the practice. Han and Mithas (2013), highlighted how outsourcing decreases the cost of the service outsourced. However, the practice increases other organisational costs associated with the service or production process outsourced and Wickford (2016) asserts that outsourcing is associated with job loss fear and employee insecurity which deters productivity among employees proving detrimental to an organisation. Outsourcing low value added services has a negative effect on productivity further adding that turning fixed expenses into variable costs by moving low value-added activities such as ancillary services outside an organisations borders does not result in cost saving (Antonioli et al., 2015). Cuillan and Andi –Zheng (2017) assert that outsourcing certain activities results in time lags for related activities lasting as long as three days, illustrating how outsourcing can cripple the efficiency of product and service delivery to customers.

Certain scholars have taken a neutral stance on the subject of downsizing with Zvonicek (2012) suggesting that outsourcing production processes do not reduce the COGS. The tendency is that costs are merely transferred from one COGS class to another. When core organisational processes are outsourced the costs savings associated with outsourcing are crippled by the organisational adaptability sacrificed. Outsourcing production process leaves adaptation to production and market trends to the service provider which can prove to be detrimental negating the cost-saving aspect (Weigelt and Sarkar, 2012). Zvonicek (2012) emphasizes that outsourcing on its own has no effect on the quality of the final product surfacing the need to pay attention to enforcement of contracts as the determinant of benefits associated with outsourcing. Ho and Wei (2016) support the notion that outsourcing in itself has no effect on the quality of the product suggesting that quality is a matter of perception to the outsourcing organisation. Outsourcing can produce negative, positive, insignificant, mixed or moderate benefits to an organisation (Lahiri, 2016).

Organisation redesigning through delayering: Brauer and Laamanen (2014) outline that a labour force reduction alternative can improve the performance or an entity. Lahiri (2016) asserts that organisation redesigning is an effective labour force reduction technique with the perks of cutting costs while maintaining the capacity of an organisation. Unlike out write layoffs which piles more work on fewer employees, organisational redesigning focuses on the jobs, work units and organisational plan (Kavadis and Castañer, 2015). Yu et al. (2013) emphasize that redesigning an organisation and delayering tall structures within an organisation assist the organisation to attain swift communication within and across departments facilitating efficient productivity. Brauer and Laamanen (2014) assert that small-scale redesigning leads to efficiency improvements within the organisation without disturbing existing organisational routines. Brauer and Laamanen (2014) further added that large-scale redesigning is more advantageous as it involves fundamental recreation of routines resulting in enhanced positive outcomes.

Despite the on-going use of organisational restructuring, organisational change scholars, Miller et al. (2012) outline the negative effects of organisational change on employee morale and motivation and ultimately the firm as it disrupts the normal way of doing things, as employees encounter challenges to unlearn prior lines of conduct and discover and develop new work routines. This notion is supported by Bryson et al. (2013) who emphasize that change, when approached reactively to factors such as financial constraints or impending losses faced by an organisation, will result in questioning employees and destroy morale. Redesigning organisations tempers with the informal structure of an organisation disrupting the informal flow of efficient communication (Schenkel and Teigland, 2016). Zvonicek (2012) asserts that survivors of organisational redesigning tend to view their organisation as less than a superlative employer increasing the turnover intent in the surviving employees resulting in knowledge loss in the form of employee exits to the organisation. Survivors of the organisational redesigning are diverted to focusing on acquiring and transferring knowledge as opposed to the preferred scenario of employees applying knowledge which they already have resulting in inferior productivity and diminishing efficiency (Anderson and Lewis, 2014; Holton and Burch, 2016).

Although restructuring through delayering reduces payroll costs, the cost savings enjoyed are mitigated by the lower productivity of the demoted employees (Fraher, 2013 and Goesaert, Heinz and Vanormelingen, 2015). The success of an organisation after restructuring activities such as delayering can prove to be disruptive to the normal pattern of doing things. However, a well-educated team moderates the effects of downsizing as they take up the challenge to do things differently (Ahn, 2015). Restructuring can be detrimental in the short run as the practice leads to an organisation losing its routine and transitive memory. However, the practise enables cheaper novices within the organisation to take charge and bring about change and productivity required in the long run. Contextual factors such as workforce configuration and organisational culture help moderate the effect of delayering (Datta and Basuil, 2015).

4. Factors affecting the implementation of Labour Cost reduction methods

The successful implementation of labour cost reduction methods perpetually involves careful consideration and management of the relationship between an organisation and its employees alongside effective communication related to the imminent changes and their implications to the employee from the employees standpoint (Datta and Basuil, 2015). The interaction between effective communication and employee involvement is critical to the outcome of labour force reduction exercises (Datta and Basuil, 2015). The following subheadings will review organisational change and labour force cost reduction literature paying particular attention to organisational downsizing and restructuring.

Employee involvement: Employee involvement is an effective tool to overcome the hurdle of resistance to change by assisting the organisation to calm employees' fears over restructuring by actively engaging them in the process (Sahoo, 2014; Ashman, 2016; Boddy, 2016; Garcia et al., 2014). Employee participation program such as employee committees, suggestion schemes and interactive discussion help reduce misconceptions and misunderstanding among employees mitigating the spread of falsified rumours (Sahoo, 2014; Appelbaum et al., 2017). Zvonicek (2012) asserts that the success of organisational restructuring rests with the employees because the organisation only makes and announces the decision while the implementation of the changes is carried out by employees highlighting how the involvement of the implementers is of paramount importance to the success of any change initiative. Gondolfi (2013) explains how employee involvement programs ensure acceptance of labour cost reduction strategies and how they create the desire to assist the organisation in the labour cost reduction efforts within employees. Braegger et al. (2015) found that employees who were actively engaged in layoff processes receiving career counselling and job search assistance had improved perception of the fairness of the labour force reduction exercise. Braegger et al.

(2013) further indicate how employees perceive layoffs as fair and reasonable if they are engaged in discussions leading to the layoffs and are aware of the criteria to be used prior to the layoff process.

On the other hand, Lahiri (2015) suggests that employee involvement in programs increases the expense burden of an organisation while the practice raises concerns about job security among employees which leads to ineffective worrying employees, proving to be costly to productivity and as an additional expense. Lam (2015) supports Lahiri (2015)'s view declaring that involving employees in talks or discussions around layoffs increases employee's perception of job insecurity compared to employees who were unaware of the impending layoff. He enunciates how involving employees in layoff discussions will lead employees to worry about their jobs instead of empowering them. Zvonicek (2012) supposed that management is risk-averse when it comes to involving employees in discussions on implementation of change strategies as they fear that employees may react negatively or protest before a decision is made and management are not interested in increasing costs by facilitating workshops or forums. Rehman and Naeem (2012) assert that merely talking about forthcoming layoffs is stressful.

Employee involvement in organisational redesigning and change has had mixed results. Although employee participation may seem like a positive step to reduce resistance, the resistance thought and feeling within employees is depended on their level of organisation based self-esteem (Lahiri, 2015). Greenbaum et al. (2012) concur that the ability an employee has to adhere to organisational change depends on their personal core self-evaluation. Even though positive stimuli such as involvement in decision-making processes can lead to improved behaviour in employees, inertia as a characteristic of employees and systems prohibits ruling out employee resistance as an attempt to thwart any change initiative by the organisation (Reynaud, 2017). This is supported by Norman et al. (2013) expressing how matters such as employees' level of education can lead to a variation of employees' empathy of managements' justification of labour force reduction during the discussion. The mixed findings and notions on employee involvement as a critical factor to facilitate successful implementation of labour force reduction initiatives have pushed the researchers to investigate the factors that influence the success of labour force reduction in manufacturing companies in a developing country.

Communication: Formal and informal communication with and among employees improves employees' commitment to changes such as labour cost reduction programmes as this clarifies grey areas that might be causing concerns among employees (Appelbaum et al., 2017). Lahiri (2015) asserts that early communication diminishes the feeling of uncertainty among employees and limits the possibility of exaggerated rumours wreaking havoc on the upcoming change process of reducing labour costs. Norman et al. (2013) further add that maintaining a steady, accurate flow of information is key to diminishing resistance to change to come. Leadership's vision for the organisation must be effectively communicated to improve employees' readiness to accept change as this assists management and the employees to operate in unison as they are both aware of the desired results of the change initiative of reducing labour force costs (Haque et al., 2016). Sahoo (2014) accentuates that workshops within organisations must be held to provide information pertaining to imminent layoffs enhance trust. Greenbaum et al. (2012) affirm that providing honest information prior and during a downsizing exercise raises trust within the remaining employees. Employees who receive notice in reasonable time and explanations as to the causes and proceeding of downsizing exercises perceive labour force reduction exercises as being fair and have the aptitude to accept the outcome of the entire process (Braegger et al., 2015).

Although companies try to communicate layoffs in a positive light to employees pointing out how it was the last resort, the question still remains whether employees perceive it this way given declined performance of employees whose co-workers were fired during the process. This shows how communication is not understood even though management makes efforts to avoid negative communication (Norman et al., 2013). Invernizzi (2012) emphasizes that poorly managed communication can actually worsen the results of the change process as it results in resistance to change. Grebe (2013) highlights that management trying to conceal its failure to address matter leading to the organisations need to reduce labour costs by communicating labour force reduction in a positive light as doing so aggravates employees and exacerbates the situation. Lam (2015) accentuates that employees that know about an imminent catastrophe such as layoffs have diminished job security which increases inefficiency and mistakes at work.

Norman et al. (2013) took a neutral stance accentuating that communication may improve employees' understanding of the process and reason for the move. They further enunciated how different individuals in the same organisation can perceive a communicated message differently during labour force reduction exercises. This highlights how an effective announcement can yield mixed results within the same organisation. Communicated labour force reduction can alert employees of potential psychological violation responses to the psychological violation varies dependent on the level of subjection, orientation and mastery orientation of the individual (Arshad, 2016). Given the equivocal literature on the effectiveness of communication as a factor to successfully implement labour cost reduction techniques, the research seeks to uncover effects of communication on successful labour force reduction in a developing country.

Employees' response to labour force reduction: Employees react to labour force reduction programmes differently. The following section seeks to review the literature on employees' responses to labour force reduction paying attention to employees' feelings, job insecurity, organisational commitment, moral and stress. Employees working in organisations that underwent labour force reduction routines reported increased mistakes and distraction during the discharge of their duties (Fraher et al. 2013). They further underlined the cost of labour force reduction on an organisation pointing out that employees that experienced layoffs and Furloughs had increased levels of stress, frustration and anger resulting in diminished trust in the organisation and reduced morale to undertake their duties. Bryson et al. (2013) outlined that labour-related organisational change is significantly associated with increased errors and mistakes within the workplace as employees are consciously and unconsciously acting on the amplified stress and anxiety feeling within them which negatively affect one's behaviour. Halbesleben et al. (2013) emphasise that labour force reduction measures exert immense emotional nervous tension on employees leading to augmented emotional fatigue, which explains the poor performance exhibited by survivors of downsizing exercises. Survivors reduced their performance by 43% after the downsizing exercise owing to their perception of the employer's loyalty and psychological contract violation (Norman et al., 2013).

Rehman and Naeem (2012) pointed out that organisational downsizing affected employees' commitment to their organisation negatively noting an increase in employees' sense of insecurity, therefore, decreasing the employees' dedication to stay with the organisation. This is supported by Halbesleben et al. (2013) who found that high performing employees had increased staff turnover intentions following labour cost reduction methods, the very same exceptional employees an organisation tries to secure. Darvishmotevali and Kilic (2017) emphasized how layoff survivors experience anxiety. Halbesleben et al. (2014) drew attention to employees' tendency to redirect their attention from the workplace to family and personal affairs after experiencing labour cost reduction exercises increasing employees' propensity to resign. Despite the negative employee feelings and responsive behaviours, there were notable positive responses seen in labour cost reduction survivors. During labour reduction exercise, employees console each other with the fact that they are going through the process together. Psychologically, each individual comes to terms with the fact that they will be left fighting for limited positions within the organisation, cultivating competitiveness among employees. This justifies positive surges in performance per employee as employees try to prove their worth to their employers (Norman et al., 2013). Hamed et al. (2013) support the view as they found that efficiency per employee increased after downsizing exercises. Ahn (2015) accentuated that employees' perception of control over situations affects their propensity to seek new employment. External factors such as layoffs, and furloughs trigger awareness in the minds of employees that their employment status is out of their control enhancing their loyalty to an organisation and shattering turnover intentions as they feel that they are fortunate to be a labour force reduction survivor and no other organisation would accept them (Ahn, 2015). Labour force reduction involves the discontinuing of organisational norms and routines inherently disrupting individuals' knowledge.

Tomprou et al. (2015) and Wei (2015) affirm that although labour cost reduction event shatter psychological contracts from employees' perspective. This does not guarantee employees acting upon the psychological contract change. Survivors of labour force and cost reduction exhibit mixed reactions which vary from positive reaction, negative reaction to no reaction at all depending on workforce characteristics (Norman et al., 2013). Arshad (2016) postulates that employees' responses to labour cost reductions vary with individuals of different mind sets which can result in employees exhibiting mixed responses within one organisation. Cultures vary among nations. Asian nationals are used to lifetime employment and lifetime contracts with their employers while American nationals are used to moving from job to job seeking better contracts and employment conditions. With this in mind, labour force reduction exercises in America might not trigger any positive or negative response from surviving employees. The diverse reactions demonstrated by employees in the various studies on employees' responses to labour force reduction prompted the researchers to investigate the problems manufacturing companies in a developing country encountered.

The effects of employing Labour Cost reduction on Production Efficiency: The high level of labour cost reduction bustle globally indicates managements' beliefs with regards to the positive, productive efficiency to be gained from the strategy (Datta and Basuil, 2015). The researchers will review the effects of labour cost reduction practises on the production efficiency of an organisation looking into organisational turnaround literature and downsizing literature paying close attention to layoffs, furloughs, outsourcing and restructuring.

Production time: In an attempt to isolate the effects of labour cost reduction from the influence of economic hardships, De Meuse and Dai (2013) conducted an empirical study on downsizing firms in a developing economy. The results showed improved production efficiency. In an empirical study investigated by Kavadis and Castaner (2015) results showed that in times of poor performance, organisations that employed restructuring as a labour cost reduction method improved the performance of their organisations mitigating the inefficient bottlenecks of tall organisational structures and redundant skills within an organisation. Garnero et al. (2016) emphasized that organisations' on and off employment techniques have a strong positive relationship on the production efficiency of an organisation, Conversely, Goesaert et al. (2015) found that organisations that reduced their labour cost with the intent of increasing production efficiency experienced great declines in production efficiency with production taking longer than it did prior to downsizing. While organisations that cut labour costs due to economic hardship only faced a disdaining drop in productive efficiency during the labour cost reduction exercises. The drop is closely related to lower employee morale and motivation to tackle tasks at the efficient rate they used to take them prior to the downsizing event (Goesaert et al., 2015).

Cost reduction methods associated with labour have a negative effect on the likely-hood of an organisation recovering from diminishing productivity and performance suggesting the inappropriateness of labour force reduction as a measure to improve production efficiency (Ndofor et al. 2013). The disruptive result inherent to labour force reduction disrupts collective knowledge which is equivalent to a workforce that collectively forgets how to operate. This produces permanent detrimental effects on productivity of an organisation (Anderson and Lewis, 2014). Miller et al. (2012) affirm indicating how labour force reduction disrupts an organisations' ability to perform established routines which result in a drop in operating efficiency. The greater the portion of employees laid off the greater the operational efficiency damage. Labour force reduction upsets social network and periphery structure of an organisation. The two dynamics are essential to efficiency in tackling internal and external issues namely productivity communication and sales, interrupting already developed and normative dynamics shrink production efficiency of an organisation (Schenkel and Teigland, 2017). Rehman and Naeem (2012) emphasized how labour cost exercises are detrimental to the productive efficiency of individual employees and ultimately the production efficiency of the organisation as a whole. Rahman and Naeem (2012) further added that labour retrenchment strategies as labour cost techniques are detrimental to the production efficiency of an organisation, further pointing out that 'cure' of workforce reductions are costly than the supposed 'disease'.

Datta and Basuil (2015) assert that the result of downsizing of the production efficiency of an organisation is contextual dependent on factors such as culture, firm to employee relationship and timing. This means that different organisations can reap different results from implementing labour force reduction techniques as a cost reduction measure. Lahiri (2016) agrees by highlighting how organisations employing the same labour force reduction technique can obtain varying production efficiency results from a negative, positive, moderate, mixed or no effect at all. Norman et al. (2013) suggest that the extent of the labour force reduction affects the results of the exercise. They stipulated that insignificant layoffs such as laying of three managers or supervisors in an international conglomerate may have no significant impact, while laying off 50% of an organisation workforce may improve efficiency by eliminating redundant outdated skills. Alternatively, if a similar organisation does the same, this might cut too deeply into an organisation and harm its efficiency. In light of the dissonance in findings and conclusions on the impact of labour force reduction on production efficiency, the researchers seek to ascertain how the practice affected the production efficiency of manufacturing companies operating in a developing country.

Employees workload: Implementation of labour force reduction methods such as layoffs result in an organisation having less employees to complete a task which forces employees to own up to tasks that were tackled by former employees (Chhiner and Currie, 2014; Rehman and Naeem, 2012). Chhiner and Currie (2014) indicated that organisations that downsize experience organisational productive growth while utilizing less human capital and increased operating profit per employee, pointing out how layoffs augment the production efficiency of organisations. Kavadis and Castaner (2015) emphasized that employment of restructuring activities leads to surges in productivity per employee as employees are challenged with new tasks that come with the new post that they attain after restructuring activities. After implementation of labour force reduction, activities such as layoffs and delayering employees' output is increased as they battle to attain and retain management and director's attention so they can avoid getting laid off or get positions of prominence after delayering exercises (Pearce and Robinson, 2015). This is also supported by Garnero et al. (2016) who pointed out that some employees go to lengths of requesting for additional tasks from management or supervisors in attempts to prove their value in the organisation. This creates a competitive environment which rubs off fellow employees improve output per employee notably (De Meuse and Dai, 2013; Oke and Kach, 2012; Tomprou et al., 2015; Zohrabi, 2013).

Hamed et al. (2013) found that employees' workload was increased with surviving employees taking up the workload of employees that had left the organisation, which meant that organisations could enjoy the production of about the same number of units with a significantly lower number of employees. Conversely, Anderson and Lewis (2014) found that layoffs, furloughs and restructuring activities that are involved in labour force reduction activities result in employees forgetting how to tackle certain tasks they used to complete in teams after one or more of their co-workers is laid off. Anderson and Lewis (2014) added that once key team members from teams are removed, the number of units produced per employee drops and the drop is especially pronounced in the immediate and short-term basis. Ko and Yeh (2013) emphasized that reducing an organisation's labour force diminishes employees' job satisfaction and motivation which results in employees slacking and absorbing less work. Shepherd (2017) noted that employees' zeal to complete tasks is shattered when they experience the loss of co-workers through labour force reduction especially when the memories are fresh on their mind.

Drensky and Heinz (2014) emphasized that labour force reduction on its own is not sufficient to hinder employees from tackling the tasks they used to tackle before labour force reduction. Ko and Yeh (2013) also added that labour force reduction initiatives cannot scare an employee into taking on new responsibilities in the workplace. According to Drensky and Heinz (2012), employees take up new jobs, however, the fear of losing their job hinders the employees' ability to tackle the tasks they take up neutralising the workload increase that was hoped for. Datta and Basuil (2015) in their research pointed out that employees' response to labour force reduction varies depending on the employee's opinion of the exercises fairness. Research on labour force reduction and employees' propensity to work harder and take on more workload has had varying findings, and this has pushed the researchers to investigate how labour force reduction affected production efficiency, paying close attention to employees' efficient completion of tasks in Zimbabwe's Manufacturing industry.

Labour Force reduction relationship with Rota: In the following section, the researchers will review empirical literature on labour force reduction and its impact on financial performance. Profitability is widely accepted as a measure of financial performance with ROTA and ROE being the measures of profitability (Gandolfi, 2013). ROTA is the most effective measure of financial performance as companies usually reduce their labour force in an attempt to reduce payroll costs and improve their profit margins. Therefore, measuring the change in profit as a percentage of sales can give a reflection of the financial performance amelioration or deterioration in value creating organisations (Brauer and Laamanen, 2014). If all things are held constant that is revenue and assets are held constant, labour force reduction reduces operational costs meaning ROTA should increase (De Muese and Dai, 2013). The following section will pay particular attention to literature that used ROTA as a measure of financial performance.

Brauer and Laamanen (2014) found that smaller (5% - 14%) labour force reduction resulted in significant 4% to 8% increases in ROTA as payroll costs are decreased without disrupting organisational routines of the organisation while larger (30% - 40%) labour force reduction exercises improved organisational ROTA by 2% - 13% due to the major changes and interference with organisational routines. The percentage difference of the positive effect of downsizing is attributable to the labour force reduction rational with organisations that implemented downsizing reactively to diminishing performance reaping low-performance increments than their proactive counterparts that downsized offensively to improve efficiency (Brauer and Laamanen, 2014). Raynaud (2012) found that reducing labour force was positively associated with increases in an organisation's ROA in both the short (one year) medium (3 years) and long-term (5 years) at a steady climb. The positive result was more prominent in the non-listed organisation as they give precedence to economic rather than accounting figures (Reynaud, 2013). De Meuese and Dai (2013) noted an improvement in ROTA in the year of labour force reduction and a continuous upward trend post labour force reduction reflecting the positive relationship between downsizing and firm performance. Jung et al. (2017) found that American corporations that undertook efficient layoffs saw positive increments in ROTA in two subsequent years hinting towards a positive relationship between labour force reduction and ROTA.

Conversely, Luan et al. (2013) found that reducing the labour force in both economic hardship and prosperity was negatively related to ROTA, while reducing an organisations' workforce during economic recession proves to be more detrimental to an organisation's ROTA. Although downsizing reduces operating costs through cutting wages and salaries, they resulted in organisations wrong sizing themselves by cutting operating capacity (Luan et al., 2013). Ndofor et al. (2013) pointed out how retrenchment activities such as layoffs lead to a decline in ROTA in the year of labour force reduction and the following year and no further noteworthy increases or decreases. This shows how retrenchment such as layoffs in an attempt to turnaround an organisation prove to be costlier than the payroll savings and having a negative relationship to ROTA. Abraham et al. (2013) noted a negative relationship between labour force reduction and downsizing with organisations that performed poorly having a severe decrease in ROTA while better performing firms experienced minor decreases in ROTA. The timing of labour force reductions influences the possibility of turnaround success while late layoffs are negatively related to increases in ROTA (Tangpong et al., 2015). Chhiner and Currie (2014) established that excuse, justification, denial and apology based labour force reduction had a negative relationship with ROTA. They further highlighted that labour force reduction resulted in a sharp decline in ROTA in the year of downsizing for the four rationales behind labour force reduction and a steady rise in the subsequent two years with the rise never exceeding the post labour force reduction Ratio.

Labour force reduction is not necessarily limited to resulting in a positive or negative effect on ROTA. Carriger (2016) in his empirical research found that companies that reduced their human capital had no noteworthy increases or decreases in ROTA. ROTA was not affected and the labour force reduction strategy made no significant impact on efficiently using available assets (Carriger, 2016). After conducting an empirical investigation, Hamed et al. (2013) asserted that there was no relationship between labour force reduction and ROTA seeing as there was no notable difference between post and pre-labour force reduction ROTA ratio. Gandolfi (2013) supports the notion as he established that labour force reduction had no significant impact on organisations' ROTA ratio. Research on the relationship between labour force reduction and financial performance measure by ROTA has been inconclusive with contrasting results incentivising the researchers to conduct an empirical study to investigate the impact of labour force reduction on the financial performance of manufacturing organisations operating in a developing country. The next study shall, therefore, be based on a follow up empirical research.

5. Conclusion

From the literature reviewed, the study established that methods used for labour force reduction are layoffs, furloughs, outsourcing and delayering. Of the four methods, literature revealed that furloughs were the most effective method to reduce labour force and improve financial performance. The second most effective method of labour force reduction to improve financial performance as the measure was layoffs. Outsourcing contrary to layoffs and furloughs proved to be detrimental to financial performance as a measure. In addition, the researchers made critical evaluations of results, findings and conclusions of empirical and qualitative research around labour force reduction. The study established that labour force reduction did not have the same effect on employees. It also emerged that labour force reduction did not result in increased employee turnover. The study concludes that reducing innovative employees responsible for the production of new breakthrough products is detrimental to the production efficiency of producing new products, however, reducing human capital responsible for the production of homogenous products results in improved production efficiency.

Recommendations: The study recommends that:

- Organizations facing inefficiency within the organisation should consider laying off employees with their hands on the deck and delaying their organizational structure to reduce excess deadweight.
- Organizations should actively engage employees in discussions pertaining to labor force reduction prior to and during labor force reduction to ensure that employees understand management and directors vision and they do not face a drop in production efficiency in the short run.
- Organizations should ensure that they adequately communicate labor force reduction exercises prior to and during labor force reduction exercises to reassure employees that their jobs are secure and to boost their morale.

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Trade Liberalization and Performance of the Nigerian Textile Industry

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Abstract: Nigeria textile industry is characterized by questionable incentives, political uncertainty, acute power shortage, poor infrastructure, smuggling and red-tape bureaucracy, among others. The study modified the endogenous growth model within a time series (1986 and 2015) estimation techniques of Autoregressive Distributed Lagged model (ARDL). Findings revealed that the effect of simple tariff rate on textile industry is negative and statistically significant in the long-run; while trade liberalization policy measure through simple tariff rate has a lag effect before it can be effective in the textile industry. In both short and long run, real effective exchange rate depreciation worsens the performance of the textile industry in Nigeria. In the long run, a 1.0% rise in trade openness would decrease the level of textile industry performance by about 17.49%, while factor affecting textile industry performance in the short run are simple tariff rate, financial development, exchange rate changes, trade openness and labor and capital inputs respectively. The study concluded that Trade liberalization has a lag effect on textile industry performance and a significant effect on the performance of the Nigerian textile industry. It is therefore recommended that government should make concerted efforts toward providing a favorable business environment, reducing inflation and improve the infrastructural facilities for the textile industry to strive.

Keywords: *Trade liberalization, simple tariff rate, Industrial performance, Trade openness, Real Effective Exchange rate, Financial Development, Nigeria*

1. Introduction

Textiles industry is an important, but often negligent sector when it comes to empirical research. The sector plays an important role in human societies be it developed or less developed and its major output, fabrics, has been established as one of the key basic need. In addition to this, textile materials are used in furniture, coverings and blinds, interiors of vehicles and health gadgets such as bandages and gloves. The textile industry is also known for its capacity to generate huge employment; hence, serving as a source of livelihood to many households. The Nigerian textile industry performed these roles as well, especially up to the 1980s and was rated third largest in Africa after Egypt and South Africa (Bello, Inyinbor, Dada and Oluyori, 2013). Nigeria's textile and apparel industry covers the clothing value chain and is characterized with questionable incentives, political uncertainty, acute power shortage, poor infrastructure, smuggling and red-tape bureaucracy, among others (Banjoko et al., 2012; Eneji et al., 2012; Maiwada and Renne, 2013). However, the government of Nigeria in appreciation of the role of industrialization in growth process now motivates firms. This is done through the establishment of various agencies and government policies like tax incentives, harmonized tax structure, infrastructural development, and financing, as well as the creation of a production hub for cotton industry and Information, Communication, and Technology (ICT) sector. Other identified objectives of the incentives are to address the problem of inputs supply, demand, and price competitiveness of Nigerian textile industry, the provision of foreign exchange requirements to direct cash grant on export performance, trade liberalization, tax relief inducements and some other industrial assistance in the form of marketing, technology advancement, packaging quality, R&D, and innovation of Nigeria textile products, all are to improve productivity (NIRP, 2014). All these policies were designed to address these problems and encourage textile industry performance with a view of diversifying the productive base and increase its output for both domestic and export earnings. Though these programs and policies are well-intentioned and designed, they are yet to achieve the desired objectives because the industry has recently experienced a serious performance decline. For instance, the number of firms in the industry declined to about 42 in 2003, 25 in 2010 and 10 in 2011 with employment falling to 60,000 in 2002 and 24,000 in 2010 (Banjoko et al., 2012). Smuggling is also common in the industry (Uexkull and Shui, 2014). This decline in the performances of the Nigerian textile industry occurs despite various policies designed in its support. It is notable that textile is a major item on the Nigerian import prohibition list. Firms in the industry also benefit from some incentives in the forms of pioneer status and subsidies. Therefore, given the declining performance of the industry, there is need to evaluate the effect of trade policies such as trade liberalization on the performance of the textile industry in Nigeria.

Research Objectives: The major objective of this study is to evaluate the effect of trade liberalization on the performance of the Nigerian textiles industry. Specifically, this study is set-out to;

- Determine the effect of simple tariff rate on the exportation of textiles product in Nigeria.
- Examine the effect of the real effective exchange rate on textiles export value in Nigeria.
- Determine the effect of trade openness on textiles export in Nigeria textiles industry in Nigeria.

Research Questions

- What is the effect of simple tariff rate on the exportation of textiles product in Nigeria?
- How does the real effective exchange rate impact on textiles export value in Nigeria?
- What is the effect of trade openness on textiles export in Nigeria?

Statement of Hypothesis: The following hypotheses were formulated for assessing the effect of trade liberalization on the performance of the Nigerian textiles industry. The hypotheses were tested in this study at 5% significant level.

Ho: Simple tariff rate has a significant negative effect on the exportation of textiles product in Nigeria.

H_1: There is no significant negative effect of Simple tariff rate on the exportation of textiles product in Nigeria.

Ho: Real effective exchange rate has a significant effect on textiles export value in Nigeria.

H_1: Real effective exchange rate has no significant effect on textiles export value in Nigeria.

Ho: Trade openness has a significant effect on the Nigerian textiles industry export rate.

H_1: Trade openness has no significant effect on the Nigerian textiles industry export rate.

2. Literature Review

Trade liberalization is viewed in this study as a deep-rooted agreement by compliant nations for the complete removal or partial reduction of several trade restrictive instruments that hinders the free flow of goods across borders. In the literature, there are conflicting results on trade liberalization and performance; some studies claimed a positive relationship (Yahya, Dantama and Abdullahi, 2013; Kazem and Reza, 2012 and Manni and Afzal 2012), while others established a negative association between trade liberalization and performance. Specifically, the notion that trade liberalization enhances the economic growth of the developing countries is confirmed in the work of Yahya et al. (2013) in which the relationship between trade liberalization and economic growth in Sub-Saharan Africa was examined. Likewise, in the work of Kazem and Reza (2012) who carried out a study on the impact of trade liberalization on Iran's economic growth, it was discovered that trade liberalization has a positive impact on Iran's economic growth. Similarly, Frensch (2010) also found out that trade liberalization helps emerging economies to be successfully involved in import-led growth strategies, which leads to rapid economic growth. While, Thu and Lee (2015) also supported this view by revealing that trade liberalization has a strong positive impact on total output, exports, and imports in Vietnam.

Ali-Hussien, Ahmed, and Yousaf (2012) discovered that Sub-Saharan African countries that adopted the trade liberalization program had shown a substantial boost in their trade share. This discovery is confirmed in the work of Manni and Afzal (2012) who assessed the impact of trade liberalization on Bangladesh economy between 1980 and 2010 and found out that the Bangladesh Gross Domestic Product (GDP) increased significantly, after the country's adoption of trade liberalization policy. Findings of El-Wassal (2012) also attest to the fact that trade liberalization is statistically and positively correlated with the economic growth of twenty (20) Arab countries over the period of 1995 to 2010. Correspondingly, within the Nigerian context, Bakare and Fawehinmi (2011) revealed that since 1986, trade liberalization has led to sustainable impact in the country's non-oil industrial sector. In contrast to the findings in the preceding paragraph, some studies have revealed that trade liberalization has not contributed to economic growth in Nigeria (Adewuyi and Akpokodje, 2010; Olaifa et al., 2013; Oluwaleye, 2014).

Ricardian Trade Model propounded by David Ricardo, (1772 - 1823), Ricardian theory of comparative advantage is perhaps the most important concept in international trade theory (Krugman and Obstfield, 2003). Ricardo intuition was that trade is advantageous even when a single country has an absolute advantage in the production of two goods. According to him, what matter is not an absolute advantage but comparative advantage? Ricardo model assumed two countries that consume two products and that both products are produced with labor alone. The model further assumes constant returns to scale in production, competitive firms, no role for institution and government policies among others. Therefore, the model focuses on labour productivity as the main determinant of trade. The model demonstrates that under a free trade regime, countries could trade and specialize their pattern of production in accordance with a comparative advantage while also assigning a role for wages and productivity among competitive countries of the world. Aside from these, Ricardo's trade model is very simple and some of its assumptions are unrealistic and for these reasons, the model is not able to fully capture many factors determining trade.

The Slow Growth Model: The Solow Growth Model is a model of capital accumulation in a pure production economy. The model assumes that there are no prices and everyone works all the time. The model further assumes that production technology uses labour and capital as the main input into the production process while technology is exogenous (Romer, 1999). Hence, capital accumulation is important for production the production of output. Solow growth model makes the following assumptions about the production function: The model assumes constant returns to scale, Marginal products of capital and labor are positive, but declining; both production factors are necessary and Inada conditions are satisfied.

Endogenous Growth Model: Endogenous growth theory explains long-run growth as emanating from economic activities that create new technological knowledge. This suggests that technical progress is determined by the model rather than assumed given as in the Solow Growth Model. Endogenous growth is long-run economic growth at a rate determined by forces that are internal to the economic system, particularly those forces governing the opportunities and incentives to create technological knowledge. In the long run, the rate of economic growth, as measured by the growth rate of output per person, depends on the growth rate of total factor productivity (TFP), which is determined in turn by the rate of technological progress. The neoclassical growth theory of Solow (1956) and Swan (1956) assumes the rate of technological progress to be determined by a scientific process that is separate from, and independent of, economic forces.

Trade liberalization and Performance: An empirical study carried out by Petreski (2013) to analyze the impact of CEFTA-2006 on trade, revealed that CEFTA-2006 has exerted a positive effect on trade in South-eastern Europe. Oladipo (2011) also examined the impact of trade openness on Mexico's economic growth and discovered that the long run economic growth in Mexico is largely attributed to the degree of Mexico's trade openness. El-Anis (2013) also examined the overall level of bilateral trade between Jordan and the United States before and after the Jordan-United States Free Trade Agreements (JUSFTA) came into effect and discovered that Jordan has benefitted from an overall trade surplus since the implementation of the Jordan-United States Free Trade Agreements (JUSFTA), compared to the trade deficit experienced in the pre-Jordan-United States Free Trade Agreements (JUSFTA) era. Additionally, Matthias, Steffen, and Groening (2012) assessed the impact of Jordan's substantial trade liberalization over the last two decades and found out that the Free Trade Agreement (FTA) with the United States has boosted the country's exports to a considerable degree. Equally, the findings of the study carried out by Yucel (2014) shows that, the customs union between Turkey and the European Union has strengthened the economic and commercial ties of Turkey. Andrzej and Hagemejer (2011) also evaluated the effectiveness of preferential trade liberalization in Central and Eastern Europe and discovered that all forms of preferential trade liberalization contributed significantly to the expansion of trade of the Central and Eastern Europe (CEE) countries. In addition, Bustos (2011) carried out a study on the impact of the regional trade agreement on Argentinean firms and discovered that expanded export opportunities have a positive effect on firm performance in Argentina. Also, Parinduria and Thangavelu (2013) found out that the free trade agreement between the United States and Singapore increases the value of firms in Singapore.

Conversely, a study carried out by Boyrie and John (2013) to ascertain the effect of trade openness on the growth of major Latin American economies shows that trade openness does not significantly contribute to growth, in major Latin American economies. This view is also supported by the study carried by Safuan

(2012) who discovered that disparity of potential economic benefit exists among ASEAN member countries. Yoko et al. (2013) investigated the effect of the termination of the Multifibre Agreement (MFA) on the Cambodian garment firms and found out that the termination of the MFA did not stop the growth of the Cambodian garment industry. Dadakas and Katranidis (2010) analysed the welfare effects of the MFA and the Agreement on Textiles and Clothing (ATC) regime, on the cotton-yarn sector in Greece and found out that the openness to trade did not change the pattern of import protection in the yarn sector nor affect the magnitude of transfers to Greek yarn producers. Similarly, Sunariyo et al. (2015) analyzed the impact of trade openness on the performance of palm coconut plantations in Indonesia and discovered that the trade openness has no significant impact on firm's performance, especially on domestic demand of palm coconut in Indonesia.

3. Methodology

Theoretical Framework: This study augmented the endogenous growth model. The endogenous growth model explains countries long-run growth as emanating from forces that are internal to a system. In the model, the main drivers of long-run growth considered are human capital, labor force, physical capital and total factor productivity. These inputs are paid their marginal products. A formal analytical framework for deriving the determinants of output performance in which trade policies such as trade liberalization is included is developed. The initial step in the process is the specification of an explicit Cobb-Douglas production function of the usual form as follow;

$Y_t = A_t(K_t^{\propto} L_t^{\beta})$ ………………………………………………………. (1)

Note: $\propto < 1, \beta < 1$

$A_t = A(0)Ei^t$ (2)

Where Y is the output of textile, k and L are measures of capital and labor services employed, while A is the measure of total factor productivity performance. Substituting equation (2) in (1), we have;

$Y_t = A(0)Ei^t K^{\alpha} L^{1-\alpha}$……………………………………………… (3)

Taking the growth rate of equation (3), we have;

$y = a(0)ei^t k^{\alpha} l^{1-\alpha}$ (4)

Where y is the growth rate of textile output, k and L are the growth rates of measures of capital and labor services employed, while components of (a) are measures of the growth rate of output which are linearly associated with measures of trade policy such as trade liberalization. Equation (4) implies that trade policy, influence the efficiency of the production process. However, in order to investigate the effect of trade liberalization on the performance of textiles industry, equation (4) is transformed to the following:

$y = a(0)ei^t k^{\alpha} l^{1-\alpha} + e$ (5)

Where e is the random variable or white noise error term which captures the impact of other variables not included in the model. Therefore, this study incorporated other growth determinants variables such as energy required to produce the textile product, financial development, human capital, and trade openness. This is done in order to underscore whether there are different effects for incorporating these macroeconomic series in modelling the relationship between trade liberalization and performance of textiles industry in Nigeria. Equation 5 with other determinants of variables that influences the performance of textile industry can be explained by equation 6

$y = a(0)ei^t k^{\alpha} l^{1-\alpha} + Energy + openness + Find + Hc + e$ (6)

Thus, the relationship between trade liberalization and performance of textiles industry in Nigeria is examined in equation (6) with the addition of other important determinants factors. To this end, equation 6 can be converted into a linear relationship given in equation (7)

$y_t = \alpha_0 + \alpha_1 Energy_t + \alpha_2 Openness_t + \alpha_3 Find_t + \alpha_4 HC_t + \alpha_5 K_t + \alpha_6 Lab_t + \alpha_7 TL_t + \varepsilon_t \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots$ (7)

Since the main objective of this paper is to investigate the effect of trade liberalization on textile industry performance in Nigeria, there is need to decide on the measurement of trade liberalization indicators. Following the literature, this study employs the popular trade liberalization indicators that are often measured by most favored nation (MFN) simple mean (all products, %).

Model Specification: Based on the framework developed above, the estimable model for this study can be specified as follows[1];

$$y_t = \alpha_0 + \alpha_1 Energy_t + \alpha_2 Openness_t + \alpha_3 Find_t + \alpha_4 EXC_t + \alpha_5 HC_t + \alpha_6 K_t + \alpha_7 Lab_t + \alpha_8 STR_t + \varepsilon_t \dots \dots \dots (8)$$

Where

y = output of textile industry that is proxy by textile export value

K = Physical Capital that is proxy by Gross fixed capital formation (% of GDP)

LAB = Labour force that is represented by Population, total

Energy = Energy use (kg of oil equivalent per capita)

Find = Domestic credit to private sector (% of GDP)

EXC = Real effective exchange rate index (2010 = 100)

Openness = Trade Openness (the ratio of total trade to GDP)

HC = Human capital that is represented by Secondary School Enrollment, (gross), gender parity index (GPI)

STR = Tariff rate, most favored nation, simple mean, all products (%)

$\boldsymbol{\varepsilon_t}$= White noise stochastic term

t= time (1986 – 2015)

Estimation Techniques: We employ a time series data and a linear autoregressive distributed lag model (ARDL). The model helps to capture both linear long and short-run impacts of trade liberalization on textile industry performance in Nigeria. The study follows Pesaran, Shin, and Smith, (2001) bound test co-integration techniques. According to Pesaran et al. (2001), the method is valid irrespective of whether the series is stationary at level or after first difference. The advantages of the techniques over other multivariate co-integration is that it is a simpler approach that permits the co-integration relationship to be estimated in a single equation specification; once the lag order of the model is identified. Therefore, equation 8is re-specified in an ARDL format as:

$$\Delta y_t = \alpha_0 + \alpha_1 Energy_{t-1} + \alpha_2 Openness_{t-1} + \alpha_3 Find_{t-1} + \alpha_4 EXC_{t-1} + \alpha_5 HC_{t-1} + \alpha_6 K_{t-1} + \alpha_7 Lab_{t-1} + \alpha_8 STR_{t-1} + \sum_{i=1}^{p} \alpha_i \Delta Energy_{t-i} + \sum_{i=1}^{p} \alpha_i \Delta Openness_{t-i} + \sum_{i=1}^{p} \alpha_i \Delta Find_{t-i} + \sum_{i=1}^{p} \alpha_i \Delta HC_{t-i} + \sum_{i=1}^{p} \alpha_i \Delta K_{t-i} + \sum_{i=1}^{p} \alpha_i \Delta Lab_{t-i} + \sum_{i=1}^{p} \alpha_i \Delta STR_{t-i} + \varepsilon_t \dots \dots \dots (9)$$

All variables are defined before. According to Pesaran et al. (2001), the decision rule for determining the level relationship or otherwise co-integration is that computed F-statistic must be greater than the critical lower I (0) and upper I (1) bound value, Otherwise, there is no level relationship. However, if the calculated F-statistics falls within the band, then the inference is inconclusive.

Variable definition and Measurement

Trade Openness: This is the most natural measure of a country's integration in world trade (WTO, 2012). Trade Openness is measured as the sum of imports and exports over a country's Gross Domestic Product (GDP).

Real Effective Exchange Rate (REER): The real effective exchange rate is a measure of the domestic economy's price competitiveness in comparison with its trading partners (WTO, 2012). The calculation of Nigeria's REER calculations is retrieved from the world development indication, 2017 online version from 1986 to 2015.

Textiles Industry performance: is the value of Nigeria's textiles exports to the rest of the world over a period of time. The aggregate export data on textiles products is available at the World Integrated Trade Solution from 1986 to 2015. This dataset was used to measure textiles industry performance rate in this study.

[1] Incorporating these two measures of trade liberalization into equation 7 yield 8 and 9;

Trade Liberalization that is proxy by Simple Tariff Rate; the indicator is defined as the simple average tariff imposed on all exports from developing countries and LDCs. The Simple average tariff is the unweighted average of the effectively applied rates for all products. The dataset is freely available at the World Development Indicator, 2017 database. This study uses the simple tariff rate, most favored nation[2], simple mean, all products (%).

4. Results and Discussion of Findings

The results in this study follow three (3) steps; pre-estimation, estimation and post-estimation analysis. All these were done in other to validate the stability of the study.

Table 1: Descriptive Statistics for variables in the model

	ENERGY	EXC	FIND	HC	K	LAB	STR	TRADE	Y
Mean	6.579	4.599	2.630	-0.211	2.347	18.640	3.048	0.542	9.709
Median	6.576	4.506	2.577	-0.233	2.438	18.639	3.195	0.579	9.321
Maximum	6.680	5.607	3.648	-0.088	2.807	18.994	4.306	0.818	12.981
Minimum	6.506	3.907	2.164	-0.324	1.697	18.271	2.415	0.214	5.620
Std. Dev.	0.050	0.439	0.341	0.049	0.321	0.222	0.526	0.154	2.098
Skewness	0.242	0.945	1.475	0.314	-0.242	-0.021	0.185	-0.446	-0.127
Kurtosis	1.869	3.276	5.293	3.107	1.680	1.771	2.047	2.527	1.870
Jarque-Bera	1.890	4.564	17.452	0.508	2.470	1.889	1.308	1.275	1.677
Probability	0.389	0.102	0.000	0.776	0.291	0.389	0.520	0.529	0.432
Sum	197.380	137.957	78.894	-6.325	70.407	559.200	91.434	16.268	291.276
Sum Sq. Dev.	0.072	5.586	3.363	0.069	2.983	1.427	8.034	0.690	127.661
Observations	30	30	30	30	30	30	30	30	30

Table 2: Correlation Analysis of the Variables used in the Regression Analysis

	ENERGY	EXC	FIND	HC	K	LAB	STR	TRADE	Y
ENERGY	1.000								
EXC	-0.161	1.000							
FIND	0.183	0.008	1.000						
HC	0.485	-0.251	0.287	1.000					
K	0.187	-0.034	0.016	-0.127	1.000				
LAB	0.889	0.051	0.340	0.660	0.028	1.000			
STR	-0.826	-0.107	-0.360	-0.554	0.000	-0.872	1.000		
TRADE	-0.158	-0.222	0.003	0.010	-0.568	-0.110	0.136	1.000	
Y	0.713	-0.069	0.389	0.291	0.431	0.654	-0.707	-0.386	1.000

Source: Researcher's Computation (2017)

Pre-estimation Results: Descriptive Statistics and Correlation Analysis: Results of the descriptive analysis of the variables used in the regression analysis are reported in Table 1. In the Table, the mean variability is higher for Labour (LAB), textile performance value (Y), and energy consumption (ENER), than real effective exchange rate (EXC), Gross fixed capital formation (K), domestic credit to private sector (Find), Secondary school enrolment (HC), simple mean tariff rate (STR) and Openness (Openness). Similarly, the pairwise correlation coefficients for the variables used are presented in Table 2. The outcomes of the correlation result are important for establishing the level of association among the variables used in the regression analysis and to determine whether the series can be included together in a single equation model. For our case, the results show a moderate coefficient and all series can co-exist in the same model.

[2]Most-Favored Nation Tariffs (MFN) tariffs are what countries promise to impose on imports from other members of the WTO, unless the country is part of a preferential trade agreement (such as a free trade area or customs union).

Stationarity Test (Unit root): Further on the pre-estimation analysis, this study further examines the Stationarity properties of the data used. Although not often required in ARDL, this study employed both Augmented Dickey-Fuller (ADF) test and Phillips-Perron standard unit root test. The results of the unit root tests are summarized and presented in Table 3. Test for Stationarity shows that all the series are stationary after first difference except for real effective exchange rate, human capital development, and trade openness that are integrated of order I(0) and thus, stationary at levels.

Table 3: Unit Root Tests Results

Variable		**Unit Root Tests**		
		ADF	**PP**	**Decision**
Energy	Level	-1.2201	-0.9797	I(1)
	1st Difference	-4.9725*	-8.8299*	
EXC	Level	-3.2211**	-3.4189**	I(0)
	1st Difference	-5.6671*	-5.6977*	
FIND	Level	-2.5030	-2.4966	I(1)
	1st Difference	-4.8749*	-7.5451*	
HC	Level	-3.6037*	-3.5849*	I(0)
	1st Difference	-6.7620*	-13.8999*	
K	Level	-1.7476	-1.6897	I(1)
	1st Difference	-5.4995*	-5.1404*	
LAB	Level	-1.0262	-1.5221	I(1)
	1st Difference	-3.5461**	-4.0384**	
STR	Level	-1.3572	-1.1011	I(1)
	1st Difference	-7.0235*	-8.5782*	
OPENNESS	Level	-3.6059**	-3.6129**	I(0)
	1st Difference	-5.2195*	-8.2587*	
Y	Level	-1.6643	-1.5612	I(1)
	1st Difference	-7.6424*	-7.6876*	

*Note: *, **and *** denote 1%, 5% and 10% significance level respectively, the optimal lag structure is determined by SIC. Source: Researcher's Estimation (2017)*

Empirical Estimate of the model- Objective 1: Effect of Simple Tariff rate on Performance of Textile Industry**-** Proceeding to the co-integration test for objective 1; the bounds co-integration test result revealed that the computed F-Statistics for Wald test is 4.59 on approximation and the value exceeds both the upper bounds and lower bounds critical values for all level of significance (see Table 4). Therefore, there is a long-run relationship between simple tariff rates, financial development, energy consumption, openness and textile industry performance in Nigeria.

Table 4: Bounds Testing for Co-Integration Analysis

Computed Wald F-Statistic: 4.5912 (AIC Lags = 1)		
Bounds level:	Lower I(0):	Upper I(1):
1% critical bounds value	2.79	4.10
5% critical bounds value	2.22	3.39
10% critical bounds value	1.95	3.06

Source: Researcher's computation using E-views, 10

After establishing long-run relationship on the objective, we further estimated the impact of simple tariff rate on the performance of the textile industry in Nigeria[3]. The outcomes of the objective are presented in Table 5. In the long-run, simple tariff rate is negative and significantly related to on textile industry performance in Nigeria. This implies that a 1.0% rise in simple tariff rate would decrease the level of the textile industry performance by 5.96% on approximation.

[3]All variables were logged and estimation period is from 1986-2015.

Table 5: ARDL Regression Results on the Effect of Simple Tariff rate on Performance of Textile Industry in Nigeria

Long-run Results Variable	**Coefficient**	**Short-run Results Variable**	**Coefficient**
STR	-5.9567* (0.001)	ΔSTR	-1.8752 (0.161)
LAB	15.3521** (0.016)	ΔSTR_{t-1}	3.7872* (0.000)
$ENERGY$	-61.1112* (0.014)	ΔLAB	17.7339* (0.012)
K	2.1679*** (0.066)	ΔLAB_{t-1}	
EXC	-3.8784* (0.003)	$\Delta ENERGY$	-40.2369*** (0.098)
HC	-54.8351* (0.003)	$\Delta ENERGY_{t-1}$	
$FIND$	-0.7119 (0.423)	ΔK	1.8821 (0.113)
$Openness$	-2.6579 (0.175)	ΔK_{t-1}	-4.0398* (0.008)
		ΔEXC	-2.2231*** (0.066)
		ΔHC	-27.1371** (0.016)
	-	ΔHC_{t-1}	
	-	$\Delta FIND$	-0.8224 (0.413)
		$\Delta FIND_{t-1}$	
		$\Delta OPENNESS$	-3.0704 (0.168)
		$\Delta OPENNESS_{t-1}$	
	-	ECM (-1)	-0.1551* (0.001)
C	148.3087** (0.051)		
R-SQUARE	0.9544		
AdJ. R-SQUARE	0.8880		
F-STATISTICS	14.3833 (0.0000)*		
AIC	2.4616		
SIC	3.2704		
D-WATSON	2.7868		
J–B normality test	2.6137		
Breusch–Godfrey serial correlation LM test	1.4769 (0.1413)		
ARCH test	0.4642 (0.5019)		
Heteroskedasticity Test: Breusch-Pagan-Godfrey	0.4012 (0.9526)		
Ramsey RESET test	0.1155		

*Note: *, ** and *** denote 1%, 5% and 10% significance level respectively and probability values in parenthesis.*
Source: Researcher's Estimation from E-views, 10

Also, a 1.0% rise in both capital and labour input use lead to about 2.17% and 15.35% increase in textile industry performance, while energy consumption dampens the industry performance by about 61.11%. The effect of the exchange rate is negative and significant on textile industry performance in Nigeria, while human capital development, trade openness and financial development are negatively related with the textile industry performance. However, in the short-run, evidence shows that trade liberalization policy measure through simple tariff rate has a lag effect before it can be effective in the textile industry in Nigeria. The results, however, show a positive significant lagged effect for simple tariff rate impact on textile industry performance in Nigeria. Specifically, a 1.0% rise in past simple tariff rate value (trade policy) raises the level of textile growth by about 3.78%, while the current increases in tariff rate lower the textile industry performance by 1.88% over the period of analysis. In general, the major factor affecting the textile industry performances in short-run are simple tariff rate, labour force, energy inputs, exchange rate fluctuations and human capital development in Nigeria. Moreover, the speed of adjustment to restore equilibrium in the dynamic model following a disturbance is around -0.155, implying that a deviation from the long-run equilibrium is corrected for by approximately 15% after each year. In addition to the above results, the CUSUM and CUSUM square parameter stability test was conducted and presented in figure 1 and 2 to show that the estimated parameters in this study is stable during the sample period (1986-2015).

This study concurs with the Solow growth theory which argues that production technology uses labour and capital as the main input into the production process while energy consumption decreases it's because of additional costs which are paid out of profits. It also validates the null hypothesis which assumed that simple tariff rate has a negative significant effect on the exportation of textiles product in Nigeria. Consequently, one may hypothesize a positive relationship between simple tariff rate (STR) and textile industry performance because of industrial protection across the industries. Such a relationship may however, not hold in the Nigerian case because the government over the years has been opening up the boarder to encourage imports. The results from this study concurs with the views of Ahmed (2016) and Musila and Yiheyis, 2015 who argues that both exchange rate devaluation that is associated with free trade policy will allow the prices of imported intermediate inputs to rise which will then impact negatively on output growth.

Figure 1: Stability test, Recursive Estimates (OLS) CUSUM Test

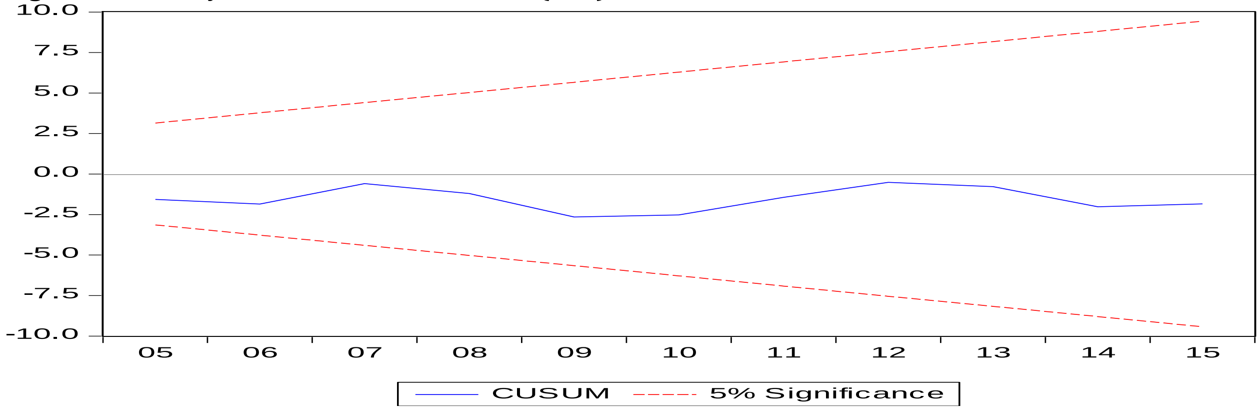
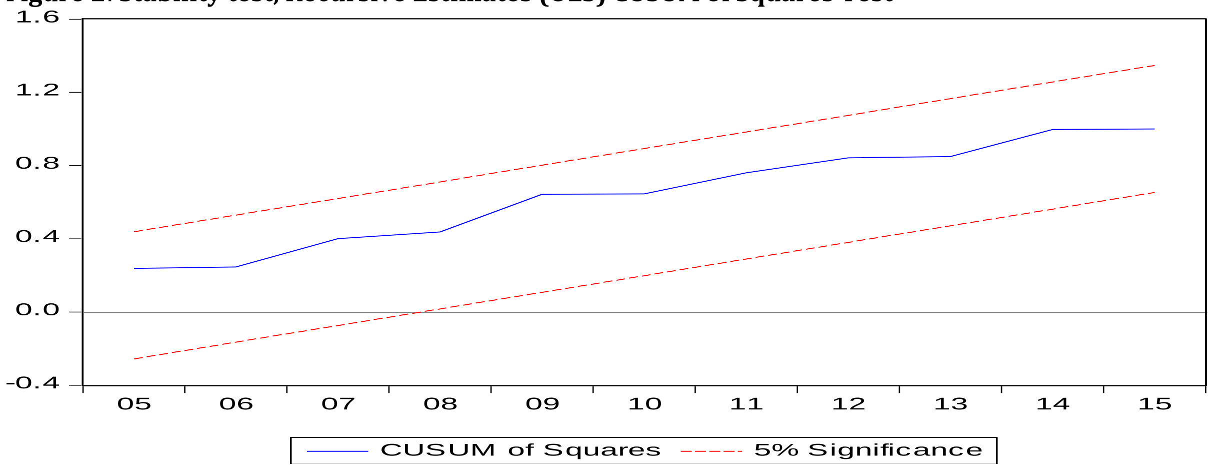


Figure 2: Stability test, Recursive Estimates (OLS) CUSUM of Squares Test



In general, the overall fit of the analysis is quite good (R2 = 0.95 and adjusted R2 = 0.89) as explained by the R-squared. The R-squared shows that our model explained approximately 95% variations in textile performance in Nigeria without autocorrelation as shown in the value of Durbin-Watson test statistics. Thus, shows that the result is reliable in explaining the dynamic between textiles industry performance and trade liberalization in Nigeria.

Effect of the Nigerian Real Effective Exchange Rate on Textiles Industry Performance: For objective 2; the bounds test statistic yields evidence of a long-run relationship between our measure of exchange rate and textile industry performance in Nigeria.

Table 6: Bounds Testing for Co-Integration Analysis

Computed Wald F-Statistic: 4.9808 (AIC Lags = 1)		
Bounds level:	Lower I(0):	Upper I(1):
1% critical bounds value	3.15	4.43
5% critical bounds value	2.45	3.61
10% critical bounds value	2.12	3.23

Notes: for the Wald F-Statistic; Asymptotic critical value bounds are obtained from Table C1 (iii) Case III: unrestricted intercept and no trend for k = 6 (Pesaran et al., 2001, pg. 300).

Source: Researcher's computation, (2017)

Table 7: ARDL Regression Results on the effect of Real Effective Exchange Rate on Textile Industry in Nigeria

Long-run Results		**Short-run Results**	
Variable	**Coefficient**	**Variable**	**Coefficient**
LAB	11.6459* (0.012)	ΔSTR_{t-1}	
$ENERGY$	-10.1432 (0.517)	ΔLAB	-0.2478 (0.987)
K	2.1679*** (0.066)	ΔLAB_{t-1}	2574.2902* (0.003)
EXC	-1.6026** (0.025)	$\Delta ENERGY$	-10.9632 (0.462)
HC	-39.3469* (0.001)	$\Delta ENERGY_{t-1}$	-17.7695 (0.161)
$FIND$		ΔK	0.5917 (0.558)
$Openness$	2.3049 (0.157)	ΔK_{t-1}	-4.0398* (0.008)
		ΔEXC	-0.2064 (0.838)
		ΔHC	-12.2937 (0.153)
	-	ΔHC_{t-1}	18.7949** (0.029)
	-	$\Delta FIND$	-0.8224 (0.413)
		$\Delta OPENNESS$	3.2197 (0.155)
	-	ECM (-1)	-0.3969* (0.000)
C	-191.3564* (0.000)		
R-SQUARE	0.9095		
AdJ. R-SQUARE	0.8121		
F-STATISTICS	9.3341 (0.0001)*		
AIC	3.0035		
SIC	3.7172		
D-WATSON	2.2721		
J–B normality test	1.2720		
Breusch–Godfrey serial correlation LM test	0.7238 (0.4116)		
ARCH test	0.3159 (0.9775)		
Heteroskedasticity Test: Breusch-Pagan-Godfrey	0.87076 (0.3597)		
Ramsey RESET test	2.7339 (0.1241)		

Note: *, ** and *** denote 1%, 5% and 10% significance level respectively and probability values in parenthesis. Source: Estimated from E-views, 10

The empirical analysis of the effect of real effective exchange rate on textile industry performance in Nigeria showed that in both long and short-run, exchange rate impact negatively on the textile industry performance in Nigeria. This implies that a 1.0% appreciation in the real effective exchange rate would decrease the level of textile performance by about 1.60%. This finding concur with the study of Arezki et al. (2012), who claimed that commodity exporting countries face larger terms of trade fluctuations which render their real exchange rate volatile than other countries. They reiterated further that increased volatility in the real effective exchange rate hurts the economy through its adverse consequences on private agents' consumption and investment decisions. Also, the result further showed that a 1.0% rise in trade openness will help mitigates the performance of the textile industry in Nigeria in both long and short-run. This result is in line with the work of Yanikkaya, (2003), who emphasized that trade openness enhances economic growth through increased variety of intermediate goods and capital equipment, access to more efficient technology, and higher capacity utilization. Equally, trade openness provides a larger market for domestic producers and allows them to reap the benefits of international trade (Alam et al., 2012; Falvey et al., 2013).

Figure 3: Stability test, Recursive Estimates (OLS) CUSUM Test

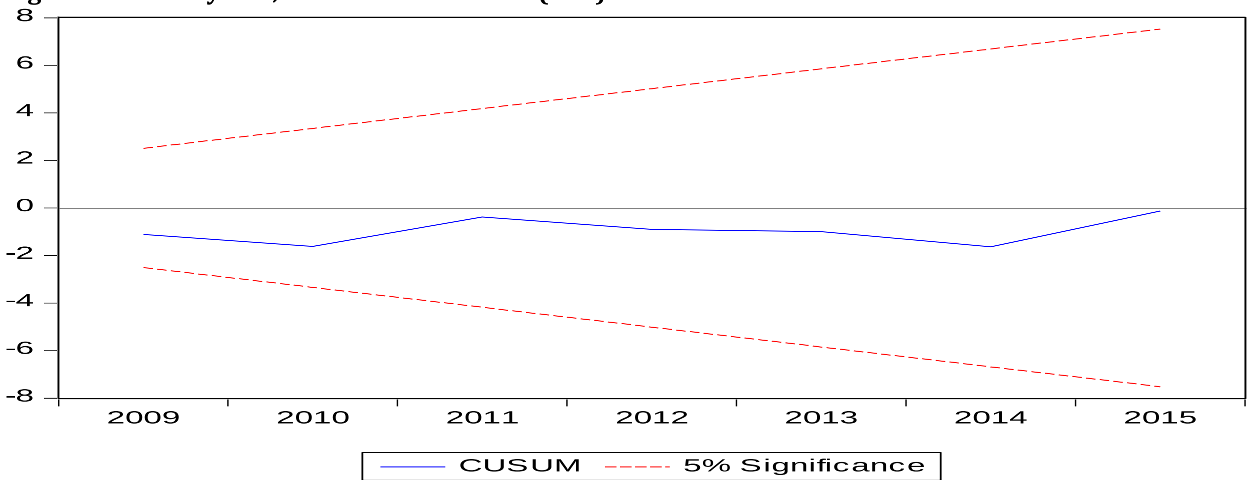
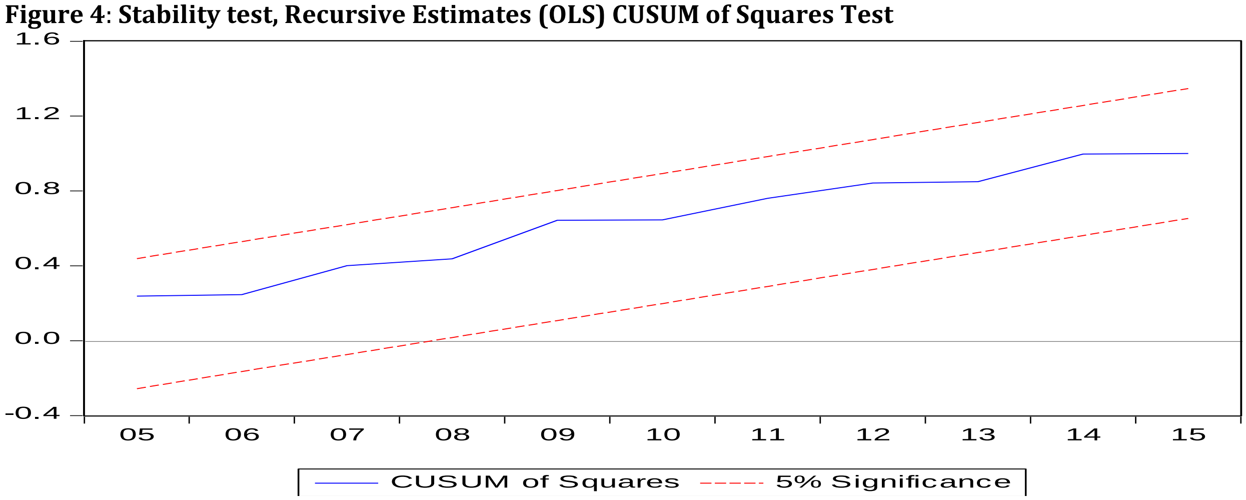


Figure 4: Stability test, Recursive Estimates (OLS) CUSUM of Squares Test



Effect of trade openness on textiles industry Performance in Nigeria: The empirical analysis of objective 3 is carried out in Table 8 and 9 respectively. Starting from the bounds test co-integration, the result revealed a Wald test statistic value of 10.66 on approximation. The value is greater than both the upper bounds and lower bounds critical values according to Pesaran et al. (2001). Therefore, we concluded that there is a long-run relationship between trade openness and textile industry performance in Nigeria.

Table 8: Bounds Testing for Co-Integration Analysis

Computed Wald F-Statistic: 10.6642 (AIC Lags = 1)		
Bounds level:	Lower I(0):	Upper I(1):
1% critical bounds value	2.79	4.10
5% critical bounds value	2.22	3.39
10% critical bounds value	1.95	3.06

Notes: for the Wald F-Statistic; Asymptotic critical value bounds are obtained from Table C1 (iii) Case III: unrestricted intercept and no trend for k = 8 (Pesaran et al., 2001, pg. 300).

Source: Researcher's computation (2017)

However, to determine the magnitude of the relationship between trade openness and textile industry performance in Nigeria, we proceed to estimating the ARDL and presented the results in Table 4.9below. The dependent variable is the logarithms of textile performance values.

Table 9: ARDL Regression Results on the effect of trade openness on textiles industry Performance in Nigeria

Long-run Results		**Short-run Results**	
Variable	**Coefficient**	**Variable**	**Coefficient**
STR	-2.7318 (0.299)	ΔSTR	-16.3248* (0.006)
LAB	-0.6845 (0.879)	ΔSTR_{t-1}	6.5681*** (0.059)
$ENERGY$	-19.3306* (0.549)	ΔLAB	62.0364** (0.026)
K	2.7649 (0.199)	ΔLAB_{t-1}	-20.0829*** (0.090)
EXC	-1.8382 (0.231)	$\Delta ENERGY$	44.5355** (0.038)
HC	-54.8351* (0.003)	$\Delta ENERGY_{t-1}$	12.5405 (0.299)
$FIND$	3.2903** (0.018)	ΔK	4.5199** (0.032)
$Openness$	-17.4957** (0.023)	ΔK_{t-1}	-4.0306 (0.111)
		ΔEXC	0.3701 (0.482)
		ΔEXC_{t-1}	2.7215** (0.029)
	-	$\Delta FIND$	5.2999** (0.012)
		$\Delta OPENNESS$	-10.3996** (0.041)
		$\Delta OPENNESS_{t-1}$	2.8819 (0.277)
	-	ECM (-1)	-0.4819* (0.011)
C	210.9124 (0.249)		
R-SQUARE	0.9959		
AdJ. R-SQUARE	0.9631		
F-STATISTICS	30.3392 (0.0083)*		
AIC	0.6245		
SIC	1.8139		
D-WATSON	2.8488		
J–B normality test	2.6982		
Breusch–Godfrey serial correlation LM test	0.1731 (0.9977)		
ARCH test	0.07845 (0.7817)		
Heteroskedasticity Test: Breusch-Pagan-Godfrey	0.4012 (0.9526)		
Ramsey RESET test	0.1155		

Note: *, ** and *** denote 1%, 5% and 10% significance level respectively and probability values in parenthesis. Source: Estimated from E-views, 10

The long-run results reveal that the effect of trade openness on textile industry is negative and statistically significant at 5%; meaning that a 1.0% rise in trade openness would decrease the level of textile industry performance by about 17.49%. These findings are similar to the work of Ahmed (2016); Musila and Yiheyis, 2015; Ulaşan, 2015; Clemens and Williamson, 2001; O'Rourke, 2000, but differs with the work of Keho (2017), who found a positive relationship between trade openness and output growth in Cote d'Ivoire in both short and long run. Similar to our study, Ahmed (2016), used linear ARDL and focused on Nigeria, found a negative long-run impact of trade openness on output growth but a positive growth effect in the short run. Musila and Yiheyis, (2015) found trade-policy induced openness to having negative and significantly affected investment and the rate of economic growth in Kenya. Thus, this study proposed a restrictive trade policy on textiles materials in the country, because opening up the border to foreign competition has led to collapse and closure of many textile factories in Nigeria as they could not compete with the relatively cheap imports.

Figure 7: Stability test, Recursive Estimates (OLS) CUSUM Test

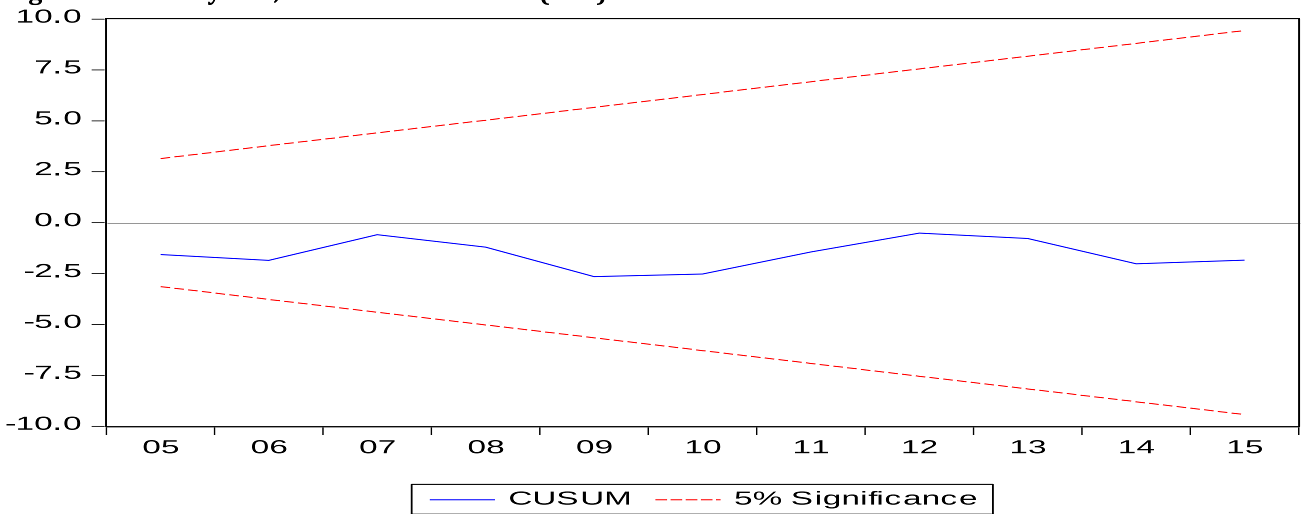
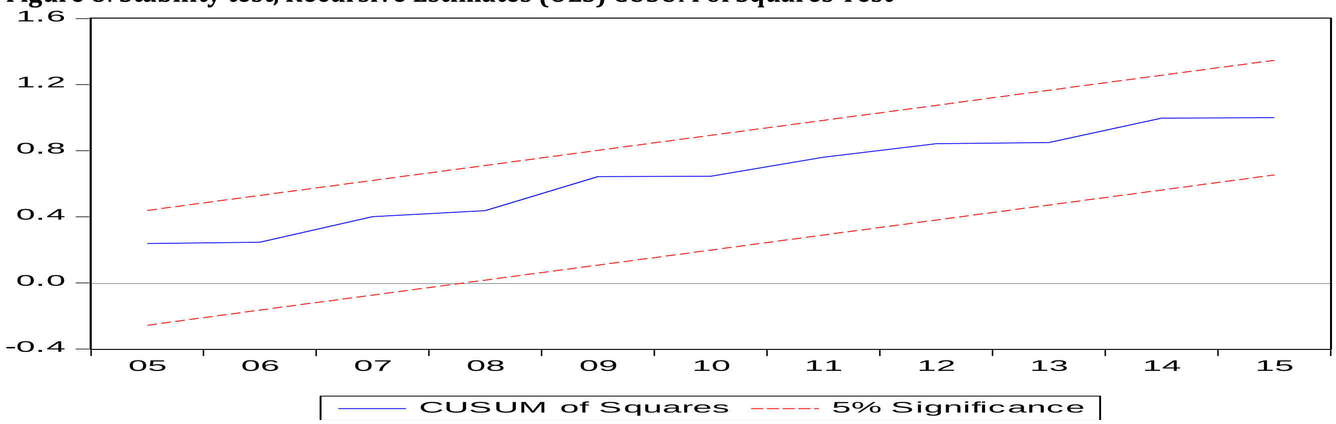


Figure 8: Stability test, Recursive Estimates (OLS) CUSUM of Squares Test



The post estimation stability test results in Figure 4.7 & 4.8 and Table 4.11 showed that the residual series are normally distributed as suggested by the Jarque–Bera statistics. The Breusch–Godfrey LM test statistics indicate that the model does not have significant serial correlation problem, while the ARCH test and the Ramsey RESET test respectively indicated that the residuals are homoscedastic and the model has correct functional form.

5. Conclusion and Policy Recommendations

This study conducted an empirical study on the relationship between trade liberalization policies and textile industry performance in Nigeria over the period 1986 -2015. The study showed that trade liberalization measured through simple tariff had a significant impact on textile industry performance in Nigeria. Trade liberalization has a lag effect on textile industry performance. Moreover, the study finds statistically significant evidence to suggest that Nigerian textile industry has benefitted from the rising appreciation in exchange rate. Hence, based on the findings of the study, we conclude that trade liberalization has significant effect on the performance of the Nigerian textile industry from 1986 to 2015. Thus, we recommend that Nigerian government should provide a favorable business environment for textile industry to strive, while putting in place right measures to curb the devaluation of the naira, in order to improve the trade balance. Further, a restrictive trade policy on textiles materials in the country is required, because opening up the border to foreign competition will continue to expose them leading to collapse and closure of many textile factories in Nigeria as they could not compete with the relatively cheap imports.

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The Role of Basic Business Skills Development and Their Influence on South African Small, Medium and Micro Enterprise Sustainability

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Abstract: South African Small, Medium and Micro Enterprises (SMMEs) have received vast amounts of attention from both government and scholars over the years, mainly due to the socio-economic value they add to the national economy. Notwithstanding the importance of these business entities to the South African economy, prior research suggests that South African SMMEs have one of the worst sustainability rates in the world; mainly attributable to the influence of unmanaged economic factors. Included in these economic factors is the matter of a scarcity of skills, particularly that of basic business skills. Though limited research has been conducted on the individual business skills which require development in South African SMMEs the perception was formulated that the development of basic business skills in these business entities may have a positive influence on their attainment of key businesses objectives in the foreseeable future. As such, empirical research was performed which fell within the positivistic research paradigm; data were gleaned from South African SMME management through means of a questionnaire. Stemming from the results, it was found that although there is a dire need for the development of basic business skills in South African SMMEs. It can be argued that some basic business skills were more important to develop than others as only a few had a positive influence on the attainment of business objectives.

Keywords: *Basic business skills, Small, Medium & Micro Enterprises, South Africa, sustainability*

1. Introduction

In 1996 South African Small, Medium and Micro Enterprises (SMMEs) were first formally recognised by the South African government as drivers of the national economy (Bruwer, 2016). According to legislation[4]these business entities have the responsibility to attain three main socio-economic objectives. They pertain to the decreasing of national unemployment through job-creation, the diminishing of national poverty through wealth-dissemination, and the boosting of the national economy through adding value to the national Gross Domestic Product (GDP) (South Africa, 1996).Despite the fact that South African SMMEs make up approximately 90% of all business entities operating in the country (Mouloungui, 2012), while simultaneously contributing up to 57% to the national GDP (Naidoo & Urban, 2010;Thabethe, 2013), national unemployment[5] and national poverty[6] have not improved over the past two decades since the formal recognition of SMMEs by national government (Biyase, 2009;Cant &Wiid, 2013;Moloi, 2013).The foregoing is placed in perspective when taking into account that more than 50% of South Africans live in poverty; making ends meet on ±R25.00 per day / ±R779.00 per month (Cole, 2015;Grant, 2015). Additional evidence to support this view is provided through the statistics presented in Table 1. It is evident from Table 1that both unemployment and poverty are still major problems in South Africa. Particularly between 2000 and 2016 there was an increase of an estimated 3.3 million unemployed South Africans (an increase of 28.9%)while the Gini-index hovered between 0.60 and 0.69 over the same timeframe. Hence, taking into account the three socio-economic objectives which South African SMMEs are responsible to achieve, it is fair to assume that the sustainability[7] of these business entities is very weak.

[4]In the context of this paper, the term "legislation" refers to the National Small Business Act No. 102 of 1996 and the National Small Business Amendment Act No. 26 of 2003.

[5]South African unemployment is generally measured by the unemployment rate, as based on the narrow definition; referring to a percentage of a country's estimated population who are unemployed and actively searching for employment opportunities (Ashipala, 2010;Fransman, 2014).

[6]Poverty in South Africa is measured by the Gini-coefficient; a measurement which shows how equally wealth is disseminated in a country – 0 represents absolutely equal dissemination of wealth while 1 represents absolute unequal dissemination of wealth (Meyer, 2016).

[7]Sustainability pertains to the attainment of relevant business objectives through the fulfilment of economic responsibilities, social responsibilities and/or environmental responsibilities, all with the intent to remain in operation

Table 1: Summary of poverty, unemployment and estimated population size of South Africa between 2000 and 2016

Year	Gini-coefficient	Unemployment rate	Estimated population size	Estimated unemployed citizens
2000	0.68	25.4%	44.9 million	11.4 million
2001	0.65	27.9%	45.1 million	12.6 million
2002	0.60	29.2%	46.2 million	13.5 million
2003	0.60	29.6%	47.0 million	13.9 million
2004	0.60	27.1%	47.7 million	12.9 million
2005	0.69	26.6%	48.4 million	12.9 million
2006	0.65	25.6%	49.0 million	12.5 million
2007	0.64	23.2%	50.0 million	11.6 million
2008	0.63	22.5%	50.3 million	11.3 million
2009	0.63	23.7%	51.0 million	12.1 million
2010	0.69	24.9%	51.6 million	12.8 million
2011	0.63	24.8%	52.2 million	12.9 million
2012	0.63	24.9%	52.8 million	13.1 million
2013	0.63	24.7%	53.4 million	13.2 million
2014	0.65	25.1%	54.0 million	13.6 million
2015	0.68	25.4%	54.5 million	13.8 million
2016	N/A	26.7%	55.0 million	14.7 million

Sources: (Tregenna & Tsela, 2012; OECD, 2015; Trading Economics, 2017; Worldometers, 2017; World Bank, 2017).

The assumption above is supported by previous research (Wiese, 2014) where it was found that the sustainability of South African SMMEs is believed to be among the worst in the world. This is mainly the case since approximately 75% of these business entities fail after being in existence for only three years (Fatoki, 2014; Siwangaza, Smit, Bruwer, & Ukpere, 2014). Despite the fact that previous research (Kunene, 2008; SAICA, 2015) has identified an array of factors which adversely influence the overall sustainability of South African SMMEs, the two most notable factors include macro-economic factors and micro-economic factors (Radas & Božić, 2009). These two factors are briefly elaborated on below (Bruwer & Van Den Berg, 2017):

- **Macro-economic factors:** Those factors which stem from outside a business entity, which impacts on the economy of a country, including its inhabitants (both legal- and natural persons) over which management have limited control. Examples of such factors include *inter alia* changes in interest rates, changes in inflation rates, changes in taxation rates, national service delivery, supply and demand and changes to legislation.
- **Micro-economic factors:** Those factors which stem from inside a business entity, which impacts on the stakeholders of the relevant business entity (both legal- and natural persons) over which management have reasonable control. Examples of such factors include *inter alia,* changes in customer satisfaction, product- and/or service quality, basic business skills of relevant stakeholders and changes in financial performances and/or financial positions.

According to previous studies(Brand, Du Preez, & Schutte, 2007; Olawale & Garwe, 2010; Herrington, Kew, & Kew, 2010; Cant, Erdis, & Sephapo, 2014) a major micro-economic factor which adversely influences the sustainability of South African SMMEs is a lack of basic business skills[8].The phenomena of scarce skills stems directly from the political history of South Africa (Apartheid) where the majority of the population was excluded from reasonable access to fair opportunities such as education, freedom of movement, and freedom of association. In addition, over the past two decades of democracy (post-Apartheid), in an attempt to "bridge

for the foreseeable future (Van Calker, Berentsen, Giesen, & Huirne, 2005; Jeon, Amekudzi, & Guensler, 2010;Lebacq, Baret, & Stilmant, 2013).

[8]In a recent study, (Mamabolo, Kerrin, & Kele, 2017) describe basic business skills as those skills pertaining to business management, financial management, human resource management and marketing. Albeit the latter, the term "basic business skills" is not clearly conceptualized in a South African SMME dispensation.

the gap" in relation to scarce skills, education policies were updated which favour throughput over meritorious achievements which, in turn, adversely impacted literacy-levels across the board (South Africa, 2016). This has resulted in poorly equipped people entering the business world, including entrepreneurs and employees of SMMEs. Hence, using the above as a basis, the inference can be made that if basic business skills are developed in South African SMMEs, it may have a positive influence on the attainment of their business objectives in the foreseeable future. As such, for this research study, the following two hypotheses were developed and tested:

H_1: Basic business skills of members of management, if developed in South African SMMEs, have a statistically significant positive influence on the attainment of their key objectives.
H_2: Basic business skills of employees, if developed in South African SMMEs, have a statistically significant positive influence on the attainment of their key objectives.

For the remainder of this study, discussion takes place under the following headings: 1) literature review and conceptualisation of business skills, 2) research design, methodology and methods, 3) results and discussion, and 4) conclusion.

2. Literature Review and Conceptualisation of Business Skills

The lack of scarce skills is a major socio-economic problem for South Africa (Ramukumba, 2014;Mateus, Allen-Ile, & Iwu, 2014;World Economic Forum, 2014). This is specifically the case since the lack of scarce skills has been found to have an adverse influence on the national economy in the sense that it excludes a large proportion of South African citizens from participating in economic activities (Polity, 2013). The lack of scarce skills is believed to stem directly from *inter alia* poor quality education, the lack of competent teachers, the lack of proper training opportunities, and the emigration of subject matter experts (IOL, 2008; Höppli, 2014; Duncan, 2014). While being aware of the issue, the South African government, in recent times, has highlighted an array of scarce skills which should be developed[9] by accredited education providers through identifying occupations that are in high demand and/or vacancies which are not easily fillable (DHET, 2015). Before elaborating further, it is important to conceptualise the term "skills" within the ambit of this study. The term "skills" is generally regarded as abilities, attributes and/or areas of expertise (Dictionary, 2017), this term is viewed differently by scholars around the globe. For example, (Kirschner, Van Vilsteren, Hummel, & Wigman, 1997) describes "skills" as actions which can be measured according to how well it is being carried out, while (García-Magariño, Gómez-Sanz, & Fuentes-Fernández, 2009) views "skills" as the capability to fulfil a goal. In addition, (Demetriou, Shayer, & Efklides, 2016) explain that "skills" serve as a control structure governing a specific class of actions that a person can perform in a specific context and (Thórisson et al., 2014) aver "skills" to be phenomena which consist of learning models and their context and sequence of execution. Taking into account the above, and for this research study, the term "skills" was conceptualised as follows:

Those abilities which can be learned and mastered, which can also be utilised and/or relied on when performing certain tasks, with the main intent to achieve certain pre-determined objectives.

Reverting to the scarce skills which need development in a South African dispensation, there exists a plethora of skills which are regarded as scarce to the national economy (DHET, 2015). Some of these scarce skills also relate to basic business skills (Cameron, 2014;FASSET, 2015). Taking into account the conceptualisation of the term "skills" above, it becomes apparent that basic business skills will pertain to attributes, knowledge and/or competencies which can be used and/or relied on in a business dispensation. This view is supported by (Mittelstaedt & Wiepcke, 2007) who regard the concept of "business skills" as abilities and/or capacities which can be used to enhance the economy, efficiency and effectiveness of a business. Thus, using the above as a foundation, the term "basic business skills" was conceptualised in this study as follows:

[9]Though that the manner in which skills can be developed falls beyond the scope of this study, it is worth noting that the latter strongly relates to cognitive development, as supported by an array of theories (Fischer, 1980), (Masson, 1990), (Anderson & Krathwohl, 2001).

Those fundamental abilities which can be learned and mastered, that are utilised and predominantly relied on when performing business-related tasks, with the main intent to achieve certain pre-determined business objectives.

In fundamental nature basic business skills should assist relevant stakeholders (i.e. owners, managers and employees) to perform business-related tasks in order to execute relevant business operations, with the main intent to attain pre-determined business objectives, all with the intent to assist a business to remain in operation for the foreseeable future (Panco & Korn, 1999; Dahlqvist, Davidsson, & Wiklund, 2000; Thornhill & Amit, 2003).A non-exhaustive list of the most scarce basic business skills is shown and described in Table 2(Woolard, Kneebone, & Lee, 2003; Daniels, 2007).

Table 2: Non-exhaustive list of scarce business-related skills

Skill	Description
Accounting skills	Those competencies pertaining to the discipline of accounting, as required by a person to competently perform functions in relation to the: 1) recording of transactions in the books of a business, 2) reporting on the financial situation of a business, and 3) providing recommendations on how the financial situation of a business can be improved on.
Administrative skills	Those skills related to running a business or keeping an office organised through means of: 1) virtual organisation, 2) file management, 3) performing planning activities, 4) solving office-related problems, 5) communication with stakeholders (verbal and non-verbal), and 6) time management activities.
Business management skills	Those competencies related to holistic controlling-, leading-, organising- and planning activities in a business.
Communication skills	Those skills that build trust and strong relationships between applicable stakeholders of a business entity through means of *inter alia* 1) active listening abilities, 2) proper non-verbal methods, and 3) proper verbal methods
Computer literacy skills	Those skills required to appropriately use computers and related technology efficiently Such skills may include, among other, data capturing, word processing, and electronic communications.
Conflict management skills	Those skills that limit the negative aspects of conflict while simultaneously harnessing the positive aspects of conflict so as to enhance effectiveness and/or performance in a business entity.
Decision making skills	Those skills involved in choosing between two or more courses of action towards possible solutions to a given problem.
Entrepreneurial skills	Those skills which are used to create, organise and manage a business entity successfully.
Financial management skills	Those skills required to efficiently and effectively manage money in such a manner to accomplish the financial objectives of a business entity.
Leadership skills	Those skills required to make thoughtful decisions about an organisation's mission and objectives, and properly allocate resources to achieve them.
Legal skills	Those skills required to understand the legal aspects and legislative requirements to which a business entity needs to take note of and/or comply with.
Listening skills	Those skills that enable one to pay attention to and effectively interpret what other people are saying.
Literacy skills	Those attributes that are required to read and write. They include such things as awareness of the sounds of language, awareness of print, and the relationship between letters and sounds.
Management skills	Those skills which pertain to that of problem-solving, decision-making,

Skill	Description
	planning, delegation, communication, and time management.
Marketing skills	Those skills that enable a set of processes for creating, communicating and delivering value to customers and for managing customer relationships in ways that benefit a business entity and its applicable stakeholders.
Mathematical skills	The ability to understand and analyse numerical information and to make the correct conclusions and decisions.
Motivational skills	Those skills required to promote productivity in the employees of a business entity. These include actions or strategies that will elicit a desired behaviour or response by a stakeholder.
Multitasking skills	Those skills that enable an individual to perform more than one task at any given time.
Negotiation skills	Those skills involving formal discussions between people who have different aims or expectations, with the view to reaching an agreement on mutual grounds.
Organising skills	Those skills required to use time, energy and resources effectively to achieve goals set by a business entity.
People skills	Those skills required to communicate effectively with people in a friendly way in the business environment both internally and externally. This generally takes place by making use of sincere empathy.
Planning skills	Those skills that enable one to look ahead and accomplish goals or avoid emotional-, financial-, physical- or social problems and ultimately allow one to make and implement decisions.
Presentation skills	Those skills that are required to deliver effective and engaging presentations to a variety of audiences. This includes the structuring a presentation, its design, the tone of voice used and the body language of the presenter.
Problem-solving skills	Those skills that follow a process of finding solutions to difficult or complex issues related to a business entity.
Research skills	Those skills required to identify a problem, determine the informational resources needed, to respond to the problem to adequately reduce and/or eliminate the applicable problem through means of proper recommendations
Staff management skills	Those skills required to manage all employees in a business entity, including the development of staff skills through training and other forms of staff development as well as the identification, development and implementation of training needs and programs available for staff.
Thinking skills	Those skills that enable the mental processes to solve problems, make decisions, ask questions, construct plans and evaluate ideas, among other cognitive abilities.
Time management skills	Those skills that involve the process of planning and exercising conscious control over the amount of time spent on specific activities, all with the intent to increase effectiveness, efficiency or productivity.
Writing skills	Those skills that enable non-verbal communication through text that allows a business entity's management to organise knowledge and beliefs into convincing arguments through to relevant stakeholders, and to convey the meaning of it through well-constructed written documents which can take many forms

Sources: (Thornhill & Amit, 2003; Strydom & Tustin, 2003; Mughan, Lloyd-Reason, & Zimmerman, 2004; Clover & Darroch, 2005;Onoh, 2011 ;DHET, 2015; Mamabolo, Kerrin, & Kele, 2017)

3. Methodology

This study was empirical in nature[10] and constituted survey research. In addition, this study was quantitative in nature (falling within the positivistic research paradigm) which entailed the collection of primary data from 500 respondents through means of questionnaires. The deployed questionnaires comprised 22 questions; 14 multiple choice questions, 3 checkbox questions, 4 Likert-scale questions and 2 ratio questions – rendering the questionnaire to be quantitative in nature and allowing for the study to fall within the positivistic research paradigm. For the Likert-scale questions both a five point Likert-scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree) and a six point Likert-scale (1 = not applicable, 2 = strongly disagree, 3 = disagree, 4 = neither agree nor disagree, 5 = agree, and 6 = strongly agree) were used.

The targeted population was South African SMME members of management; all respondents had to adhere to the following delineation criteria:

- Respondents had to have decision-making power in their respective SMMEs.
- Respondents had to be actively involved in their SMMEs.
- Respondents had to have at least 1 year's managerial experience.
- Respondents had to be South African citizens.
- Respondents' SMMEs had to employ between 1 and 50 full-time employees.
- Respondents' SMMEs had to be regarded as "micro enterprises", "small enterprises" or "very small enterprises".
- Respondents' SMMEs had to be regarded as sole traders, partnerships or close corporations.
- Respondents' SMMEs had to be regarded as non-franchised.
- Respondents' SMMEs had to operate in the Cape Metropole.
- Respondents' SMMEs had to exist for at least 1 year.
- Respondents' SMMEs had to be based in the Fast Moving Consumer Goods (FMCG[11])industry.

Furthermore, applicable ethical considerations were adhered to in this study. Particularly, all respondents voluntarily participated in this study and could withdraw from it at any time without being discriminated against. All information provided by respondents were handled with the highest levels of confidentiality, the anonymity of respondents was guaranteed and all respondents were safeguarded from physical harm.

4. Results and Discussion

For the remainder of this section, discussion takes place under the following headings: 1) demographical information on sampled SMMEs, 2) sustainability of sampled SMMEs, 3) basic business skills of employees, 4) basic business skills of management, 5) Basic business skills requiring development and their influence over the attainment of key objectives and overall sustainability.

Demographical information on sampled SMMEs: Stemming from the results, the following demographical information was evident for sampled SMMEs:

- 77.4% were sole traders, 8.8% were partnerships and 13.8% were close corporations.
- 100% were non-franchised business entities.
- 39.6% existed for between 1 and 5 years, 29% existed for between 6 and 10 years and 31.4% existed for longer than 10 years.

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[10]This study was also exploratory in nature as no previous studies have been conducted on the identified hypotheses, especially in a South African dispensation.

[11]The Fast Moving Consumer Goods industry is characterised by business entities which sell non-necessity and necessity products on which marginal mark-ups are placed, which have a lifespan of less than three years and are consumed regularly by customers (Bose & Pekny, 2000;Nagarajan & Sheriff, 2013).

- 80.2% were micro enterprises (employed between 1 and 5 employees), 12.2% were very small enterprises (employed between 6 and 10 employees) and 7.6% were small enterprises (employed between 11 and 50 employees).
- 100% operated in the FMCG industry.
- 100% operated in the Cape Metropole.

Thus, the inference can be made that the average sampled SMME was a non-franchised micro enterprise sole trader which have been in existence for between 1 and 5 years, while employing between 1 and 5 employees at a given time, while operating in the FMCG industry within the Cape Metropole.
In addition to the above, the following demographical information pertained to respondents (members of management) of sampled SMMEs:

- 35.8% were owners, 32.4% were managers and 31.8% were owner-managers.
- 53.6% had between 1 and 5 years' managerial experience, 27% had between 6 and 10 years' managerial experience and 19.4% had more than 10 years' managerial experience.
- 100% were South African.
- 100% were actively involved in their respective SMMEs.
- 100% had decision making power.
- 30.2% did not have a secondary qualification, 41.6% had a secondary qualification and 28.2% had a tertiary qualification.

Using the above as a basis, it can be inferred that the average respondent was a South African owner of an average SMME (see above), while being actively involved in the respective SMME and having decision making power; possessing between 1 and 5 years' managerial experience with a secondary qualification as highest qualification.

Sustainability of sampled SMMEs: To better understand the sustainability of sampled SMMEs, respondents were asked to rate their agreement of statements pertaining to the sustainability of their respective SMMEs through means of a 5-point Likert-scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree). Each statement started with a base sentence which read: "This business ..." A summary of the results is shown in Table 3.

Table 3: Respondents' perceptions on their respective SMMEs' attainment of key objectives

This business ...	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Mean
Has more income than expenses	0.80%	5.00%	19.40%	56.20%	18.60%	3.87
Has more assets than liabilities	0.60%	6.20%	17.80%	53.20%	22.20%	3.90
Has sufficient cash on hand	0.40%	6.20%	15.20%	57.40%	20.80%	3.92
Has a good reputation with customers	0.60%	0.20%	3.80%	35.00%	60.40%	4.54
Has a good reputation with competitors	-	1.20%	20.40%	47.00%	31.4%	4.09
Has a good reputation with suppliers	-	0.60%	6.00%	39.80%	53.60%	4.46
Will remain operational in the foreseeable future	0.40%	0.40%	6.20%	42.40%	50.60%	4.42
Can be regarded as sustainable	0.20%	0.20%	4.60%	52.00%	43.00%	4.37

Source: Researchers' own construct

Stemming from the results in Table 3, it appears that respondents regarded their respective SMMEs to be relatively sustainable; supported by mean scores for all line items in the range of 3.87 and 4.54. In core respondents perceived their SMMEs to achieve relevant economic responsibilities (i.e. being profitable, liquid and solvent) while simultaneously having a sound reputation with applicable stakeholders. In essence, respondents also had the perception that that their SMMEs will remain operational for the foreseeable future. Although the results in Table 3 appear favourable, it should be noted that respondents may have been biased in their responses (respondent bias). In order to ensure that respondents' perceptions were reasonable, they were asked to provide insight on whether their respective SMMEs were achieving their applicable objectives. From the results, 2.20% indicated "no", 34.00% said "unsure" and 63.80% stated "yes". Taking into account that 95.00% of respondents viewed their respective SMMEs as sustainable while only 63.80% of respondents indicated that their SMMEs are achieving their applicable objectives, it is possible that respondents may have been biased in their responses. In order to test this view, internal consistency (reliability) was tested through means of calculating a Cronbach's Alpha value for the applicable Likert-scale question. A value of 0.625 was calculated which is below the acceptable0.700 value. As such, it appears that respondents may have been biased with their answers provided.

Basic business skills of employees: In order to understand whether employees possessed basic business skills, respondents were asked to rate their agreement of relevant statements through means of a 6-point Likert-scale (0 = not relevant, 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree). Each statement started with a base sentence which read: "In this business, employees need to have appropriately developed ..." A summary of the results is shown in Table 4.

Table 4: Respondents' perceptions on basic business skills required by employees

In this business, employees need to have appropriately developed	Not relevant	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Mean
Accounting skills	46.80%	5.80%	12.80%	15.40%	16.00%	3.20%	1.58
Administrative skills	40.00%	2.80%	17.40%	9.40%	24.60%	5.80%	1.93
Business management skills	35.20%	4.80%	13.60%	19.00%	20.00%	7.40%	2.06
Communication skills	2.00%	1.80%	6.20%	11.60%	54.40%	24.00%	3.87
Computer literacy skills	38.20%	6.00%	10.40%	15.20%	18.80%	11.40%	2.05
Conflict management skills	16.80%	4.60%	12.20%	20.00%	37.60%	8.80%	2.83
Decision making skills	38.20%	6.00%	10.40%	15.20%	18.80%	11.40%	2.89
Entrepreneurial skills	16.80%	4.60%	12.20%	20.00%	37.60%	8.80%	2.01
Financial management skills	16.20%	4.80%	11.20%	19.80%	37.80%	10.20%	2.04
Leadership skills	35.40%	4.80%	17.40%	16.40%	18.20%	7.80%	2.58
Legal skills	36.60%	4.60%	11.60%	17.20%	25.00%	5.00%	0.95
Listening skills	21.60%	4.00%	15.20%	20.80%	30.60%	7.80%	3.98
Literacy skills	64.40%	8.40%	8.20%	8.00%	9.00%	2.00%	3.80
Management skills	0.80%	2.20%	7.00%	9.20%	50.00%	30.80%	2.50
Marketing skills	2.80%	1.80%	5.00%	14.60%	54.60%	21.20%	2.37
Mathematical skills	24.40%	3.80%	13.00%	24.00%	25.80%	9.00%	3.25
Motivational skills	26.60%	4.60%	16.20%	18.20%	26.40%	8.00%	2.97
Multitasking skills	11.80%	2.60%	7.00%	17.40%	49.60%	11.60%	3.82
Negotiation skills	14.80%	4.00%	12.20%	19.40%	37.60%	12.00%	3.00
Organising skills	2.80%	2.20%	6.60%	16.00%	43.60%	28.80%	3.32
People skills	15.60%	3.40%	8.40%	21.20%	40.80%	10.60%	4.00
Staff management skills	9.40%	2.60%	9.00%	17.40%	49.20%	12.40%	2.21
Planning skills	2.20%	1.20%	4.00%	10.00%	52.00%	30.60%	2.64
Presentation skills	32.80%	4.00%	8.00%	24.40%	26.20%	4.60%	2.52
Problem-solving skills	20.40%	4.80%	12.00%	22.40%	34.00%	6.40%	3.36
Research skills	24.40%	5.60%	9.60%	21.00%	32.40%	7.00%	1.64
Thinking skills	7.20%	2.20%	10.00%	21.00%	46.80%	12.80%	3.77
Time management skills	43.40%	9.20%	12.20%	14.60%	16.80%	3.80%	3.63
Writing skills	3.20%	1.20%	4.60%	17.60%	53.60%	19.80%	3.92

Source: Researchers' own construct

From the results in Table 4[12], it appears that it was not mandatory for employees to possess legal skills, research skills and accounting skills. Of all remaining basic business skills, the skills which were mostly required by employees, according to respondents, were as follows:

- Writing skills (82.60% agreement).
- People skills (82.60% agreement).
- Listening skills (80.80% agreement).
- Administrative skills (78.40% agreement).
- Literacy skills (75.80% agreement).
- Thinking skills (73.40% agreement).
- Multitasking skills (72.40% agreement).
- Time management skills (68.20% agreement).

Using the above as a basis, respondents were asked to describe the overall development of the basic business skills of their employees. From the results, 7.80% of respondents indicated that it was not well developed, 41.00% stated that it was developed on an average level, while 51.20% mentioned that it was well developed.

Basic business skills of management: Similarly, to the above, to ascertain whether management possessed basic business skills, respondents were also asked to rate their agreement of relevant statements through means of a 6-point Likert-scale (0 = not relevant, 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree). Each statement started with a base sentence which read: “In this business, management needs to have appropriately developed ...” A summary of the results is shown in Table 5.

Table 5: Respondents’ perceptions on basic business skills required by management

In this business, management needs to have appropriately developed	Not relevant	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Mean
Accounting skills	18.60%	2.00%	9.40%	12.80%	39.80%	17.40%	3.05
Administrative skills	13.20%	1.40%	6.60%	10.00%	45.20%	23.60%	3.43
Business management skills	4.40%	1.20%	5.20%	14.20%	46.00%	29.00%	3.83
Communication skills	0.40%	0.60%	1.20%	8.00%	38.60%	51.20%	4.37
Computer literacy skills	20.00%	5.00%	8.20%	13.20%	28.80%	24.80%	3.00
Conflict management skills	3.60%	1.60%	4.80%	17.00%	45.20%	27.80%	3.82
Decision making skills	0.60%	1.20%	1.00%	6.80%	44.80%	45.60%	4.31
Entrepreneurial skills	3.00%	1.80%	7.80%	18.20%	33.20%	36.00%	3.85
Financial management skills	4.00%	1.80%	8.20%	17.40%	46.60%	22.00%	3.67
Leadership skills	2.20%	1.40%	4.00%	11.40%	41.80%	39.20%	4.07
Legal skills	32.40%	5.60%	11.80%	22.20%	20.60%	7.40%	2.15
Listening skills	0.20%	0.80%	1.80%	7.20%	40.80%	49.20%	4.35
Literacy skills	0.60%	0.80%	0.80%	5.40%	48.60%	43.80%	4.32
Management skills	1.40%	0.80%	4.00%	12.20%	46.80%	34.80%	4.07
Marketing skills	6.60%	1.60%	6.80%	19.60%	38.80%	26.60%	3.62
Mathematical skills	1.60%	0.40%	4.60%	12.00%	57.20%	24.20%	3.95
Motivational skills	5.00%	1.00%	4.60%	13.80%	42.00%	33.60%	3.88
Multitasking skills	0.80%	0.60%	4.40%	8.60%	34.40%	51.20%	4.29
Negotiation skills	2.00%	1.00%	2.60%	10.80%	49.20%	34.40%	4.07
Organising skills	1.20%	0.40%	4.00%	9.60%	44.80%	40.00%	4.16

[12]A Cronbach Alpha of 0.905 was calculated for the variables in Table 4.

People skills	0.40%	0.20%	2.00%	6.00%	36.20%	55.20%	4.43
Staff management skills	3.00%	0.40%	3.60%	10.60%	43.40%	39.00%	4.08
Planning skills	0.80%	0.60%	4.80%	10.00%	50.40%	33.40%	4.09
Presentation skills	9.00%	1.40%	5.40%	15.40%	48.20%	20.60%	3.54
Problem-solving skills	1.20%	2.00%	1.40%	10.60%	46.80%	38.00%	4.14
Research skills	16.60%	3.60%	6.00%	24.20%	35.40%	14.20%	3.01
Thinking skills	0.80%	0.20%	0.80%	6.80%	44.20%	47.20%	4.35
Time management skills	0.60%	1.20%	5.40%	7.60%	35.00%	50.20%	4.26
Writing skills	0.60%	0.60%	1.00%	3.20%	40.60%	54.00%	4.45

Source: Researchers' own construct

Stemming from the results in Table 5[13], it becomes apparent that respondents did not regard it as mandatory for them to possess legal skills. Of all remaining basic business skills, the ten skills which were most appropriately developed in management, according to respondents, were as follows:

- Writing skills (94.60% agreement).
- Literacy skills (92.40% agreement).
- Thinking skills (91.40% agreement).
- People skills (91.40% agreement).
- Decision making skills (90.40% agreement).
- Listening skills (90.00% agreement).
- Communication skills (89.80% agreement).
- Multitasking skills (85.20% agreement).
- Time management skills (85.20% agreement).
- Problem-solving skills (84.80% agreement).

For the sake of comparison respondents were asked to describe the overall development of basic business skills for themselves. From the results, 1.60% of respondents indicated that it was not well developed, 24.60% stated that it was developed on an average level while 75.40% mentioned that it was well developed.

Basic business skills requiring development for the achievement of key objectives and overall sustainability: Using the above as a basis, it appears that employees and management only require certain basic business skills to be developed at an appropriate level to perform their relevant tasks. Before performing any inferential statistics, respondents were asked whether the basic business skills possessed by management and employees, respectively, had any influence over the attainment of sampled SMMEs' key objectives. From the responses received, 87.40% agreed that the basic business skills possessed by employees had an influence over the attainment of key objectives of sampled SMMEs, while 93.80% agreed that the basic business skills possessed by management had an influence over the attainment of key objectives of sampled SMMEs. To determine whether the above perceptions had merit, linear regression analysis was conducted. A summary of the statistically significant results is shown in Table 6. The calculated R^2 was calculated at 15.5% which indicates a weak explanation of the variances among relevant variables. Alternatively stated, there existed very few statistically significant relationships where independent variables could predict the dependent variable. This view is justified by the results – out of 56 tested relationships, only 10 (17.86% of all tested relationships) were found to be statistically significant; 6 positive and 6 negative.

[13]A Cronbach Alpha of 0.866 was calculated for the variables in Table 5.

Table 6: Summary of linear regression analysis results of statistically significant relationships

		Attainment of key objectives
Independent variables	R^2	0.155
	F	1.392
	Sig.	0.036
Employees' literacy skills	Stdβ	**0.090***
	Sig.	0.100
Employees' mathematical skills	Stdβ	**-0.112***
	Sig.	0.059
Employees' negotiation skills	Stdβ	**-0.112***
	Sig.	0.067
Employees' time-management skills	Stdβ	**0.125****
	Sig.	0.039
Employees' writing skills	Stdβ	**-0.145****
	Sig.	0.019
Management's administration skills	Stdβ	**-0.149***
	Sig.	0.079
Management's mathematical skills	Stdβ	**0.109***
	Sig.	0.055
Management's research skills	Stdβ	**0.118****
	Sig.	0.042
Management's time management skills	Stdβ	**-0.162*****
	Sig.	0.004
Management's writing skills	Stdβ	**0.127****
	Sig.	0.027

*Statistically significant at the 10% level
** Statistically significant at the 5% level
*** Statistically significant at the 1% level

Source: Researchers' own construct

When placing emphasis on the results in Table 6, it becomes apparent that the attainment of sampled SMMEs' key objectives was statistically significantly positively influenced by management's mathematical skills (β = 0.109), research skills (β = 0118), and writing skills (β = 0.127).In addition, the attainment of key objectives in sampled SMMEs was statistically significantly negatively influenced by management's administration skills (β = -0.149) and time management skills (β = - 0.162).Thus the following statistically significant predictions can be made with at least 90% confidence:

- When sampled SMMEs' management improves their mathematical skills, research skills and writing skills, it will have a statistically significant positive influence on the attainment of key business objectives.
- When sampled SMMEs' management improves their administration skills and time management skills, it will have a statistically significant negative influence on the attainment of key business objectives.

Reverting to Table 6, it also appears that the attainment of sampled SMMEs' key objectives was statistically significantly positively influenced by employees 'literacy skills (β = 0.090) and time management skills (β = 0.125). Furthermore, the attainment of key objectives in sampled SMMEs was statistically significantly negatively influenced by employees' mathematical skills (β = -0.112), negotiation skills (β = -0.112), and writing skills (β = - 0.145).

Thus the following statistically significant predictions can be made with at least 90% confidence:

- When sampled SMMEs' employees improve their literacy skills and time management skills, it will have a statistically significant positive influence on the attainment of key business objectives.

- When sampled SMMEs' employees improve their mathematical skills, negotiation skills and writing skills, it will have a statistically significant negative influence on the attainment of key business objectives.

Although the statistically significant predictions above are straight-forward, the reasons for these predictions are not clear. It may be probable that if management spends too much time on mundane tasks (which can be outsourced), that they do not add optimal value to sampled SMMEs which may adversely influence the attainment of key objectives. In addition, it may also be probable that if employees became too skilled with managerial-related tasks, that they may abuse their positions ("freedom" to act on management's behalf) in sampled SMMEs. Regardless of the possible reasons, this is an avenue for further research. Notwithstanding the above, no concrete evidence is provided to accept H_1 and H_2 as majority of tested relationships were statistically insignificant (82.14% of all tested relationships) resulting in the rejection of both hypotheses.

5. Conclusion

According to popular literature there is a need for the development of basic business skills in South Africa, particularly in SMMEs. Although no previous study has been conducted on the individual basic business skills which need development in South African SMMEs, this study was conducted with the main intent to explore the latter phenomena. From the research conducted it was found that certain basic business skills are more important to possess than others in sampled South African SMMEs, in order to perform relevant tasks. For example, legal skills and research skills were regarded as unnecessary for employees to have while only legal skills (to some extent) were regarded as unnecessary for management to possess. Notwithstanding the aforementioned, both management and employees were perceived, by respondents, to have properly developed basic business skills. When focus was shifted to the basic business skills which should be developed in sampled South African SMMEs, to assist in the attainment of key objectives, the results showed that an improvement in management's mathematical skills, and research skills and writing skills, and employees' literacy skills and time management skills had a statistically significant positive influence thereon. Regardless of the fact that the results of the study rejected both developed hypotheses, conducting the same research study in a different geographical region and/or industry may yield different results. Hence, it may still be probable that the development of basic business skills in South African SMMEs may actually have a positive influence on the attainment of key business objectives.

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The Moderating Effect of Work-Life Balance on Job Satisfaction

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Abstract: In emerging cultures, job satisfaction and work-life balance are ongoing factors in gaining the ultimate competitive advantage for organizations. Work-life balance is a core ingredient for job satisfaction and for quality work performance, and employees need to have a sense of commitment to their jobs. The study attempts to determinethe extent to which work-life balance has a moderating effect onjob satisfaction in a call centre organization. The approach for the study was quantitative, and a self-developed questionnaire was the research instrument. The sample was107 employees and, both descriptive and inferential statistics were utilized. A probability random sampling technique was chosen. As evidenced in the study, room for improvement was required with both job satisfaction and work-life balance and; the validity and reliability for the study were high. The hypothesis for the study was partially accepted. In addition to a significant relationshipthat exists between the main constructs, work-life balance does have a moderating effect onjob satisfaction. The results and recommendations provide anecdotal evidence to call centre managers and policy makers to reach new levels of operations in order to meet their strategic intent and goal attainment.

Keywords: *Job satisfaction, workforce, work-life balance, flexible work arrangements, employee performance*

1. Introduction

Competitive challenges and the convergence of trends forces organizations to review their daily practices spelling the need for quality leadership with strategic intentions to map out processes to accommodate employee needs for performance, productivity and end results. Belcourt and McBey (2016) asserts that environmental scanning is the monitoring of factors that influence the organization to identify factors that may affect organizational and HR strategies. Globally, competitive organizations need to emerge as this is the terrain of the knowledge worker equipped to outperform their competitors. In line with this, job satisfaction and work-life balance needs integration to create a balance for a harmonious environment in the domains of work and home life and, to be aligned with the company's vision and mission statement. Job satisfaction has become the pillar on which employee performance is hinged (Agbozo, Owusu, Hoedoafia, & Atakorah, 2017). It is also worker attitude toward job, including rewards and, organizational and physical characteristics of the environment where work is performed (Leap & Crino, 1993 cited in Bakotic & Babic, 2013). Job satisfaction is an affective or emotional response towards many areas of an employee's work (Schermerhorn, 1993 cited in Bakotic & Babic, 2013). The feelings of people toward their job are partially feelings that they have for life as job satisfaction increases life satisfaction (Nabavi & Shahryari, 2012). Job satisfaction has been approached by some researchers from the perspective of need fulfilment, which is based on Maslow's theory (Worf, 1970 cited in Bakotic & Babic, 2013). Remuneration, career advancement, colleagues, and managers' support, amongst others play an important role in obtaining employee job satisfaction (Hasan & Teng, 2017). Additionally, factors such as, lower convenience costs, higher organizational and social and intrinsic reward increases job satisfaction (Mulinge and Mullier, 1998, cited in Babotic & Babi, 2013) Evidently, absenteeism, stress and burnout affect productivity, compelling continuous workplace improvements for the avoidance of any form of hindrance with productivity. The aim is for job satisfaction to supersede job dissatisfaction. For employees, critical factors such as co-worker relationship, management support, and the embeddedness of job rotation and job enrichment are needed in the workplace. Satisfied employees work with more effort and are likely to remain with the organisation.

Furthermore, work demands intensifies daily, compelling drastic actions to be taken, including the need to balance work demands and employees' personal roles. Work-family conflict surfaces due to work demands which infringes on a person's home activities and personal life. Responsibility is with both work activities and family obligations. Work life balance outlines the ability to satisfy three basic domains of life which relates to work, family and personal lives (Delecta, 2011 cited in Sathya Dev, 2017). According to Hasan and Teng (2017), people are exposed to the idea of work-life balance for the achievement of total satisfaction in life, in addition to being happy or performing well at work. At times the responsibility of work, family demands and caregiving becomes overwhelming which affects employee well-being. Working women have the responsibility of family obligations and yet attend to work responsibilities. Numerous studies emphasize the balance of a person's level of work and private life (Fisher, Bulger & Smith, 2009) and; the business value of work-life balance spellsgreat advantages and organisational outcomes. During the 1980s and 1990s, female liberation and the number of childcare facilities increased (Van Gils & Kraaykamp, 2008) provoking women to participate in the workforce and the increased number of working couples are evident today (Nomaguchi, Milkie & Bianchi, 2005), also due to employees' financial implications. Companies that invest in work-life balance indicate lower employee turnover (Mayberry, 2006 cited in Downes & Koekemoer, 2011). This intervention from work to home exists and is ongoing. Managing work-life balance, a managerial strategy ensures improvement and employee performance (Lasch, 1999 cited in Sathya Dev, 2017). Lazar (2010) emphasizes that employees who manage their work and personal life roles effectively are motivated to give optimal work performance. Work-life strategy has the potential to align corporate and individual goals for a win-win scenario by addressingthe business needs of the company and the individual's needs (Akthar & Azeem, 2014). Although a cost-factor is involved with programmes, today's organizations are aware of the long term benefits. Nayak & Patra (2013) indicate that there are factors other than wages that improves employee performance, that is, non-monetary. Kersley, Alpin, Forth, Bryson, Bewley, Dix and Oxenbridge (2005) emphasize that work-life balance does not have full integration in major corporate environments because of the continuous changing business dynamics. On the contrary, it has a major concern for those organizations that consider their human resources who steer the company in the right direction.

Human resource departments should promote policies, hence incorporating corporate social responsibility, employee well-being and work-life balance (Bell, Rajendran & Theiler, 2012 cited in Tasnim, Hoosain & Enam, 2017). The current study attempts to investigate the impact of work-life balance on job satisfaction. Several studies have exploredjob satisfaction and work-life balance, including the demand by employees for work-life balance (Hasan & Teng, 2017); whereas other authors have shown a projection of the positive evidence of the relationship between work-life balance and job satisfaction (Ramadevi & Nagini, 2014 cited in Hasan & Teng, 2017).Often, organisations do not want to relinquish their control but in the long-term flexible work arrangements and EAPs, amongst others would result in attaining job satisfaction. Furthermore, apositive relationship between work-life balance and job satisfaction exists (Ramadevi & Nagini, 2014 cited in Hasan & Teng, 2017). The study is important for several reasons. Firstly, the key constructs of work-life balance and job satisfaction applies to both males and females at any time in their career paths. Secondly, an employee's quality of life and productivity at work has a profound effect when organizations attempt to maximise employee potential and their productivity levelsfor organizational outputs. Lastly, work-life balance and job satisfaction has been explored mostly in the educational sector and in the business context whereas the current study focused on a call centre organization. The study explores the constructs of supervisory support, work itself, working conditions, promotions and pay for job satisfaction; followed by work flexibility, work-family conflict, management support, child and elderly care and employee assistance programmes for work-life balance.

2. Literature Review

Supervisory support: According to Therkelsen and Fiebick (2003), supervisors are the linchpins of employee relations and, employee loyalty is with the immediate supervisor. In the same vein, Rose and Wright (2005) highlight that employee commitment and loyalty is dependent on good leadership, communication, recognition and training. Supervisors are also the link between call centre agents and upper level management (Rose & Wright, 2005). Supervisory support influences the levels of employees' job satisfaction which includes trust and; their care includes employee involvement in decision making and, the resultant effect is experience of higher levels of job satisfaction (Luddy, 2005). In their studies, Ko, Hur & Smith-Walter found that obtaining support from supervisor and dependent care program of the organisation and the flexibility of scheduling indicated a positive and high relationship with job satisfaction.

Work itself: Job satisfaction is dependent on employee satisfaction obtained from the job component (Luddy, 2005). Work itself is employees' tasks and duties as work provides opportunities for learning and growth; and job satisfaction may be evident if the work is stimulating and requires skill and capabilities (Robbins, Odendaal, & Roodt,2003). Luddy (2005) opines that employees prefer work duties that are mentally and physically stimulating. Further emphasis by Robbins et al. (2003) is that simple work may lead to boredom and frustration, thus leading to low levels of job satisfaction.

Working conditions: Atambo, Enock and Nyamwamu (2013) are of the view that working conditions relate to two way communications, employee involvement in organisational goals, career development opportunities and teamwork, amongst others, including safe working conditions, free from danger. The humidity, noise, temperature, fatigue and shift work, amongst others are factors of concern. Theworking environment influences the employees'level of satisfaction and motivation. Social, organizational and physical factors are impetus for task and activity which then impacts worker performance (Strong, Jeannerert, McPhail & Bleckley, 1999 cited in Agbozo, Owusu, Hoedoafia, & Atakorah, 2017). A good workplace is checked by such characteristics as competitive wages, trusting relationship between the employees and management, equity and fairness for everyone, and a sensible work load with challenging yet achievable goals. A composite of these conditions makes the workplace the best possible working conditions for employees to work with high level of satisfaction (Agbozo, Owusu, Hoedoafia, & Atakorah, 2017).

Promotions: Promotions lead to responsibility, rank and a compensation package with improvement, hence increasing job satisfaction (Danish, Malik & Munir, 2012). With incentives, employees exert greater effort (Artz, 2008) and; promotions will only be an effective mechanism for eliciting greater effort if workers place significant value on the promotion itself (McCausland, Pouliakas & Theodossiou, 2005). Otherwise, organisations would simply use pay increases to reward effort and productivity. Promotions, associated with a sense of accomplishment influences job satisfaction (McCausland et al., 2005). With a significant change in compensation, promotions and benefits, there is worker satisfaction and productivity is increased (Mohamed, 2005 cited in Agbozo, Owusu, Hoedoafia, & Atakorah, 2017).

Pay: Many organizational managers are of the view that salaries and financial benefits increases job satisfaction. The fairness of pay structures in organisations are extremely significant because employees should feel that they are being compensated for the content of the work they deliver (Artz, 2008). Employees are in agreement that salaries will increase the job satisfaction and the resultant effect is that individual performance is also increased (Al-Zoubi, 2012). Performance pay increases job satisfaction by creating a work environment that rewards hard work and effort and; a higher level of satisfaction is evident. Performance pay increases productivity and therefore job satisfaction if workers can witness this and gain pride, confidence and self-worth (Artz, 2008). According to Luddy (2005), it is difficult to indicate that pay improves job satisfaction. The wage strategy contributes to maintain the workforce viability, the realization of the vision and the mission and, including the achievement of work objectives (Umar, 2012).

Work flexibility: A flexible work arrangement increases job satisfaction and helps to maintaina balance between work and life (Jaoko, 2012). Flexible working hours contributes in meeting employees'jobs and family obligations (Coetzee & Schreuder, 2011). Flexible working conditions include part-time work, job sharing, flexitime, shift swapping, and flexible working locations, amongst others; and working 30 hours per week is ideal for family responsibility (Bingham, Porter & Simmonds, 2008). Workplace flexibility (schedule flexibility and location flexibility) allows workers to control and adjust their arrangements to perform work-related duties (Casey & Grzywacz, 2008). The focus of flexibility in the workplace is to respond to women's' needs (Gunawan & Amalia, 2015). A salient point is that flexibility in timing and location of work is vital (Hill, Hawkins, Ferris & Weitzman, 2001, cited in Tasnim, Hoosain & Enam, 2017). Furthermore, flexibility at work with an attractive work place is the main success of maintaining work-life balance (Hutcheson, 2012). Research has addressed work-life balance and work-life balance policies, such as, flexitime adequately (Clutterbuck, 2003; Richman, Civian, Shannon, Hill &Brennan, 2008, cited in Downes & Koekemoer, 2011).

Work family conflict: Work family conflict, a type of inter-role conflict are pressures from the work and family domains which are sometimes compatible (Baltes, Kotrba, LeBreton, Michel & Mitchelson, 2009). The theoretical approaches to work-life conflict include boundary theory, compensation theory, role theory and social identity theory, amongst others (Baltes et al., 2009). Role theory explicitly suggests that work and family domains involve several roles with numerous demands, hence bringing about conflict; and individuals spend more time in one domain (work) with less time and role performance in the other domain (family) (Baltes et al., 2009). Also, role conflict and role ambiguity (work role stressors) causes tension, anxiety, depression and irritability (Coetzee & Schreuder, 2011). Coetzee and Schreuder (2011) emphasize that strain in one role alters role performance in another; and certain patterns of role behaviour may conflict with the expectations of behaviour in the other roles. Work-family conflict destabilizes the family, decreases job satisfaction and productivity (Chan & Wang, 2015) and increases absenteeism. Hence, the incompatible pressures make it difficult with rolefulfilment that is required. Chan and Wang (2015) opine that with balance there is a greater sense of well-being.

Management support: Managers and supervisors make the operational decisions about work-life balance (Maxwell & McDougall, 2004). Managers encourage work-life programs and activities, and enthusiastically advocate work-life programs and tasks, thus encouraging employees to support the programmes (Lazar, 2010). With supervisory support, there are solutions to work-related problems or emotional support on non-work-related employee problems (Tayfur & Arslan, 2013). Singh (2013) advocates that the help of supervisors impacts on the positive effect on work-life balance. On the contrary, managers' negative attitude towards flexible working hours discourages employees from using work-life programmes (Lazar, 2010), yet their support is essential for work-life balance initiatives.

Child and elderly care: The responsibility of children and elderly care prevails with employees. With dedication to work a person is unable to look after their children and responsibilities are neglected (Hunter, 2012). Childcare facilities providean opportunity for working women to be active at work and take care of their families (Babu & Raj, 2013). This overwhelming responsibility affects employees' well-being, including their relationships with their children and other family members (Kossek, Colquitt & Nel, 2001). By working and bringing work home employees are unable to provide the support for their elder care (Hunter, 2012). Call centre employees engaged in shift work andspend less time with their families (Hunter, 2012). They are exhausted from long shift work and undesirable working conditions and as a result they neglect their family duties.

Employee Assistance Programmes: Employee Assistance Programmes (EAPs) help employees with alcohol abuse, substance abuse, stress, family issues and financial problems, amongst others (Carrell et al., 2015). When recovered, employees become more valuable to the organisation with productive years of service (Carrell et al., 2015). These programmes helpsemployees with job performance and well-being (Els, Pienaar & Sieberhagen, 2011), including the prevention of health issues (Carrell, Elbert, Hatfield & Warnich, 2015). EAPs identify employee concerns and aims to design interventions to resolve such concerns (Kinder, Hughes & Cooper, 2008). Today's EAPs which include behavioural well-being serve a diverse clientele and contributes in dealing with poor performance. Tomazevic, Kozjek and Stare, (2014) have addressed the positive and negative consequences due to work-life balance. The study diagnoses the variables of work-life balance and job satisfaction with a quantitative investigation and; sheds light on several areas. Although work-life balance and job satisfaction is not in its infancy stage as it has been researched over many years, but they are powerful trends in today's organizations as they have the potential to maximize employees' potential and organizational goals.

3. Methodology

Research approach: A quantitative approach was selected for the study. The design of the research methodology is to assess call centre employees' perceptions of work-life balance and job satisfaction and, to determine whether work-life balance has a moderating effect on job satisfaction. Factor analysis, reliability, descriptive statistics and correlations were utilized in the study

Respondents: The current study was conducted at a call centre agency, in KwaZulu-Natal, South Africa. The sample comprised of male and female respondents of various age categories including number of children and length of service. The adequacy of the sample for job satisfaction was determined using the Kaiser Meyer-Olkin Measure of Sampling Adequacy (0.741) and the Bartlet's Test of Spherecity (1196.492). In addition, work-life balance was also determined using the Kaiser-Meyer Olkin Measure of Sampling Adequacy (0.793) and Bartlet's Test of Spherecity (1216.047). The majority of the respondents were 25-34 years of age (71.0%), followed by 20-24 years (23.4%) and, lastly 35-44 years (5.6%). The respondents were mostly female (69.2%), followed by male (30.8%). The majority of respondents had one child (43.9%), some respondents had no children (33.6%), followed by respondents with two children (15.9%) and, lastly the lowest response was respondents with three or more children (6.5%). The majority of the respondents worked for 0-5 years (75.7%), followed by respondents who worked for 6-10 years (17.8%) and, lastly respondents worked for 11-15 years (6.5%) in this organization.

Measuring instrument: A self-developed questionnaire was utilized, of which Section A projected on the demographic factors which is measured using pre-coded option categories. Section B constitutes 10 items, of which 5 items projected on job satisfaction and a further 5 items related to work-life balance. Items were measured using a 5-point Likert scale ranging from strongly disagree (1), disagree (2), neutral (3), agree (4) and strongly agree (5). Pilot testing were conducted and the same protocol was adopted for the distribution of the main sample and; it was confirmed that the questionnaire was appropriate with relevance and construction.

Measures: The validity of Section B which constitutes job satisfaction and work-life balance was assessed using Factor Analysis. A principal component analysis was used to extract initial factors and an iterated principal factor analysis was performed using SPSS with an Orthogonal Varimax Rotation. The items with loadings >0.5 were considered to be significant. Factors with latent roots greater than unity were extracted from the factor loading matrix. The results from the Factor Analysis confirms the validity of the instrument (Table 1).

Table 1: Factor Analysis - Validity of the instrument

Job Satisfaction			Work-life Balance		
Factor	**Eigenvalue**	**% of Total Variance**	**Factor**	**Eigenvalue**	**% of Total Variance**
1	4.38	17.14	1	4.54	18.17
2	3.33	13.3	2	3.72	14.86
3	2.62	10.48	3	2.74	10.97
4	2.49	9.99	4	2.40	9.62
5	1.94	7.77	5	1.82	7.27

The reliability of the questionnaire was determined using Cronbach's Coefficient Alpha. The overall alpha coefficient for job satisfaction and work-life balance were0.585 and 0.630 respectively, indicating high internal consistency and reliability for both variables (Table 2).

Table 2: Reliability – Job Satisfaction and Work-life Balance

Job Satisfaction	Work-life Balance
Cronbach's Coefficient Alpha	Cronbach's Coefficient Alpha
0.585	0.630

Administration of the measuring instrument: The time frame was two weeks for the administration of the questionnaires which was conducted by an employee of the organization. The questionnaires were returned timeously. Hard copies of the questionnaire were utilized for distribution.

Statistical analysis: Both, descriptive and inferential statistics were utilized for the analysis of the quantitative data. The data collected was captured on Excel and the Statistical Package for Social Sciences (SPSS) was used to perform the statistical analyses. The results were presented in tabular form.

4. Results

The respondents were expected to respond to the dimensions of both job satisfaction and work-life balance using a 5 point Likert scale, which were analysed using descriptive statistics (Table 3). With regard to job satisfaction, Table 3 indicates that for each of the dimensions there is room for improvement, as evidenced when mean score value is compared against a maximum attainable score of 5. The analyses indicate that little improvement is needed in terms of supervisory support. On the contrary, pay requires the greatest attention in this organization. Employee perceptions with regard to working conditions are fairly high, followed by promotion and then work itself. Work itself requires a greater level of attention. Room for improvement is also needed with the work-life balance constructs. Little improvement is needed in terms of work family conflict as opposed to employee assistance programmes which requires the greatest attention. The organisation needs to take cognisance of the importance of these programmes for long-term benefits. In addition, the perceptions regarding management support are fairly high, followed by child and elderly care and then work flexibility. EAPs require the greatest attention and therefore, managers need to pay attention to this by accommodating employees' needs.

Table 3: Descriptive Statistics-Dimensions & Sub-dimensions of Job Satisfaction and Work-life Balance

Dimension	Mean	95% Confidence Interval Lower Bound	Upper Bound	Variance	Std. Dev.	Min.	Max.
Job Satisfaction							
Supervisory support	3.61	3.47	3.75	0.54	0.74	1.6	5.0
Work itself	2.79	2.67	2.91	0.39	0.63	1.20	5.0
Pay	2.76	2.63	2.89	0.46	0.68	1.0	5.0
Promotion	2.81	2.68	2.94	0.46	0.68	1.20	5.0
Working conditions	3.07	2.97	3.16	0.26	0.51	2.0	4.6
Work-life Balance							
Work flexibility	2.63	2.47	2.79	0.71	0.84	1.0	5.0
Work family conflict	3.25	3.08	3.42	0.80	0.90	1.0	4.8
Child and elderly care	3.02	2.88	3.16	0.53	0.73	1.4	5.0
EAPs	2.39	2.25	2.52	0.49	0.70	1.0	4.2
Management support	3.07	2.88	3.25	0.92	0.96	1.0	5.0

Frequency analyses were computed to obtain greater insight into employee perceptions regarding job satisfaction. With regard to supervisory support, 73.8% agree that their supervisor gives praise and credit for work well done; whereas 34.9% disagree that their supervisor gives attention to subordinates feelings. In addition, 46.7% agree that they find their work to be challenging and innovative and; on the contrary, 68.9% disagree that their work tasks are difficult to complete. With pay, 50.5% agree that they feel unappreciated by the organisation, considering the salary that they receive; whereas 68.8% disagree that the salary is based on their work performance. With promotion, 56.6% agree that the opportunities for advancement are limited and; on the contrary, 49.5% disagree that their organisation promotes employees based on favouritism. With working conditions, 61.7% agree that the organisation promotes work place safety; whereas 45.8% disagree in this regard.

Similarly, frequency analyses were also computed for work-life balance. With regard to work flexibility, 54.2% agree that they are responsible for their own schedules and; 54.7% disagree that the organisation has a flexitime programme. With work family conflict, 53.3% agree that their work puts a strain on their relationships with family members and; on the contrary 78.5% disagree that they take work home on a regular basis. With child and elderly care, 35.6% agree on the difficulty to find a full-time caregiver to take care of their family members. On the contrary, 40.2% disagree that the organisation promotes a balance between work and family life. For employee assistance programmes, only 15.1% agree that counselling was of tremendous help to employees; whereas 48.6% disagree that the organisation has measures in place to help them lead a balanced lifestyle. Also, 46.7% agree that management support provides the necessary tools to complete their work; whereas 37.4% disagree that management promotes work-life balance.

Hypothesis 1: The sub-dimensions of job satisfaction significantly inter-correlates with the sub-dimensions of work-life balance (Table 4).

Table 4 indicates the following correlations and hence, hypothesis 1 maybe partially accepted:

- There is a significant correlation with supervisory support and work flexibility at the 1% level of significance.
- Furthermore, supervisory support correlates inversely with work family conflict at the 5% level of significance.
- There is a significant correlation with pay and work flexibility at the 1% level of significance.
- There is an inverse correlation with promotion and work flexibility at the 1% level of significance.
- There is an inverse correlation with promotion and work family conflict at the 5% level of significance.
- There is a significant correlation with promotion and management support at the 5% level of significance.
- Working conditions correlates inversely with work flexibility at the 1% level of significance
- Working conditions correlates with work family conflict at the 1% level of significance.

Table 4: Correlations: sub-dimensions of work intensification and work-life balance

Dimensions		Work flexibility	Work-family conflict	Child and elderly care	EAPs	Management Support
Supervisory	r	0.342 **	-0.213*	-0.152	0.031	0.180
support	p	0.000	0.027	0.118	0.750	0.063
Work itself	r	-0.072	0.129	0.017	0.103	0.128
	p	0.461	0.185	0.862	0.292	0.188
Pay	r	0.363**	0.019	0.092	0.160	0.076
	p	0.000	0.849	0.346	0.099	0.438
Promotion	r	0.275**	-0.201*	-0.038	0.179	0.215*
	p	0.004	0.038	0.700	0.064	0.026
Working	r	-0.306**	0.336**	0.207	-0.184	0.037
conditions	p	0.001	0.000	0.032	0.057	0.705

Table 5: Correlation (Spearman's rho): Job Satisfaction and Work-life Balance

Dimension		r/p	Dimensions of Work-life Balance
Dimensions of Job Satisfaction	r p	1	
Dimensions of Work-life Balance	r p	0.268 0.000**	1

Table 5 reflects that there is a significant relationship between job satisfaction and work-life balance. Hence, hypothesis 1 is confirmed at the 1% level of significance.

5. Conclusion and Recommendations

In this study, the concept of job satisfaction and work-life balance were examined based on employees' response in a call centre organization. Both, job satisfaction and work-life balance were measured with five response items each. The recommendations and areas for improvement provide organizations with a snapshot view on each of the constructs of the study. Additionally, the recommendations for job satisfaction and work-life balance solves many operational problems which leads to optimal performance and for 21st century organizations that strive to meet their goals. In this study, there is room for improvement for each of the sub-variables of job satisfaction and work-life balance and a significantly relationship exists between job satisfaction and work-life balance.

With regard to *supervisory support*, it is recommended that supervisors pay constant attention to the needs of employees and adequate training be provided for supervisors on people management, call centre operations and keeping updated with new products or services. Employee experiences of supervisors' support is the extent to which they encourage and support employees (Griffin, Patterson & West, 2001 cited in Baloyi, van

Waveren & Chan, 2014). Interestingly, the authors found a positive relationship between supervisor support and the job satisfaction of employees. *Pay* which requires the greatest attention must be taken seriously by the top management team as pay is associated with employee performance, customer satisfaction, productivity scores and worker attitude. In line with this, Gunawan and Amalia (2015) assert that granting wages remuneration is a complex task and it reflects efforts to defend human resources for loyalty and commitment. Umar's (2012) assertion on an effective wage strategy is seen to contribute to a work unit's viability, the realization of the vision, mission and work targets. *Promotions,* which needs attention must be considered a priority and must generate motivation from top managers. In line with this, Lazear's (2000) view is that promotion is the shifting of an employee for a job of higher significance and, including higher compensation. Researchers emphasize that there is a strong correlation with job satisfaction and promotion opportunities, in addition to a positive association between promotional opportunities and job satisfaction (McCausland, Pouliakas & Theodossiou, 2005). With *work itself,* a greater level of attention is required and managers need strategize with job rotation to upskill employees to gain experience and knowledge. According to Arnold and Feldman (1996) the work itself will play a significant role in showing how satisfied a worker is with the job. Some improvement with *working conditions* is needed in this organization*.* For example, ergonomic factors, frequent short breaks to promote productivity and, flexible working conditions leads to engaged and high performing employees. Employees enjoy an environment free of harm and unpleasantness (Robbins, 1998 cited in Bakotic & Babic, 2013) and; they prefer working conditions similar to their home conditions. Some authors emphasize the link exists between working conditions and job satisfaction (Veitch, Geerts, Newsham & Marquardt, 2005 cited in Bakotic & Babic, 2013).

Although *work family conflict* which requires the least improvement must be taken seriously as employees need the flexibility and choice to be allowed to shift their working hours to accommodate family obligations. Some professional assistance such as a psychologist can be provided to address work-family conflict. Ahmad (2008) opines that researchers are recognizing that work-family conflict is a complex, multi-dimensional construct; with dual direction (work to family and family to work); including the multiple life roles such as spouse, elder care and home care, amongst others, that emerges. Additionally, *management support* requires little improvement in this organization. A supportive work-life climate encourages the support of supervisors (Lauzun, Major & Jones, 2010). In their research on work-life balance and job satisfaction, Yadav and Dabhade (2014) suggest that employers can make efforts to know the workload and job demands and; management should take steps to improve employee morale by implementing organizational strategies to enhance the work culture, amongst others. Although c*hild and elderly care* support is fairly high, managers need to institute programmes as the eventual outcome leans toward reduced absenteeism and an increase in performance levels. Babu and Raj (2013) postulate that childcare facilities in the modern context provide working women a chance to be active at work whilst their family is taken care of. Managers need to seriously consider a more comfortable work arrangement with a flexible work schedule to accommodate *work flexibility* in this organization. Balancing work and life also reduces employees' stress levels. Managers have the authority to negotiate the flexible work schedules for positions that are in high demand (Zeytinoglu, Cooke & Mann, 2009). *Employee assistance programmes* (EAPs) requires the greatest attention and therefore, managers need to institute the programmes so that employee assistance with work issues and personal matters are addressed. The integration of internal EAPs into an organization helps to mitigate the stress concerning change initiatives, for example, with involvement, planning and decision making (Beidel, 2005).

Work life balance has a moderating effect on the job satisfaction of call centre employees. From a managerial viewpoint, job satisfaction and work-life balance impacts on organizational outputs and therefore, policies need to be emended; whereas employees need to identify what is of utmost importance to them in their career paths. With the institution of flexible time, employees will be satisfied in knowing that their organization cares about them and their optimal job performance. Other avenues such as, outdoor activities relieve the many employee pressures and increases their coping strategies. Clearly, the balance with a person' work and personal lives is a major challenge for employees. The constructs of work-life balance, that is, work flexibility and EAPs require the greatest attention, whereas improvement is needed for the job satisfaction sub-variables relating to pay, the work itself and promotion. With support programmes, such as, EAPs and child and elderly care support, employees can function effectively and, maintain a balance in the domains of work and home. Therefore, work-life balance and its constructs have a mediating effect on job satisfaction.

The correlation results show some significant positive relationships that exists between work life balance and job satisfaction. The findings which has implications for future research places great emphasis on the need for workplace improvements and employee needs, and for management to constantly view their work-life balance programmes. Undoubtedly, organizations that strive to meet deadlines need to consider the implications of work-life balance on job satisfaction and, managers need to make gallant efforts to improve every aspect of the workplace so that employees are content and fully satisfied with their jobs.

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Work-Family Stressors and Work-Family Satisfaction: Effect of Sense of Coherence at a Metropolitan Municipality

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Abstract: This article contributes to emergent research by examining the linkage between work–family stressors and their effect on work-family satisfaction (WFS) at a metropolitan municipality in South Africa. Extant literature on stress has either not adequately examined the linkage between domain specific stressors and domain specific satisfaction or have suggested models with direct connections. The present study suggests a mediating model and assesses the mediation. Specifically, it claims that sense of coherence (SOC) plays a mediating part in the in the work and family stressors - WFS relationship. This mixed methods research applied a variance-based structural equation modelling (Partial Least Squares) to a sample of 307 professional level employees at a metropolitan municipality in South Africa. The finding supports the importance of SOC and its influence on WFS. Additionally, mediation hypotheses theorise how SOC plays a critical mediating influence in the work-family stressor-WFS relationship. Data analysis suggest that (a) work stressors and WFS interrelated in a manner that SOC fully mediated the effect of work stressors on WFS (b) SOC partially mediated the relationship between family stressors and WFS. The findings have both theoretical and practical implications.

Keywords: *Work-family stressors, work-family satisfaction, work-life balance, sense of coherence, mediation*

1. Introduction

Individuals encounter stress in their everyday life at work and home. Because of this, contemporary workplaces have designed and adopted benefitting practices that assist employees with the management of their work and family stressors towards achieving satisfaction and improved performance (Michel, 2015). Ko and Hur (2014) suggest that there is a need to understand the effects of these benefits on employee outcomes at work and home. Most scholars of these practices examine their outcome on performance and behavior (Kossek, Baltes & Matthews, 2011). However, in addition to workplace benefits, employees also use their personal resources (Hobfoll, 2001) to address stress in their environment in order to achieve satisfaction with work and family situations. In their study, Caprara, Barbaranelli, Steca and Malone (2006) found that a personal resource (self-efficacy) significantly contributed to satisfaction with work among teachers. Satisfaction with work is simply the perception of contentment that individuals derive from their daily work activities (Judge, Thoresen, Bono, & Patton, 2001). Ordinarily, it is not expected that an individual burdened with work and family stressors should derive satisfaction from such situations. Interestingly, scholars have reported that irrespective of high work stressors, individuals find satisfaction with work situations (Klassen & Chiu, 2010). This implies that intervening factors could be responsible for the derivation of such satisfaction in the face of stressors. The present study examined SOC as one of those intervening factors.

To appreciate the influence of work-family stressors on the achievement of work-family satisfaction among employees at a metropolitan municipality, it is vital to consider the mediating role of SOC. Scholars have recommended SOC as an individual’s personal resource for coping with stress (Feldt, Leskinen, Kinnunen & Ruoppila, 2003; Nielsen & Hansson, 2007). Literature reveals that individuals with strong SOC cope more adequately with stress and achieve more satisfaction with work and family situations than those with weak SOC (Moksnes & Haugan, 2015; Griffiths, Ryan & Foster, 2011; Antonovsky, 1987). However, to the knowledge of these scholars, no available published studies were discovered that investigated the role of SOC in the linkage between work-family stressors and work-family satisfaction among employees of a metropolitan municipality. Therefore, the purpose of this empirical analysis was to explore the ways in which SOC directly or indirectly influenced the achievement of work-family satisfaction among professional level employees at a metropolitan municipality in South Africa.

2. Review of key concepts and research hypotheses

This section presents the review of relevant literature on SOC, work and family stressors, and WFS to avoid any misperception with respect to the focus of this article.

Work Stressors: Work stress according to the transactional theory is the connection between an individual and the environment, which the individual recognizes as pertinent to his or her wellness, in which the individual's resources are assessed as being challenged or depleted (Lazarus, 1991). Through the transactional theory, the manner that an individual assesses occurrences in the environment towards comprehending his or her mental and physical responses can be conceptualized. In this process of assessment, the linkage between the person and the environment is established (Lazarus, 1991). There are two suggested types of assessments; firstly, determining the pertinent risk that the individual is exposed to and its impact on his or her wellness. Secondly, appraisal of available personal means of coping with a stressor and decisions to be made on how to reduce the adverse effect of the stressor. As a result, drawing on Lazarus's (1991) transactional theory, this study proposed that individual employees at a metropolitan municipality in South Africa daily contend with work and family stressors. It further projected SOC as a personal resource that could mitigate the effect of work and family stressors on WFS. Scholars suggest that people search for balance among challenges and resources by seeking for ways of bringing down the effect of the challenges and/or finding ways of increasing resources that assist them in managing present challenges (Hobfoll, 1989, 2001, 2011). This is explained through the Conservation of Resources (COR) theory, which proposes that the loss of resources is the major determinant variable in stress development (Hobfoll, 1989, 2001, 2011a, 2011b). Fundamentally, COR supposes that resource conservation conditions result from life's overall events and severely persistent resource loss conditions (Hobfoll, 2001). For example, where work and family stressors are high and persistent, individual employees may tend to conserve their personal resources (SOC in this case) to cope with the work stressors. This could lead to efforts being channeled to the management of work stressors and inversely the neglect of family stressors and/or the achievement WFS. Hence, work–stressors (job stress, absence of autonomy, function vagueness/role conflicts) were investigated in this study.

Job stress are those work-related factors in the work environment that adversely affect individual employees (Beehr, 1976; Kahn, Wolfe, Quinn, Snoek & Rosenthal, 1964). This article appraised job stress as those situations that place an individual employee in a position where s/he is ill disposed to perform his/her function maximally because of strain resulting from the job and/or work environment. Job stress could associate negatively with SOC and lead to dissatisfaction at work. Persistent job stress could negatively affect strong SOC on the long run. Empirical studies report that job stress affects satisfaction with work situations adversely (Khamisa, Oldenburg, Peltzer, & Ilic, 2015; Hayes, Douglas, & Bonner, 2015).Job autonomy refers to the level of self-determination, liberty, discretion intrinsic to a job offered an individual in arranging work, and deciding the processes to be engaged in performing the job (Saragih, 2015; Tufail et al., 2016; Parker, Axtell, & Turner, 2001). Accordingly, job autonomy results in the essential mental state of "experienced responsibility for outcomes of the work", that conversely results in increased efficiency at work and increased work enthusiasm. Conversely, absence of autonomy is the lack of discretion to make important decisions concerning one's job (Kim & Stoner, 2008; Liu, Spector & Jex, 2005). When an employee feels that his/her input into what he does is not contributory to the organisational achievements, he/she may be dissatisfied with work situation. Absence of autonomy could have a significant negative impact on the level of an individual's SOC. COR claims that employees would preserve their personal resources from stressors that drain those resources rather than gain another resource for example satisfaction. In this context, the authors presume that absence of autonomy will negatively influence SOC and lead to reduction or dissatisfaction with the work situation. Liu et al. (2005) report that felt autonomy associated positively with satisfaction (at personal and organisational levels). Other scholars found that absence of job autonomy associated negatively with satisfaction with work (Wu, Luksyte & Parker, 2015).

Function vagueness/role conflict result from the diverse and clashing sources of governmental influences in the Public Service (Pandey & Wright, 2006). Features of such organisation, for example, centralised decision-making hierarchies (Nicholson & Goh, 1983), and formalities (Ramaswami, Agarwal & Bhargava, 1993), are reported to heighten function vagueness. Hamner and Tosi (1974) report that function vagueness is an outcome of the absence of necessary information concerning what an individual's task is. Scholars have also attributed dissatisfaction with work situations to function vagueness and role conflict (Hoffman, Hoffman, Kelley, Kelley, Rotalsky & Rotalsky, 2016). This article assumes that work stressors are capable of adversely affecting an employee's SOC and their achievement of WFS. Additionally, individuals with strong SOC would use it to address work stressors but in the long run, this could deplete their SOC and impair the achievement of WFS. Accordingly,

H1: An inverse but significant association exists between work stressors and SOC

Family Stressors: Several issues resulting from the interaction of family members and the family environment confront and task personal resources of family members. Family stress is characterized by multifaceted needs for modification or adaptation in behavior. Generally, families take actions against particular stressors and resultant challenges from these stressors (McCubbin & Sussman, 2014). Aseltine Jr, Gore, and Gordon (2000) confirm that family stressors could have negative influences on a person's internal consistency. Hence, there is a need to identify and examine these stressors and their effects, as well as coping factors such as SOC and their influence in buffering or eliminating the adverse stressors. Contemporary workplaces have numerous dual-earner families that are playing multiple roles and struggling to find satisfaction with work and family situations (Lin, Chen & Li, 2016). According to Hepburn and Barling (1996) in Jones, Burke and Westman (2013), responsibility for providing care for elders could upset work schedules, lead to fractional absenteeism and cause disruptions at work.

Depending on the type of family, most stressors emanate from the challenges of parenting and elder care (Keating & Eales, 2017); relational tension (Clout & Brown, 2016) and absence of spousal support (Barger & Cribbet, 2016). These difficulties tax individual abilities to cope with work and family duties. The resultant stressor from giving more attention to work is absence of spousal support, which could be challenging to an individual's coping abilities. For example, Saleem (2015) reported that due to the high level of competition in the workplace, most employees give more time and attention to their work than they give to their families. This study examined parenting, elder care, relational tension and absence of spousal support as family stressors to ascertain the influence on an individual's SOC and the achievement of WFS. This article suggests that family stressors could negatively influence an individual's WFS, but SOC could mediate the effect of family stressors on WFS. In accordance with these ideas, it is postulated that;

H2: A significant but inverse relationship exists between Family stressors and WFS.

The mediating role of Sense of Coherence (SOC): Although there are numerous factors affecting individuals at work and family domains respectively, the influence of stress and need to manage it has been attracting attention in contemporary times. This article examined work and family stressors among professional level employees at a metropolitan municipality in South Africa. Scholars have investigated the mediating role of psychological traits such as locus of control and self-efficacy (Prati, Pietrantoni, & Cicognani, 2011), positive and negative affect (Green, DeCourville & Sadava, 2012), and mindfulness (Black, Sussman, Johnson & Milam, 2012), relevant to stress and other outcome variables. This article sought to demonstrate that SOC occupies a mediating role between work and family stressors and WFS. According to Yamazaki (2008), SOC is generally conceptualized as the capacity to manage individual stress. Individuals with strong SOC demonstrate positive disposition in the presence of stress and accept stressful conditions as challenges that need to be addressed. SOC is more perceptible when stress increases in an environment (Takeuchi & Yamazaki, 2010) and as a stress-cushioning factor; it kicks into action with the introduction of a stressor (Yamazaki, 2008).

Scholars report that SOC had an inverse relationship with stress and that continued exposure to stressors causes SOC to deteriorate (Moksnes, Rannestad, Byrne & Espnes, 2011; Wolff & Ratner, 1999; Ryland & Greenfeld, 1991). Extant literature further reports that SOC acts a buffer from adverse work stressors (Feldt, 1997; Urakawa, Yokoyama & Itoh, 2012). Scholars report that SOC mediated the effect of religiousness on satisfaction with life (Cowlishaw, Niele, Teshuva, Browning & Kendig, 2013). Kinman (2008), in a study among academics in the UK, found that statistically significant associations were found among SOC, job stressors and health outcomes. Antonovsky (1987) claimed that positive work experiences could improve an employee's SOC (Antonovsky, 1987). This implies that organisations can make the employees work experiences better for them in order to harness the benefits of SOC. However, Mayer and Boness (2011) report that little or no suggestions about particular interventions to stimulate SOC have been made. Although much work has been done to ascertain the role of SOC as a mediator between stress and other outcome variables, few research has been done to evaluate mediation of work-family stress and WFS. This study examined SOC to ascertain its mediating role in the interface between work and family stressors and work-family satisfaction (WFS). In accordance with the scholarly ideas,

H3a: SOC mediates the connection between work stressors and WFS at a metropolitan municipality in South Africa

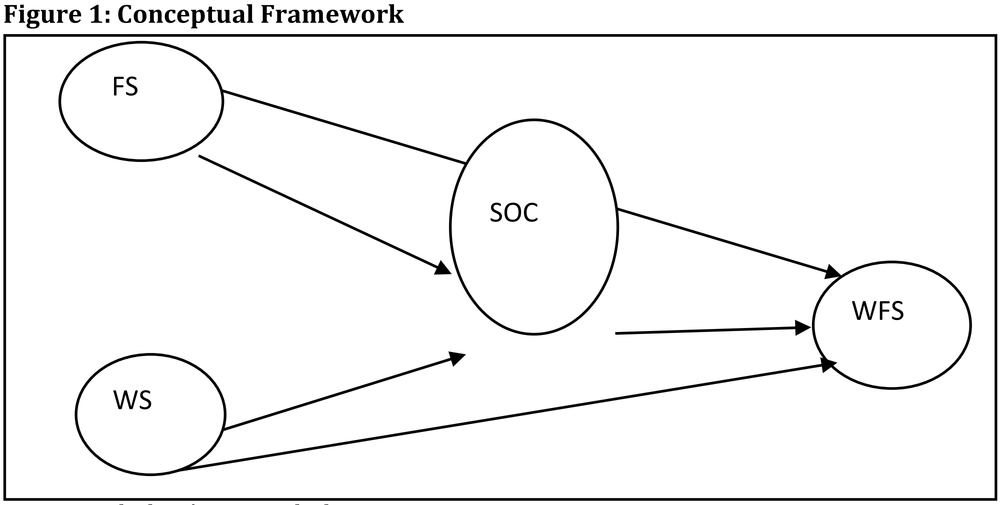
H3b: SOC mediates the connection between family stressors and WFS at a metropolitan municipality in South Africa

Sense of Coherence (SOC) and Work–family satisfaction (WFS): Work-family satisfaction is one of the endogenous (outcome) variables examined in this article. This article proposed that the relationship between work and family stressors and WFS is adversarial. Where the levels of work-family stressors are high, individuals will not achieve WFS. Additionally, where personal resources and organizational benefits available to the individual are not adequate (Lazarus, 1991), WFS will be low. The COR model (Hobfoll, 1989; Grandey & Cropanzano, 1999) and transactional theory (Lazarus, 1991) underpin the theoretical concepts of assumption. COR model theorizes that people endeavor to gain and preserve resources such as things for example, (food), personal resources (SOC, self- esteem, self-efficacy), and energy (e.g. time) (Goh, Ilies, & Wilson, 2015). A loss of or threat to these resources is significant to the individual (Hobfoll, 1989). Where individuals with high SOC for example, are exposed to continued work and family stressors, this resource stands the risk of being drained over time (Moksnes et al., 2011; Wolff & Ratner, 1999). In this context, this study posits that the work and family stressors examined could deplete an individual's personal resources (SOC) through energy drain and time consumption. Increase in work and family stressors transmutes into the need for extra resources to address them. However, resources are scarce and limited, hence much of them are not available to satisfy work and family demands (Ilies et al., 2007; Edwards & Rothbard, 2000). For example, the need to work for longer hours could result in the problem of spouses spending fewer hours at home. This could leave lesser time to fulfil home demands (Thompson, Beauvais, & Lyness, 1999) or play the role of a supportive spouse. Conflict created because of this situation between the work and family spheres could lead to the draining of the individual's personal resources (e.g. SOC) and lead to dissatisfaction with work and family situations. Inversely, SOC could buffer these stressors and lead to the achievement of WFS Based on these claims,

H4: A significant positive relationship exists between SOC and WFS

Conceptual Framework guiding the study: As presented in Figure 1, work and family stressors are conceptualised as the independent variables influencing SOC and WFS at a metropolitan municipality in South Africa.

Figure 1: Conceptual Framework



Source: Scholars' own anthology

3. Methodology

Data Collection: The study is a sequential transformative mixed method research undertaken among professional level employees in a metropolitan municipality in South Africa. Data was collected in two ways; (a) concurrently with a questionnaire that contained both open-ended and close-ended questions respectively and (b) sequentially by interviewing 11 members of top management at the metropolitan municipality. Priority was given equally to both the quantitative and qualitative data collected from the survey and interview (Creswell & Garrett, 2008; Hanson, Creswell, Clark, Petska, & Creswell, 2005; Morgan, 2007). Outcomes of quantitative data needed to be refuted, authenticated or supported by the qualitative data outcomes; hence, the equity in prioritising both data sources (i.e. quantitative and qualitative). Summarily, this paper presents the information gathered and appraised based on Hanson et al. (2005) *sequential transformative mixed* methods.

Sample recruitment and questionnaire administration: Participants were informed about the study through the municipal in-house mail and online information system. Thereafter, the researchers personally administered self-response questionnaires to the participants. All the questionnaires were written in the English language. Only employees at the professional level cadre who were born before January 1994 were permitted to participate in the study. The study targeted a population of7,000 employees and a sample of 370 professional level employees were drawn conveniently from the *HR, Governance, Finance and Procurement, Safety and Social Services, Infrastructure, and Human Settlement clusters* of the examined Metropolitan municipality (Krejcie & Morgan, 1970). Data was collected over a six-month period; response rate was 84%. The ethical committee of the University of KwaZulu-Natal (UKZN) reviewed and approved the questionnaires. All the scales used in this study to analyse SOC, work-family stressors and WFS were those whose validity and reliability and reliability had been proven in other studies. However, their reliability and reliability were also validated in the present study. Structural equation modelling using the SmartPLS was engaged in the analysis of data. The measures used are explained in broader terms below.

Measures: Standardized questionnaires were used in collecting all the items. The scholars relied on existing and validated measurement scales from existing literature where possible. For example, in measuring*SOC*: Antonovsky's *SOC-13 version of Orientation to Life Questionnaire* Antonovsky (1987) to assess SOC. The scale comprises of four- items measuring *meaningfulness*, five items evaluating *comprehensibility* and four other items assessing *manageability* (Feldt et al., 2003) and one evaluating controlwas added. Responses were based on a 7-point *semantic differential scale* with twofold anchoring sayings. Responses to items measuring *comprehensibility* ranked from 1) very often, to 7) very seldom or never; *manageability* ranked from 1) never happened to 7) always happened; and *meaningfulness* ranked from 1) very seldom or never, to 7) very often (Feldt et al., 2003). Past studies have generally reported the validity and reliability of the OLQ scale with primary evidence validating the significance of the core concept (Antonovsky, 1993). One hundred and twenty-seven (127) studies reported that the SOC-13 Cronbach's alpha range from 0.70 to 0.92 (Eriksson & Lindström, 2007). This study reported an acceptable Cronbach alpha reported of 0.78

Work Stressors: A 29-item*Work Stressor Scale* measuring *job stress, absence of autonomy and function vagueness* was used in assessing work-stressors. Job stress was evaluated on two items, while Spector and Fox's (2003) *Factual Autonomy Scale* was used in assessing absence of autonomy in order to ascertain the predictability of perception by the individual about limitations imposed on their ability to perform tasks without supervision and the result of other people's decisions on their job. However, a 17-item scale adopted fromRizzo, House and Lirtzman's (1970) 30-item scale was used in evaluating function vagueness/role conflict. This assessed how employees perceived their jobs, supervision, interpersonal relationship at work, time needed to complete a task and guidelines/ policies' clarity. The Cronbach alpha value reported in this study for this scale is 0.87

Family Stressors: Parental workload/relationship tension, absence of spousal support, and elder care were evaluated with a 13-item *Family Stressor Scale.* The items were adopted from Barling, MacEwen, Kelloway and Higginbottom (1994) and Brestan, Eyberg, Algina, Johnson, and Boggs (2003). Response was on a five-point frequency based answering scale. The Cronbach alpha reported in this study is 0.89*WFS*: was assessed on a two- item scale measuring satisfaction with work and family situations. The items the saliency of the satisfaction that respondents derived from their work and family situations respectively. *"The major satisfaction in my life comes from my job* "is one of the items from this scale. The Cronbach alpha value in this sample for the family stressor scale is an acceptable 0.70

Data Analysis: Data was initially captured and analyzed with the IBM SPSS version 22 software; there were no missing data. Thereafter, the tested data were saved as Comma Delimited (*CSV) file for ease of importation into SmartPLS 3.3 software. Partial Least Squares (PLS) permits the simultaneous evaluation of constructs validity, reliability, and appraisal of the associations among variables (Barroso, Cepeda & Rolda'n, 2010). Calculation of the path model and estimation of parameter was done with SmartPLS 3.0 based on the 'path weighting scheme' (Henseler, Ringle, & Sarstedt, 2012). The latest guidelines for PLS-SEM were followed in the assessment and measurement models prior to the evaluation of the structural model (Hair, Hult, Ringle, & Sarstedt, 2013a). However, qualitative data was organized for ease of content analysis through the NVIVO software.

4. Findings

Quantitative data: Below is a presentation of the findings of the quantitative data collected for this article.

Table 1: Quantitative Analysis

	Cronbach's Alpha	CR	AVE	FS	SOC	WS	WFS
Family stressors (FS)	0.891	0.909	0.588	**0.767**			
SOC	0.783	0.852	0.537	-0.132	**0.733**		
Work stressors (WS)	0.873	0.902	0.568	0.075	-0.244	**0.754**	
Work-Family Satisfaction (WFS)	0.702	0.814	0.687	-0.105	0.005	-0.196	**0.829**

Measurement models: The indicators were found to be at acceptable reliability levels (Klarner, Sarstedt, Hoeck, & Ringle, 2013). To doubly ascertain that the internal consistency of the major indicators were reliable, the Cronbach alpha and composite reliability coefficients were tested (Hair, Sarstedt, Hopskins, & Kuppelwieser, 2014). Table 1 shows that the composite reliability of the measurement models exceeded 0.812, while Cronbach alpha exceeded 0.700. These are clear indications that the variable measures' internal consistency are reliable. Similarly, all average variance extracted (AVE) values exceed the critical base value of 0.50, supporting the convergent validity of the measures. Furthermore, the Fornell and Larcker (1981) principle that requires the square root of the AVE to be of greater value than any of those inter-factor correlations was applied. The test provided evidence that the variables exhibited discriminant validity (Campbell & Fiske, 1959).

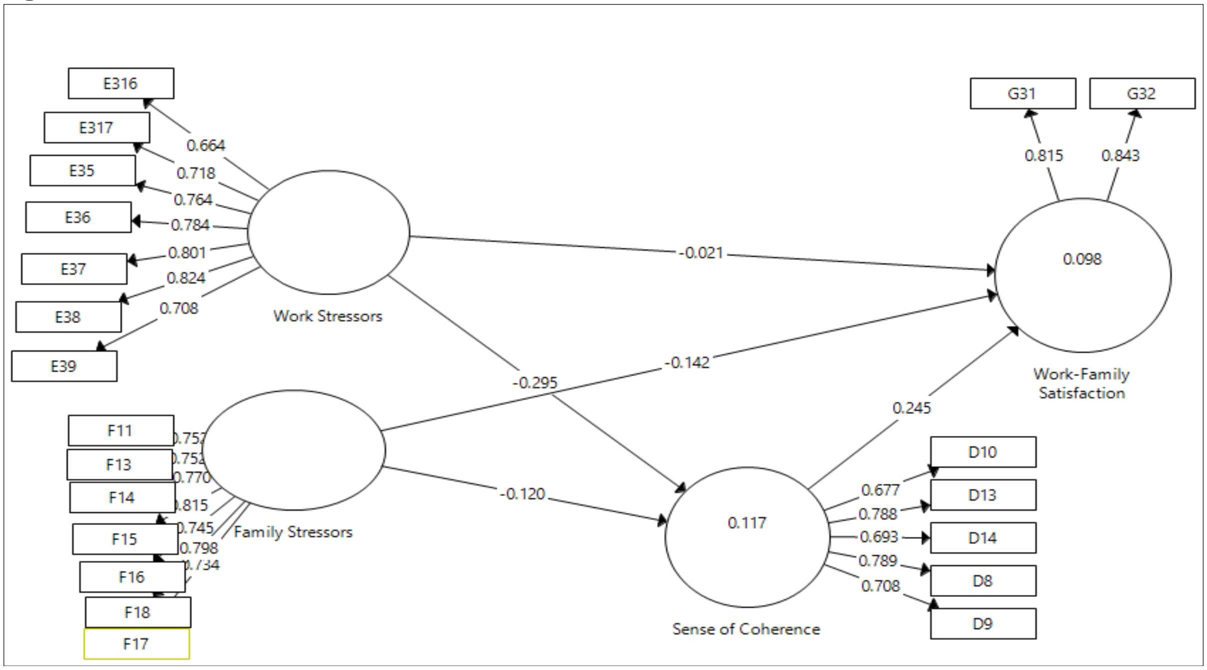
Table 2 and Figure 2 below, present the results of the PLS-SEM analysis. They illustrate findings of the structural model estimation and assessment of the associations between work and family stressors, SOC and WFS (Hypotheses H1 to H4).To test for mediation based on the SEM, where zero is absent in the interval for a mediation hypothesis, it implies that the *indirect effect is significantly different from zero with 95% confidence* (Castro & Roldan, 2013).From Table 2, the p-values indicated that a significant relationship exists among the variables at ($p < 0$ and $p < 0.05$). However, the linkage between work-family stressors and WFS are not significant. The core criterion used in assessing structural model (Henseler et al, 2012), i.e. the coefficient of determination R-square is 0.098 (see Fig. 2) for the principal target construct (WFS) in this study. This R-square, which is greater than zero, confirms the predictive validity of the model (Hair, Sarstedt, Ringle & Mena, 2012b). The recorded R-square for mediating construct (SOC) is 0.117. Summarily, the predictive validity of WFS is 9.8% and SOC is 11.7% (Hair, et al., 2012a). The indirect path WS (work stressors) to SOC (sense of coherence) indicated a negative and statistically significant beta loading of ($r = -0.295$, $p < 0.001$), while the direct path (WS –WFS) is not significant at ($r = -0.021$, $p > 0.05$). Therefore, the finding that an inverse but statistically significant association exists between WS and SOC supports H1. Furthermore, the direct path FS to WFS (r = 0.142, p, 0.05) and indirect path FS through SOC (r = -0.120, p < 0.05) have inverse but statistically significant associations. This result supports H2 by showing that family stressors significantly influence WFS and SOC negatively. The direct path (FS – WFS) showed a higher significant but inverse impact (r = -0.142, p < 0.05) than the indirect path (FS – SOC) at (r = -0.120, p < 0.05). In summary, the inverse relationships indicate that WS and FS confronting employees at the metropolitan municipality were adversely influential on employee SOC. Hence, SOC buffered 11.7% of work and family stressors among employees at the metropolitan municipality, supporting extant literature.

Table 2: Path coefficient Mean, STDEV, T-Values, P-Values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Family Stressors -> SOC	-0.120	-0.129	0.059	2.014	0.045
Family Stressors -> Work Family Satisfaction	-0.142	-0.150	0.060	2.348	0.019
SOC -> Work Family Satisfaction	0.245	0.249	0.062	3.939	0.000
Work Stressors -> SOC	-0.295	-0.303	0.053	5.543	0.000
Work Stressors -> Work Family Satisfaction	-0.021	-0.020	0.076	0.273	0.785

The path coefficient from SOC to WFS (work-family satisfaction) resulted in (r = 0.245, p < 0.001), indicating that SOC has a positive and highly significant effect on WFS among employees in the metropolitan municipality investigated and supports H4. The findings show that SOC fully mediated the connection between WS and WFS at (p = 0.000) because, the direct link which was not significant previously (r = -0.021, p > 0 .05), became significant through the indirect route (r =-0.295, p < 0.01). This implies that work stressors exerted a significant but indirect influence on WFS through SOC. This finding as explained in Figure 2 and Table 1 support hypothesis H3a of this study. Therefore, SOC was expedient in buffering work stressors among respondents and instigating WFS. However, the path analysis in Figure 2 showed that SOC partially mediated the linkage between family stressors and WFS. The association between FS and WFS remains significant (r = -0.120, p < 0.05), however with a difference. The difference of 0. 022, is lesser than when SOC was not present (r = 0.142, p < 0.05). Although the *variance accounted for* (VAF) in this study is 0. 022, Helm, Eggert, and Garnefeld (2010) suggest that partial mediations between 0% and 100% is normal, but the higher the value, the stronger the partial mediation. In this study, the partial mediation has moderate VAF of 22%. Hypothesis H3b is partially supported in this study. This means that the effect of family stressors on WFS is reduced in size but not completely buffered when SOC is controlled at the metropolitan municipality in South Africa.

Figure 2: Structural model of constructs

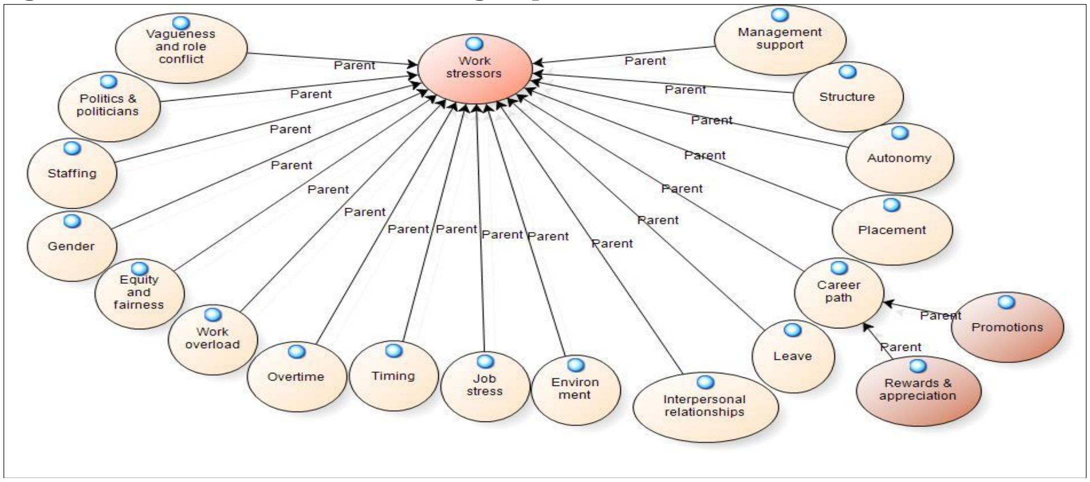


Qualitative Data analysis: *SOC:* Respondents agreed that they were facing numerous and varied work stressors but suggested that they could manage some of these stressors. The responses of some of the participants buttress this claim as follows,

"*Naturally, local government is a bureaucratic organisation and ambiguity/role conflict and absence of autonomy although expected, cause stress to employees. We know and struggle with these things, optimistically we manage"* (Interviewee 7). *"Nothing much stresses me at home. I have a great child and supportive partner"* (Respondent 058).

Employees at the municipality investigated generally accept that though they were faced with stressors at work, they have a disposition that suggests that they were sentimentally optimistic about their ability to cope with support from their families. This clarifies why SOC fully mediated work stressors and WFS and partially mediated family stressors and WFS at the metropolitan municipality investigated. Several respondents accepted some of the work stressors as normal but. Others believed that through their faith, stress was manageable. Take for example, this response
"I am capable of coping with work and life stressors. I have a strong spiritual foundation which helps me cope with the trials and tribulations of life." (Respondent 071). Extant literature supports this finding that SOC positively associates with religious faith (Cowlishaw et al., 2013). *Work stressors:* Fig. 3presents a number of work stressors suggested by the respondents as those taxing them at work.

Figure 3: Notable work stressors among respondents

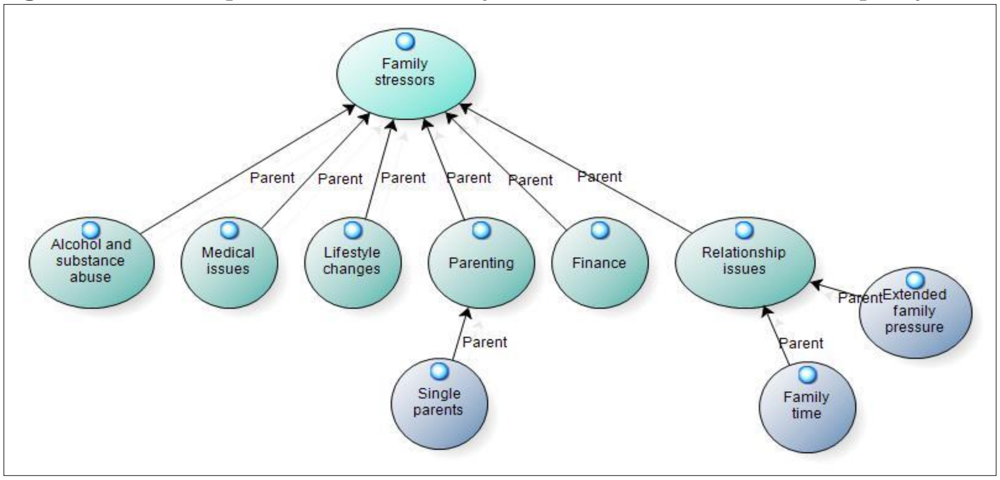


Although these stressors are numerous, the quantitative data revealed that SOC fully mediated the linkage between work stressors and WFS. This implies that if the management of the municipality invests in the adoption of interventions that build up SOC as suggested by scholars (Mayer & Boness, 2011), the effect of work stressors on employee WFS will be adequately mitigated while boosting employee satisfaction with work and family situations.
Family stressors: Respondents in this study listed fewer family stressors than work stressors challenging the achievement of WFS in the metropolitan municipality investigated. However, a particular respondent's comments summarised the overall feeling of most of the respondents.

Interviewee 3:
"It is mainly family responsibilities which affect work, either extended family or your own family. In most cases, almost all workers even my colleagues would have people that they need to take care of and that becomes a problem. You will either be irresponsible which you don't want to be because this is Africa (our culture demands that you belong to a family and the community) and no matter what you do you still want to belong and take care of your family and extended family responsibility. In addition, that becomes a conflict, which in most cases becomes irreconcilable, because the individual employee has to live a certain level of standard of living. You are responsible to the family and needed there too while your work demands your presence also. This crumbles so many of them and of course affects their coping mechanism. Numerous people are facing divorce, and others spend time at work to escape problems at home. Many of the women are single mothers and seem to have challenges with family and work involvement. They marry today and in three months' to one year's time, the marriage fails and they are divorced! In addition, in most cases the divorce is very bitter and messy. Some leave with little children that require attention and care. Most people are lucky to leave such marriages without 'baggage' but they (divorce) are always messy, very messy. Then of course, that causes a lot of stress to the employee and affects work. We expect something to be done to alleviate these challenges"

This could explain why SOC could not fully mediate family stressor –WFS linkage. Most respondents were of the opinion that family stressors were what they had to live with. Although these stressors have outcomes that may be adversarial, respondents would rather address work stressors to ensure that their earnings are secured rather than attend to family stressors. Hence, to these employees, family stressors do not influence their satisfaction with work situation and mean little or nothing in their appraisal of satisfaction. Therefore, their indifference to family stressors may account to the reason why SOC partially mediated the linkage between family stressors and WFS. Fig. 4 presents the family stressors found among professional level employees at the metropolitan municipal workplace examined.

Figure 4: Pictorial presentation of family stressors found at the municipality



Discussion of findings: The present study examined in greater depth, the stressor - satisfaction interface from an analytical statistical mediation perspective. Work and family stressors were placed at the commencement of the process while SOC occupied the mediating position between work and family stressors and WFS. The findings show that work stressors and WFS are correlated in such a way that SOC fully mediated the effect of work stressors on WFS. Conversely, the interrelationship between family stressors and WFS show that SOC partially mediated the effect of family stressors on WFS. Consequently, the findings have theoretical and practical connotations.

Theoretical implications: A statistically non- significant association was found among work stressors and WFS; this is supported by extant literature (Hoffman et al, 2016; Khamisa et al, 2015; Hayes et al, 2015; Wu et al, 2015). From this finding, it implies that strengthening individual employee SOC is more needful than merely establishing the achievement of WFS, since SOC fully mediated work-stressor and satisfaction. In this study, work stressor is the construct that is more negatively associated with WFS in line with extant literature (Ryland & Greenfeld, 1991; Wolff & Ratner, 1999; Kinman, 2008). However, transactional theory (Lazarus, 1991) and COR theory (Hobfoll, 1989, 2001, 2011a, 2011b) give supportive explanations to the outcome of the work-family stressor – SOC-WFS connexion. According to the COR theory (Hobfoll, 2011a), organisational and personal resources are required to address work and family stressors deemed to be a threat to the individual. SOC as a personal resource assembles resources from within the individual and/or organisational environment to address stressors. Additionally, SOC works in conserving some of the resources for the future(Antonovsky, 1993). Therefore, the highly significant ($p = 0.000$) mediation of SOC among work stressors and WFS indicates that where employees have strong SOC, the effect of work stressors on WFS will be fully buffered. The inverse relationship among the variables (work and family stressors and SOC; and work and family stressors and WFS) validates the expectations of this article and is substantiated by extant literature (Moksnes et al., 2011), that stressors strongly and negatively impact an individual's SOC. In this study, SOC is also authenticated as a buffering factor (Antonovsky, 1993; Feldt, 1997; Urakawa et al., 2012) in the positively significant path from SOC to WFS. Astonishingly, the family stressors – WFS link was not fully mediated by SOC. SOC partially mediated since the effect of family stressors on WFS was barely reduced in size, family stressors were not completely eliminated when SOC is controlled. Another aspect is that, although work and family stressors jointly predicted SOC work stressors contributed more to the model. The qualitative data clarified this standpoint by highlighting the numerous work stressors confronting the employees at a metropolitan municipality in South Africa. The implication of this on SOC is that, it (SOC) will consistently deplete because of the continued exposure of employees to numerous work stressors (Moksnes et al., 2011; Wolff & Ratner, 1999). This study achieved its objective because all the hypotheses tested were supported in the study.

Implication for practice: The growing importance of stress in the global work environment highlights the question of how organizations should support employees in managing their work and family stressors towards achieving WFS (Kossek et al., 2011). On these lines, Falk and Miller (1992) suggests organisations should appraise the coping means available to an individual in line with stressors in making decisions that should reduce the negative results of these stressors. A good understanding of SOC (Griffiths et al., 2011) and work place benefits (Ko & Hur, 2014) is needed to answer this question. In this empirical analysis, the findings show that individual employee SOC is important in managing work and family stressors and achieving WFS. Therefore, the management of the metropolitan municipality examined should take cognisance of the way in which the constructs influence each other in order to design and adopt workplace practices affecting each construct. This requires the adoption of a holistic method of appraising the design, adoption and implementation of workplace strategies to ensure that they integrate SOC enriching factors such as those listed by Mayer and Boness (2011). Human resource practitioners in the examined metropolitan municipality and researchers should look into ways of identifying such SOC enriching factors and tailoring them into practices and studies that assist employees in managing stress.

Qualitative data found that numerous work and family stressors (Fig. 3 and Fig 4) confront employees at the municipality examined. Extant literature suggests that employees SOC deplete with continued exposure to myriads of stressors (Moksnes et al., 2011; Wolff &Ratner, 1999). In order to circumvent the total weakening of employee SOC and promote the achievement of WFS, management could revisit concerns around those work-stressors highlighted by this study such as bureaucracy, complex holdups and practices that hinder employee satisfaction with work. More use could be made of fundamental technological solutions that simplify work processes in order to assist employees. Adopting major family aligned strategies (Abe, Fields & Abe, 2016) such as flexible work arrangement, telecommuting, domestic relationship counselling, and employee wellness programmes may be invaluable in addressing family stressors. Management has to introduce SOC enhancing elements (Mayer & Boness, 2011; Kinman, 2008)into workplace practices that assist employees in addressing their work and family stressors.

5. Conclusion

This study adds value to literature by objectively investigating the mediating role of SOC in the interface between domain specific stressors and work-family satisfaction. It found that SOC is meaningful in fully mediating work stressors and partially mediating family stressors. SOC can be improved by positive experiences at work (Antonovsky, 1987), although particular SOC promoting interventions are scarcely suggested in extant literature (Mayer & Boness, 2011). This area of finding SOC promoting interventions could be a profitable area for further research to explore. The findings have both practical and theoretical implications.

Limitations and recommendations for further studies: This study appraised the mediating influence of SOC between work and family stressors among professional level employees at a metropolitan municipality in South Africa. The study recognised various limitations in its findings and conclusions. The primary limitation is associated with the concept of causality. Even though evidence supporting the model's causality is postulated, it has not been actually verified. This study considered a soft modelling method that leaned more towards prediction rather than causality. According to Falk and Miller (1992), the capacity to control events is guaranteed by causation while predictability permits a limited level of control. The suggested model was based on structural equations, which assumes that the association between latent variables is linear (Hair, Anderson, & Tatham, 1998), is another limitation. Additionally, the cross-sectional design of this study is a limitation to its generalisation. However, future studies should assess the variables over a period, bearing in mind the subtleties of the individual parameters of assessing work and family satisfaction. Furthermore, the use of SOC as the only mediating variable may not have done justice to the linkage between work and family stressors. Other intervening variables such as work-life balance strategies, self-efficacy and support should be explored for mediation in the linkage, with SOC as a possible moderator.

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Perceptions of Different Generations Regarding Managerial Competencies in Restaurants

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Abstract: Managerial competencies of restaurant managers play a major role in motivating employees to be productive and to provide excellent service which, in turn, will lead to customer satisfaction. Drawing upon generational differences in work ethics and values, the authors examine the importance of managerial competencies in three age cohorts. A quantitative research design was selected using a structured questionnaire consisting of five competency domains. Data were collected from 180 restaurant managers and employees in restaurants in the City of Tshwane. The results of the Fisher exact test indicated that the importance of managerial competencies differed significantly in the three age groups. Significant differences existed for three leadership domains, two management domains, one interpersonal and one intrapersonal domain. No significant differences were recorded for the perceptions of the different age groups regarding the importance of the technical domain. For the younger generation, the ability to grant employees the opportunity to grow was regarded as highly important by all respondents. The ability to maintain discipline in the workforce was perceived as less important by the youngest age group when it was compared to the other age groups. The youngest employees felt that the ability to be innovative was not as important unlike the perception of the older age groups. The findings of this study could lead restaurant managers to a better understanding of the different generational groups, how to motivate them thereby ensuring job satisfaction and service quality.

Keywords: *Generations, Restaurant industry, Managerial competencies, Job satisfaction*

1. Introduction

The tourism and hospitality industry continues to be one of the fastest-growing and most vibrant sectors of Africa's economy, contributing 9% to South Africa's GDP in 2015 (Price Waterhouse Coopers, 2016). As the restaurant segment is a key source in the service sector in generating income in many African countries, factors affecting restaurant performance, such as management competencies, need to be explored (Voon, de Jager, Chitra, Kueh, & Jussem, 2013). These management competencies are the signal from a hospitality establishment to indicate the areas and levels of performance that the establishment expects from their employees. Currently, the hospitality industry is experiencing major environmental and market changes such as increasing levels of competition, rising costs accompanied by falling margins due to static prices, an inability to raise the necessary capital as well as changing customer and employee attitudes(Suh, West, & Shin, 2012) and the increased turnover requirements to remain viable(Brown, Thomas, & Bosselman, 2015; Kim, 2014; Streeter, 2007). Managers need to possess the appropriate competencies to adapt to these and other unforeseen environmental demands within a dynamic operating environment (Suh et al., 2012) to ensure success in the hospitality industry (Riggs & Hughey, 2011). Today's work environment calls for creativity, confidence, assertiveness and team-building skills if success is to be ensured (Vijayalakshmi, 2016). Providing a set of management competencies will not only assist the employee with a map of behaviours, but with skills that will be valued, recognised and rewarded in the establishment. These management competencies will be explored in this paper.

To meet the requirements of the rapidly changing hospitality industry, it is imperative to determine which competencies are essential (Sisson & Adams, 2013) and to ensure that future management possess these competencies (Suh et al., 2012; Vijayalakshmi, 2016). Due to the current turbulent economic conditions, human capital is becoming a critical factor in hospitality establishments, such as restaurants. If these establishments are able to manage their human capital they will stand a chance of success in the industry. Studies show that there is strong evidence to indicate that infusion of human capital development promotes innovation, as well as better performance ((Neagu, Lazar, Teodoru, & Macarie, 2016). Innovation and performance depend on a work environment that attracts, meets and even exceeds the employee's expectations. How the employee feels about the work environment will depend on his or her characteristics. Having a set of competencies are an important management tool and applied intelligently can be used to drive up performance of the employee, retain valuable resources and inform restructuring in an establishment that will positively impact outcomes. An employee's commitment to a job is determined by his or her perception of and attitude towards work in a specific industry(Richardson, 2010).

Major generational demographic shifts are occurring in the hospitality workforce (Chi, Maier, & Gursoy, 2013), with large numbers of Baby boomers leaving the workforce resulting in the loss of valuable experience and knowledge (Dannar, 2013). Generational membership directly affects level of work engagement and turnover intention (Park & Gursoy, 2012). It can be assumed that younger employees' psychological characteristics such as high self-esteem and optimism could drive them to feel more psychologically involved at work (Kowske, Rasch, & Wiley, 2010), which situation could lead to a higher level of satisfaction (Park & Gursoy, 2012) with lower turnover intention (Chi et al., 2013). Today's hospitality workforce is characterised by multigenerational teams. Multigenerational differences in views and perspectives can lead to conflict, resulting in high employee turnover with inevitable decreased productivity (Yang & Guy, 2006). With the influx of younger employees into the hospitality industry, managers are faced with fresh challenges. Operational managers need to update their knowledge of what motivates their employees to ensure good service delivery and low staff turnover (Brown et al., 2015). From the above introduction it is clear that the importance of this study lies in the provision of the necessary knowledge for managers to assist them in managing the new workforce meaningfully. It further provides training institutions with information that should be included in their curricula. This study sought to answer the following question: 'Does the importance attached to competencies differ significantly in different age groups?'

2. Literature Review

The literature review is divided into two sections. In the first section, managerial competencies are summarised. The second section relates to the selected generational groups.

Managerial competencies: Three general perspectives on competency theory have emerged in the literature, namely: competencies as individual characteristics; competencies as characteristics of organisations; and competencies as a tool to facilitate and structure communication between education and the labour markets (Kalargyrou & Woods, 2011; Mahachi, 2012). Millar, Mao, and Moreo (2010) and Porter (2005)postulate that the Competency Domain Model developed by (Sandwith, 1993) is the most reliable and influential competency model available in today's business environment. It identifies five competency domains: a leadership domain, a conceptual domain, an interpersonal domain, an administrative domain, and a technical domain. Managerial competencies can be used to recognise and address trends, challenges and developments in the service industry, specifically in restaurants. Furthermore, they can be applied to provide the knowledge, skills and abilities required by successful managers and leaders in each segment of the hospitality industry (Koenigsfeld, Perdue, Youn, & Woods, 2011). Some organisations use competencies as a benchmark to compare the skills an individual has with the skills the individual needs to fill a particular position. Relevant managerial competencies enable managers to get to know the organisation as a whole, lead and manage people, communicate effectively and manage the available resources to achieve the restaurant's objectives, missions and goals (Aguinis, Gottfredson, & Joo, 2012). As the hospitality industry is labour-focused and people-oriented, the concept of competency management should be stringently adhered to. Only when managers and employees are fully competent to perform their appointed tasks will their level of job satisfaction increase, resulting in positive outcomes for those restaurants (Shai, Kleynhans, & Roeloffze, 2016).Possessing social competencies or soft skills is essential in the hospitality industry because service orientation in the restaurant industry is bolstered by service encounters which are social in nature (Louw, Pearse, & Dhaya, 2012). Social competencies include communication skills, conflict resolution (Kay & Russette, 2000), social awareness and motivation of people (Cherniss & Goleman, 2001; McKenna, 2004). Firdauz, Sapri, and Mohammad (2015) maintain that organisations and managers will certainly encounter difficulties if they lack leadership and management competencies.

Leadership domain: Koenigsfeld et al. (2011)isolate the leadership domain as being the most important and frequently cited competency cluster. As effective leadership is the ultimate goal that many organisations strive for, commitment to the development of managers' skills and competencies is imperative (McCarthy & Garavan, 2007). Leadership can be regarded, at best, as the cardinal asset in the restaurant business or, at worst, as its most serious liability (Singh, 2008). Jauhari (2009) and Firdauz et al. (2015) state that leadership skills such as participative decision-making, critical thinking, problem- solving, and the ability to instil commitment are critical to an organisation's future because they directly improve the level of responsiveness to customer needs. Leadership skills have become increasingly important in the running of hospitality corporations (Koenigsfeld, Youn, Perdue, & Woods, 2012). Implications of a lack of leadership skills could lead to business failure, low productivity and an inability to respond to market changes and uncertainty. On the other hand, strong leadership in the restaurant sector plays a major role in achieving high profitability and productivity as well as competitive advantage.

Management domain: The management domain refers to those skills that relate to articulating goals, organising employees, allocating resources, monitoring progress and empowering employees with knowledge and skills (Weber, Finley, Crawford, & Rivera, 2009). The management domain enables managers to know the organisation as a whole, lead and manage people, communicate effectively and manage available resources to achieve the restaurant's objectives, missions and goals. Managers bear the key responsibility of informing their employees on hour to improve their job performance on an ongoing basis, and managing the management systems and resources that are designed to align the performance of employees in the restaurant section to the whole organisation (Aguinis et al., 2012; Ekaterini, 2011). Decision-making, performance feedback and training are the highest-rated management competencies (Toygar & Akbulut, 2013).

Interpersonal domain: The interpersonal domain refers to those human skills needed to work effectively as a group member and/or to build co-operative effort within the teams that he / she leads. These human skills deal primarily with people and how individuals perceive one another within the organisation, as well as subsequent individual behaviours. They include understanding and motivating individuals as well as groups(Porter, 2005). Interpersonal competency skills relate to the ability to interact meaningfully with people at work. Skills include effective communication with fellow employees, thereby establishing strong interpersonal relations. Co-operative, satisfying relationships need to be forged among workgroup members (Lolli, 2013; Millar et al., 2010). Bailly and Léné (2012)define interpersonal skills as the ability to communicate effectively as well as the ability to harness employees' personality traits such as enthusiasm. Another aspect is the ability to interact socially and empathetically with customers. These traits are essential if waiters and workers in all types of restaurants, supermarkets, bank front-office services or call centres want to ensure success. Understanding customers' problems and seeing these from their perspective, serve to calm them to help them to solve their problems, while simultaneously being aware of the organisation's performance requirements through effective communication.

Intrapersonal domain: Intrapersonal skills refer to dimensions such as self-regard, emotional awareness, assertiveness, independence and self-actualisation (Bardzil & Slaski, 2003; Wolfe, Phillips, & Asperin, 2014), intellectual openness, a strong work ethic/conscientiousness and honest core self-evaluation (Hamilton, Symonds, & Kotamraju, 2013). These feelings, thoughts and emotions are not readily observed because they exist within a person, therefore even an individual in close proximity may not be aware of these skills. People with intrapersonal intelligence are generally quiet and prudent, self-reflective and self-motivated. While being able to work unsupervised, they manage their personal growth and often engage in a search for identity (Vijayalakshmi, 2016). According to Ilkowska and Engle (2010) the acquisition of intrapersonal skills entails a process which monitors and directs attention, while maintaining and modifying behaviours to achieve a desired goal. Intrapersonal skills include traits such as flexibility, resourcefulness, self-esteem, goal-setting, taking the initiative, self-awareness and critical thinking (Vijayalakshmi, 2016), in addition to optimism, positive thinking, perseverance, commitment and tolerance (Bharwani & Jauhari, 2013). Time-management, that is another dimension of intrapersonal skills, is rated as the most highly desired competency by senior-level hotel managers. Good time-management skills include coping effectively with multiple demands and priorities, managing time to ensure productivity and allocating sufficient time to cardinal issues (Chung–Herra, Enz, & Lankau, 2003).

Technical domain: Studies support the concept that the two most basic competencies needed by restaurant employees are technical, also known as 'hard skills', and 'soft skills' (Wikle & Fagin, 2015). Technical skills are specialised levels of proficiency needed to complete a specific task or series of tasks, while 'soft skills' include competencies such as effective communication, which are important when working in the hospitality industry, especially when it comes to delegating duties or tasks. Technical skills are generally acquired through education, training and/or experience. Technical skills are the primary concern of employers when recruiting prospective employees, because these constitute the foundations of the job itself, that can be learnt both at school and on the job. These skills are a requirement for entry-level restaurant managers who need to calculate food costs in a restaurant, develop menus, possess culinary skills and have knowledge of food processes, serving methods and etiquette (Bailly & Léné, 2012; Weber, Crawford, Lee, & Dennison, 2013). Technical skills improve employability of hospitality graduates significantly (Wang & Tsai, 2014). Development of food and beverage skills is perceived to be a stepping stone towards the application of general management skills(Baum, 2002).

Generations: A generation cohort describes a group of people of similar age, with similar attitudes, values and behaviour as distinct from those in other generation cohorts (Benckendorff, Moscardo, & Pendergast, 2010). Around thirty years ago management in the hospitality industry focused on the expectations of the Baby Boomers and Generation X. Currently the Baby Boomers are leaving the workforce and Generation X employees are moving into middle and senior leadership positions with the Generation Y (also referred to as Millennials) employees filing the positions of supervisors (first-line management) (Chi et al., 2013). This shift in the composition of the workforce is forcing management to gain explicit knowledge about what motivates Generation Y employees(Brown et al., 2015).Three generations are represented in today's workforce: Baby boomers (born between 1946 and1964), Generation Xers (born between 1965 and 1980) and Millennials (born between 1981 and 2000) (Chi et al., 2013). There will always be generational differences in perspectives, attitudes and behaviour. However, studies indicate that there are fundamental and major differences in the work values of the three generations presently in the hospitality workforce (Chen & Choi, 2008). Gradually members of the younger generation (Millennials) are filling managerial positions vacated by Baby Boomers and Generation Xers. Therefore, it is important, from a managerial point of view, to recognise gaps that could create difficulties in the workplace. Ignoring generational differences will inevitably render an organisation less efficient (Govitvatana, 2001).

Baby boomers who were raised in an era of extreme optimism, opportunity and progress (Chi et al., 2013) grew up in the relative economic prosperity and stability of the post –World War II period (Park & Gursoy, 2012). They perceive work as a much more important part of life than the attitude of younger generations (Park & Gursoy, 2012). Loyalty and commitment to their organisations are highly valued (Gursoy, Maier, & Chi, 2008). Generation Xers grew up in the end of the Cold War period when a number of economic recessions occurred during which times unemployment and family relocations were caused by economic instability (Twenge, Campbell, Hoffman, & Lance, 2010). Gen Xers who tend to be independent place more value on their own careers than on loyalty to an organization. They link autonomy and freedom from supervision in the workplace to a strong desire for rapid career advancement (Park & Gursoy, 2012).The Generation Y employee has a radically different work-related value structure and attitude from that of previous generations (Baby boomers and Generation X). They seek flexibility with regard to new experiences; they are prepared to move from project to project and/or expect to be given the opportunity to work in different locations. A strong characteristic of Generation Y employees is that they have a sense of urgency, which means that they care only about today and as they are not concerned about the future (Richardson, 2010). Generation Y employees are described as demanding individuals (Solnet & Hood, 2008) who are generally less satisfied with their jobs (Earle, 2003)less engaged in their work and far less committed to the organisation that they work for.

Since employees from the same generation are likely to share similar norms, their work values and attitude toward work are likely to be influenced by the generation to which they belong. People from different generations could have difficulty in understanding others' perspectives in terms of work. This can be stressful and frustrating, causing confusion in the workplace (Gursoy et al., 2008). The younger generation value freedom and have high leisure/work values (Twenge et al., 2010) with disproportionately high expectations of promotion (Dannar, 2013) and pay rises in the workplace (Park & Gursoy, 2012). They are confident players in businesses, financial institutions and governmental agencies. As they prefer a structured environment with clear rules, they are comfortable in a hierarchical organisation. However, they do want their jobs to be meaningful and they want to be respected (Dannar, 2013), as fairness and recognition are work values which they embrace (Chi et al., 2013). Millennials are often seen as warm and outgoing, adaptable and sensitive (Hertzman, Moreo, & Wiener, 2015). In this study chronological age is used and respondents are categorised into 3 groups according to age. Hospitality establishments are faced not only with a diverse workforce in terms of gender, marital status, physical ability and language, but also with three generations (age groups): The Baby Boomers, Generation Xers and Generation Yers (Chi et al., 2013; Smit, Cronje, Brevis, & Vrba, 2011; Yu & Miller, 2005).

The youngest employees (Generation Yers) are becoming more numerous in the workplace while employing a hospitality employee with the required competencies is becoming an increasingly difficult task. These employees comprise a generation with different career expectations and aspirations from the other two generations (Baby Boomers and Generation Xers). The Generation Y employee expects so much to happen so quickly that hospitality managers have been caught totally off guard with regard to the new approach to work and expectations (Maxwell, Ogden, & Broadbridge, 2010; Richardson & Thomas, 2012). These Generation Yers are not just comfortable with technology, it is an integral part of their daily lives (Dannar, 2013).Tomorrow's restaurant managers or leaders need to possess skills and competencies that will enable establishments to remain competitive in the industry (Chung–Herra et al., 2003). The restaurant industry requires not only managers and employees with cross-domain abilities, it needs knowledgeable and competent staff that take cognisance of industrial trends and demands. Research suggests that supervisors often rely on "gut feeling", speculation and their own limited experience regarding those key factors that will ensure ongoing innovation in the restaurant industry. Literature advises that hospitality establishments adopt a hire-for-skill, as well as a train-for-skill approach to gain a competitive edge in the industry(Chang, Gong, & Shum, 2011).

3. Methodology

The objective of the study was to determine which differences existed in different age groups regarding the perception of managerial competencies. The research design used for this study ensured that the information collected could provide answers to the research question, as well as resolve the hypotheses and meet the objectives of the paper that were formulated to address the question at hand. For the purposes of this study, the following hypotheses were formulated:

H_{01} – No significant differences exist in the different age groups' perceptions of the importance of the leadership domain.

H_{02} – No significant differences exist in the different age groups' perceptions of the importance of the management domain.

H_{03} – No significant differences exist in the different age groups' perceptions of the importance of the interpersonal domain.

H_{04} – No significant differences exist in the different age groups' perceptions of the importance of the intrapersonal domain.

H_{05}: - No significant differences exist in the perceptions of the different age groups' regarding the importance of the technical skills domain

Population and sample: A list of all the casual dining restaurants in the City of Tshwane (South Africa) was obtained from the Eat- out website which lists all restaurants in a specific area (Eat-out, 2014). The restaurants that met the criteria as casual dining restaurants were contacted telephonically. Of the 87 restaurants that were contacted via telephone and personal visits, only 47 agreed to participate in the study. The population consisted of 350 employees in the different restaurants (N=350). Questionnaires were distributed to all the restaurant employees in the identified restaurants. Only 180 employees (n=180) completed the questionnaires, resulting in a response rate of 51%, which is acceptable according to research standards (Mbithi, 2011).

Measuring instrument: Questionnaires were used as the main data gathering instrument for this study. The instrument employed in this study was created using the Competency Domain Model developed by Sandwith (1993). According to several authors(Millar et al., 2010; Porter, 2005), it is the most reliable and influential competency model in today's business environment, as it classifies competencies into five domains: leadership domain, conceptual domain, interpersonal domain, administrative domain and technical domain.

Management and intrapersonal domains are often added to management competencies. In this paper the results from the management, leadership, interpersonal, intrapersonal and technical competency domains will be reported. The basic step in formulating the questions was to identify the required competencies, each question focused on a different competency domain which was broken down into skills. The questionnaire consists out of 46 six questions which was structured using a four- point Likert scale. This scale was used to measure respondents' perceptions as to which skills from the competency domains reviewed in the literature were deemed more important than others. Responses ranged from 1. Not important (NI), 2. Sometimes important (SI), 3. Important (I), to 4. Highly important (HI).

Data collection: A pilot study was conducted using a convenience sample of employees from two restaurants that were not included in the final study sample. Respondents were grouped into 3 age groups, 16-24 years, 25-40 years and above 40. The study was done in an ethically responsible manner. Permission was obtained from the university's Faculty of Management Sciences. In this study, ethical procedures were followed (Mbithi, 2011),to address the following categories: informed consent, confidentiality and benefits to the industry.

Data analysis: Microsoft Excel© 2010 STATA V12 statistical software was used to process the data from the completed questionnaires. Responses to the research questions were gathered and presented using descriptive statistical percentages for frequencies. To statistically analyse the sample, the Fisher's Exact test was conducted to test for significance. Cronbach's alpha was used to test internal consistency. In this study, the test score for each competency domain was 0.60 or above. Although researchers prefer a score of 0.70, Mbithi (2011) and Yayha and Elsayed (2012) point out that a Cronbach's alpha of 0.60, although moderate, is acceptable.

4. Results and discussion

Significant differences were found in several of the managerial domains. The overall data analysis showed that all three generational age groups regarded most of the managerial competencies as sometimes important, important or highly important.

Table 1: Differences in age groups of their perceptions of the leadership domain

Variable	Four-point scale	Age group 16–24	25–40	>40	Results of Fisher exact test
Ability to motivate employees to be productive	Highly important	80.0	85.71	79.34	0.651
	Important	10.0	12.24	15.70	
	Sometimes important	10.0	2.04	2.48	
	Not important	0.0	0.0	2.48	
Ability to create a conducive working environment	Highly important	90.0	93.88	95.87	0.477
	Important	10.0	4.08	2.04	
	Sometimes important	0.0	2.04	1.65	
	Not important				
Ability to share information that would make employees' jobs easier	Highly important	100	93.88	90.91	0.265
	Important	0.0	2.04	8.26	
	Sometimes important	0.0	4.08	0.83	
	Not important				
Ability to teach employees to see difficulties as problems solved	Highly important	100	87.76	92.56	0.623
	Important	0.0	8.16	4.96	
	Sometimes important	0.0	2.04	2.48	
	Not important	0.0	2.04	0.0	
Ability to get all employees involved in decision-making	Highly important	90.0	75.51	94.21	0.010
	Important	10.0.0.0	16.33	3.31	
	Sometimes important	0.0	8.16	1.65	
	Not important		0.0	0.83	

Ability to grant employees an opportunity to grow	Highly important	100	75.51	94.21	0.013
	Important	0.0	16.33	4.96	
	Sometimes important	0.0	6.12	0.83	
	Not important	0.0	2.04	0.0	
Ability to instil employees' work commitment	Highly important	90.0	85.71	95.04	0.119
	Important	10.0	12.24	4.96	
	Sometimes important				
	Not important	0.00	2.04	0.00	
Ability to inspire employees with new ideas	Highly important	100	75.51	90.91	0.108
	Important	0.00	18.37	7.44	
	Sometimes important	0.00	4.08	0.83	
	Not important	0.00	2.04	0.83	
Ability to provide employees with personal attention	Highly important	100	71.43	91.74	0.018
	Important	0.00	16.33	4.96	
	Sometimes important	0.00	10.20	3.31	
	Not important	0.00	2.04	0.00	
Ability to promote teamwork	Highly important	90.0	83.67	86.78	0.838
	Important	10.0	6.12	6.61	
	Sometimes important	0.00	4.08	4.13	
	Not important	0.00	6.12	2.48	

Table 2: Differences in age groups of their perceptions of the management domain

Variable	Four-point scale	Age group			Results of Fisher exact test
		16–24	25–40	>40	
Employee training and development	Highly important	90.0	83.67	89.26	0.169
	Important	0.00	12.24	9.92	
	Sometimes important	10.0	2.04	0.83	
	Not important	0.00	2.04	0.00	
Employee mentoring	Highly important	90.0	77.55	85.95	0.565
	Important	10.0	16.33	9.92	
	Sometimes important	0.00	2.04	0.83	
	Not important	0.00	4.08	3.31	
Employee coaching	Highly important	90.0	79.59	86.7	0.854
	Important	10.0	12.24	7.44	
	Sometimes important	0.00	4.08	3.31	
	Not important	0.00	4.08	2.48	
Promotion of participative decision-making	Highly important	80.010.0	83.67	87.60	0.074
	Important	10.0	12.24	8.26	
	Sometimes important	0.00	4.08	0.00	
	Not important		0.00	4.13	
Promotion of feedback on employee performance	Highly important	70.0	79.59	90.08	0.030
	Important	30.00.00	12.24	3.31	
	Sometimes important	0.00	8.16	4.96	
	Not important		0.00	1.65	
Promotion of employee empowerment programmes	Highly important	90.0	85.71	90.08	0.652
	Important	10.0	10.20	8.26	
	Sometimes important	0.00	4.08	0.83	
	Not important	0.00	0.00	0.83	
Ability to maintain discipline in the workforce	Highly important	70.0	83.67	93.39	0.023
	Important	10.0	6.12	4.13	
	Sometimes important	10.0	2.04	0.83	
	Not important	10.0	8.16	1.65	

Table 3: Differences in age groups of their perceptions of the Interpersonal domain

Variable	Four-point scale	Age group % 16-24	25-40	>40	Results of Fisher's exact test
Telephone communication skills	Highly important	100	77.55	89.26	0.376
	Important	0.00	14.29	5.79	
	Sometimes important	0.00	6.12	4.13	
	Not important	0.00	2.04	0.83	
Listening skills	Highly important	90.0	81.63	91.74	0.174
	Important	0.00	10.20	2.48	
	Sometimes important	10.0	6.12	2.48	
	Not important	0.00	2.04	3.31	
Writing skills	Highly important	90.0	85.71	86.78	0.965
	Important	10.0	8.16	9.09	
	Sometimes important	0.00	2.04	1.65	
	Not important	0.00	4.08	2.48	
Customer service skills	Highly important	100	87.76	93.39	0.644
	Important	0.00	8.16	2.48	
	Sometimes important	0.00	2.04	2.48	
	Not important	0.00	2.04	1.65	
Negotiation skills	Highly important	100	83.67	93.39	0.095
	Important	0.00	6.12	5.79	
	Sometimes important	0.00	4.08	0.83	
	Not important	0.00	6.12	0.00	
Conflict management skills	Highly important	100	73.47	89.26	0.028
	Important	0.00	20.41	6.61	
	Sometimes important	0.00	2.04	4.13	
	Not important	0.00	4.08	0.00	

Table 4: Differences in age groups of their perceptions of the Intrapersonal domain

Variable	Four-point scale	Age group % 16-24	25-40	>40	Results of Fisher's exact test
Ability to solve problems	Highly important	90.0	91.84	90.08	0.016
	Important	10.0	0.00	9.09	
	Sometimes important	0.00	2.04	0.83	
	Not important	0.00	6.12	0.00	
Ability to manage time	Highly important	100	79.59	92.56	0.069
	Important	0.00	18.37	4.13	
	Sometimes important	0.00	0.00	1.65	
	Not important	0.00	2.04	1.65	
Ability to adapt to change	Highly important	100	91.84	90.91	0.977
	Important	0.00	4.08	4.96	
	Sometimes important	0.00	2.04	3.31	
	Not important	0.00	2.04	0.83	
Ability to manage stress	Highly important	90.0	81.63	92.56	0.149
	Important	10.0	18.37	6.61	
	Sometimes important	0.00	0.00	0.00	
	Not important	0.00	0.00	0.83	
Ability to be creative	Highly important	100	93.88	91.74	0.740
	Important	0.00	4.08	7.44	
	Sometimes important	0.00	2.04	0.83	
	Not important	0.00	0.00	0.00	

Table 5: Differences in age groups of their perceptions of the Technical domain

Variable	Four- point scale	Age group 16-24	25-40	>40	Results of Fisher exact
Culinary skills	Highly important	100	91.84	91.74	0.878
	Important	0.00	6.12	4.13	
	Sometimes important	0.00	2.04	4.13	
	Not important				
Menu planning skills	Highly important	100	89.80	91.74	0.630
	Important	0.00	10.20	4.96	
	Sometimes important	0.00	0.00	1.65	
	Not important	0.00	0.00	1.65	
Food presentation skills	Highly important	90.0	89.80	95.87	0.218
	Important	10.0	8.16	4.13	
	Sometimes important	0.00	2.04	0.00	
	Not important				
Knowledge on food products	Highly important	100	91.84	95.87	0.404
	Important	0.000.00	6.12	4.13	
	Sometimes important		2.04	0.00	
	Not important				
Knowledge in serving procedures	Highly important	100	95.92	95.04	0.614
	Important	0.00	2.04	4.13	
	Sometimes important	0.00	0.00	0.83	
	Not important	0.00	2.04	0.00	
Knowledge in operating kitchen equipment	Highly important	100	91.84	95.04	0.709
	Important	0.00	8.16	4.96	
	Sometimes important				
	Not important				
Ability to control food wastage	Highly important	90.0	95.92	93.39	0.733
	Important	10.0	4.08	5.79	
	Sometimes important	0.00	0.00	0.83	
	Not important				

Managers and employees place a high importance on leadership skills (Suh et al., 2012). For the leadership domain (Table 1), significantly fewer (p=0.010) respondents aged 25–40 perceived the ability to get all employees involved in decision-making as highly important. Significantly more (p=0.013) young respondents (16–24) and older respondents (>40) perceived the ability to grant employees an opportunity to grow as highly important compared to respondents aged 25–40. All respondents in the age group 16–24 years perceived this as highly important. Significantly fewer (p=0.018) respondents aged 25–40 perceived the ability to provide employees with personal attention as highly important compared to the younger group and respondents older than 40 years. For all the domains where significant differences were documented the respondents aged 25-40 were less likely to perceive a domain as highly important. The importance of teamwork for the younger generations is emphasised by researchers such as Gursoy et al. (2008)and Jiang and Alexakis (2017).The ability to promote teamwork was also highly important or important to the younger restaurant employees. Several studies highlighted the importance of managerial competencies in the hospitality industry (Jiang & Alexakis, 2017; Suh et al., 2012).The proportion of those who considered the promotion of feedback on employee performance to be highly important was significantly higher (p=0.030) for the oldest age group (>40) than for the youngest respondents (16–24) (Table 2). Only a small proportion regarded it as not important, and they were in the group aged over 40. The ability to maintain discipline in the workforce was perceived by significantly more (p=0.023) respondents in the oldest category (>40) as highly important, than by respondents in the youngest category (16–24). According to Twenge et al. (2010), the younger generation value freedom. Differences in attitude towards authority ranged from accepting, questioning to even rebelling against traditional viewpoints and orders handed down from managers (Gursoy et al., 2008).

The importance of interpersonal skills is a confirmation of Suh et al. (2012)' results. All the skills categories in the interpersonal domain were rated as important by all the age categories, especially by the youngest employees (Table 3). All respondents in this age category indicated that telephone communication skills, customer service skills, negotiation skills and conflict management skills were highly important. Jiang and Alexakis (2017) reported that oral communication skills are perceived by managers to be one of the three most important management domains in the hospitality industry. However, it is a concern that the writing and listening skills categories which are deemed so important by Christou (2002) and Tesone and Ricci (2006)were perceived by only a small percentage (10%) of 16-24 year olds as important. The 25-40 year olds perceived all the interpersonal skills categories as less important when compared to the ratings of the other two age groups. There was a significant difference ($p=0.028$) in the perceptions of the different age groups regarding conflict management. The 25-40 year olds perceived conflict management as less important when compared to the other two age groups. Welch and Mickelson (2013) agree with findings of this study that listening is an important human resource skill to ensure effective restaurant operation and it assumes increasing importance as employees rise to managerial status and gain experience.

The intrapersonal skills categories (Table 4) were rated as very important by all the groups as only a limited number of respondents indicated that these were not important. Youngest respondents perceived all the intrapersonal categories as highly important. However, the ability to solve problems and the ability to manage stress were perceived by only 10% of respondents as important. Significantly more respondents ($p=0.016$) in the 25-40-year category perceived the ability to solve problems as not important, when compared to the ratings of the other two age categories. A study conducted by Toygar and Akbulut (2013) concludes that managers who feel committed to their organisations have high-level problem-solving, decision-making and creative skills. The ability to be creative was rated as the most important intrapersonal category by the 25-40 year olds, whereas 93.88% of respondents perceived it as highly important. The ability to manage time and stress was perceived by the oldest age group as most important in the intrapersonal category. This is contradicted by Jiang and Alexakis (2017) who found that managers, who are normally in an older age group, rated time management as less important than the younger group. Suh et al. (2012) make the point that due to the fast-changing business environment in the restaurant industry, all managers and employees need to possess skills to adapt to change creatively, to handle stress calmly and to solve problems effectively.

In general, all age categories perceived the technical competencies (Table 5) needed to perform their duties as employees as highly important. There were no significant differences, although the youngest age group restaurant employees did rate most of the technical skills as highly important with two exceptions. Of these employees, 10% rated food presentation skills and the ability to control food wastage as important. With regard to culinary skills and menu-planning skills, the two older age groups rated these skills as highly important, important and sometimes important. Regarding menu planning, 10% of the 25 – 40-year-old employees rated these skills as important, whereas nearly 4% of the over-40 age group perceived these skills as sometimes important or not important. Knowledge of operating kitchen equipment was rated as highly important by the youngest age group, whereas the two other age groups rated it as highly important or important. Zopiatis (2010) asserts that technical (culinary–specific) competencies, such as knowledge of food products, food preparation and presentation are considered most important in the restaurant sector. This proves that culinary skills are prerequisite at entry level for a manager or an employee. Food preparation and quality are key determinants of customer satisfaction and loyalty (Voon et al., 2013). Suh et al. (2012) maintain that knowledge of product, service and culinary skills are essential competencies in the hospitality industry. Prerequisites for entry-level restaurant managers are calculation of food costs in a restaurant, menu development, culinary skills, food processes, serving methods and etiquette. Suh et al. (2012), however, report that hospitality-related technical skills are deemed not very important to success in the hospitality industry.

5. Conclusion

Statistical differences were found in leadership domain items, therefore H_{01} that no significant differences exist in the different age groups' perceptions of the importance of the leadership domain is rejected. Evidence obtained for rejecting H_{02} ($p=\leq 0.05$) shows that significant differences exist in the different age groups' perceptions of the importance of the management domain. The hypotheses testing indicated that no significant differences existed in the 3 age groups for 5 of the 6 interpersonal skills categories while significant differences existed in the variable "conflict management skills". Therefore, evidence has been produced for rejecting H_{03} ($p=\leq 0.05$) that no significant differences exist in the different age groups' perceptions of the importance of the interpersonal domain in restaurants. The hypotheses testing further indicated that no significant differences existed in the 3 age groups for 4 of the 5 intrapersonal skills categories while there was a significant difference in the variable "Ability to solve problems". This provides evidence for rejecting H_{04} ($p=\leq 0.05$) that no significant differences existed in the different age groups' perceptions of the importance of the intrapersonal domain in restaurants. H_{05}, namely that no significant differences existed in the perceptions of the different age groups' regarding the importance of the technical skills needed to perform their duties as restaurant employees and as potential first-line managers was accepted.

Conflict could develop among different age groups if the ability to solve problems is not perceived by all employees as important. Employees from different age groups perceive the importance of managerial and leadership competencies differently. Employees from different age groups working together have both positive and negative impacts on the work environment, employee retention, service quality and company profitability. The restaurant industry relies increasingly on employee creativity and teamwork to ensure excellence in operations. Organisations of all kinds encourage team creativity so that they can compete more keenly. It could be concluded that most of the respondents in all age categories perceived most of the managerial competencies as either highly important or important. The 25-40 year olds perceived more of the competencies as sometimes important or not important compared to the youngest and oldest age groups. In general, the 16-24 year olds perceived the managerial competencies as more important than the other two age groups. Only when employees in all age groups are fully competent to perform their appointed tasks, will their level of job satisfaction increase with guaranteed positive outcomes for restaurants.

Recommendations: The value of this research is that it applies the existing knowledge of generations and managerial competencies in the restaurant industry. Training should be offered in line with competency needs. Compiling a complete set of managerial competency profiles will provide a comprehensive framework for the planning of training and development in an organisation. Training institutions should take note of the younger generation's perceptions regarding the importance of particular managerial competencies to support their needs. The tertiary education environment should be cognisant of the needs of industry, as well as the perceptions of different generations regarding the importance of managerial competencies. Students should be trained on what to expect from different generations in the workplace. This study contributes to ongoing research in the hospitality industry, without which it will not be possible to develop relevant curricula to ensure that graduates are employable. The curriculum should include informing hospitality students about the realities of the hospitality industry. Lecturers with relevant experience in industry are important to the success of hospitality students. Industry should also be informed about the perceptions of the different generations regarding the importance of managerial skills to ensure a work environment that is conducive to understanding both older and younger employees. From a managerial point of view, it is imperative to understand the value differences, as well as similarities, in a diverse workforce. Once these differences are understood, management will be able to formulate better strategies with regard to recruitment and employee retention. Due to the diversity and generational differences in the workforce, it is vital for hospitality organisations and their management teams to have an understanding of the work value differences as well as the similarities in older and younger employees.

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Incentivized Time Preferences, Level of Education in a Household and Financial Literacy: Laboratory Evidence

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Abstract: This study investigates the impact of financial literacy, level of education in a household and gender differences on time preferences of students at a university in South Africa. The study relies on a convenient sample of (N=85, female=48%) pursuing a financial literacy course. The study uses a questionnaire, a financial literacy test and a simple binary choice experimental game that elicited individual time discount rate to gather data. Ten percent of the participants were paid (in South African rands) for their time preference choices by way of quota random sampling. Female university students' individual time discount rate was found to be on average higher than that of their male counterparts, indicating that female university students are generally impatient, especially those with low levels of financial literacy. Our results (using a Negative Binomial Regression analysis and Ordinary Least Squares regression analysis) show that time preferences of university students aresignificantly influenced by highest level of education in the household. The OLS regression model shows that financial literacy, measured using financial literacy test, significantly influence time preferences for all subjects. The study concluded that patience levels among male university students increase as financial literacy increases. Gender, income, age and family size significantly influence time preferences of university students. Highest level of education in a household, financial literacy and gender differences have a bearing on individual time preferences.

Keywords: *Time preferences, financial literacy, education, individual discount rate, gender, impatient, Experiment*

1. Introduction

Time preferences can reveal one's levels of patience and self-control, attributes which are critical in making financial investments and choices. The pleasure of consuming goods immediately as opposed to the discomfort of future consumption is mainly influenced by the circumstances in which decision-makers find themselves (DellaVigna, 2009; Frederick, Loewenstein, & O'donoghue, 2002; Loewenstein, Read, & Baumeister, 2003; Rae & Mixter, 1905). Research evidence suggests that individuals' time preferences are highly correlated with financial literacy-information acquisition, job search for a long period, earning of higher wages, preparation to take up contingency measures to improve future welfare and generally better financial outcomes (DellaVigna, 2009; Meier & Sprenger, 2013).Time preferences have been used to explain economic concepts such as credit card take up, life cycle savings, retirement savings, procrastination, homework and deadlines as well as perseverance by individuals (DellaVigna, 2009). Aspects of time preferences such as self-control and patience determine whether individuals make choices immediately, in the near future, or in the distant future. On the other hand, financial literacy, according to Huston (2010), relates to measuring how well an individual can understand as well as use personal finance-related information. This implies that for one to be financially literate, one should be able to use financial knowledge to improve one's welfare. This statement is further backed by Gallery, Newton and Palm (2011) and Schagen and Lines (1996) who consider financial literacy to be the ability to make informed judgments and take effective decisions regarding the use and management of money.

Both definitions of financial literacy suggest a variation in time preferences among people with different levels of financial literacy. The differences in welfare outcomes of people across financial levels could be explained by variations in time preferences. In reality, choices made at a given moment to accrue benefits in the present or future, are aimed at maximizing one's utility; therefore, one's financial knowledge might be an important factor. In addition, time preferences are sometimes strongly associated with an individual's cognitive ability (Frederick, 2005). Cognitive ability plays an important role in helping individuals achieve beneficial outcomes (Banks, o'Dea, & Oldfield, 2010). Further, presenting incentives in the form of actual money payment on the choices made by individuals can be seen as the setting up of a practical life situation conducive to displaying true time preference behaviour. This study investigates the impact of financial literacy, highest level of education in a household and gender differences on time preferences of university students at a university in South Africa. The discrete and non-negative value nature of time discount rates allows the study to use theNegative Binomial regression method to analyse data (Hilmer & Hilmer , 2014). We also constructed a variable Time Preference index (TPI) and regressed a set of Ordinary Least Squares models in our investigation (Németh, 2014). A total convenient sample of 85 university students took part in a financial literacy test and a time preference experimental game that was included in a questionnaire. The simple binary choice time preference experimental game used tokens which were allocated over time and summed into a time budget (TB), making the design an inter temporal choice framework(Andreoni, Kuhn, & Sprenger, 2015; Angerer, Lergetporer, Glätzle-Rützler, & Sutter, 2015). Students that scored a mark above the average in the financial literacy test were categorized as the high financial literacy group, whereas those that scored a mark below average represented the low financial literacy group. Ten percent of the participants were randomly selected and paid the actual amounts of their choices using quota random sampling and according to the instructions in the time preference game. The quota random sampling incentivized system allowed all participants a fair and equal chance of being selected for payment.

The study also explored whether the state of world where university students survive in, influenced their time preferences. The state of the individual's world may include gender orientation and family status among others. In a society which participates in inter temporal choice decision making, university students are an important component mainly because of their level of financial literacy, therefore, it is critical to understand the determinants of their time preferences. In addition, students are the most logical next entrants into the job market where saving and investment decisions are equally vital. The possibility of time preferences being influenced by financial literacy and highest level of education in a household is significant in two ways. First, the impact of financial literacy on individual time preferences may sum up into market outcomes which might help authorities to design policies that improve welfare of citizens. Secondly, the impact of highest level of education in a household on university students' time preferences can explain the intergenerational education spill over. Further, understanding gender differences in time preference choices might assist in designing interventions necessary to reduce disparities. A number of studies have explored the level of financial literacy across gender, economic status, social status and area of specialization(Batty, Collins, & Odders-White, 2015;Lusardi, Mitchell, & Curto, 2010; Shambare & Rugimbana, 2012; Oanea & Dornean, 2012; Mandell, 2008). However, very little information is available on the interaction between financial literacy level, gender differences and time discount rate as a measure of time preferences. The fact that financial literacy attainment yields better welfare outcomes cannot be doubted (Becchetti, Caiazza, & Coviello, 2013; Tang & Peter, 2015; Sayinzoga, Bulte, & Lensink, 2016). What is not clear, however, is how financial literacy affects one's level of patience or impatience, which is measured by one's individual time discount rate. The level of patience (or impatience) allows individuals to gainfully use financial literacy acquired to improve current and future welfare(Carlin & Robinson, 2010).

This study follows researches by Frederick (2005), Benjamin, Brown and Shapiro (2013) and Parker and Fischhoff (2005). Fredrick tested time preferences of subjects using a cognitive reflection test (CRT) and concluded that there are time preferences variations across gender. Benjamin et al (2013) concluded that Chilean high school students with a high maths score were more patient while Parker and Fischoff (2005) found out that vocabulary proficient scholars were more likely to be patient. Our results are mixed; female university students were more likely to be impatient especially those with lower levels of financial literacy while on the other hand, increase in financial literacy levels among male students also increased patience. There is evidence that show that the highest level of education in a household influences time preference of university students. The OLS regression model shows that financial literacy significantly influences time preferences of all participants and male participants in particular. Our study can also be compared with studies by Meier and Sprenger (2013) as well as Sabri et al. (2010). The next section presents a review of literature, followed by a discussion of the methodology, data analysis and presentation of results. The final section provides the conclusion of the study.

2. Literature Review

Financial behaviour is known to be determined by financial knowledge, perceptions, norms, and attitudes(Kennedy, 2013). Important financial attitudes that help economic agents to maximise on their financial behaviour are time preferences, which is a process of making inter temporal choices. The quest to understand what drives time preferences has been a subject of debate to researchers(Capuano & Ramsay, 2011; Hoch & Loewenstein, 1991; Loewenstein & Thaler, 1989;Frederick, Loewenstein, & O'donoghue, 2002). Although individual time discount rate is used to measure time preferences, a number of factors are known to influence time preferences; namely, habit formation, affection, anticipatory utility and visceral influences(Frederick et al., 2002). Neoclassical economics holds that exhibiting an optimal behaviour is an aspect of rational choice (Mas-Colell, Whinston, & Green, 1995). Predictable, yet irrational behaviour exhibited by consumers is mainly driven by knowledge and psychological processes that create mental "shortcuts" as well as biases (Smith & Barboza, 2014). Beside neoclassical suggestions, human beings have exhibited time-inconsistent behaviour, which is an aspect of irrationality (Hoch &Loewenstein, 1991; Loewenstein & Thaler, 1989; Imrohoroglu, Imrohoroglu, & Joines, 2003). Students' social upbringing, cognitive ability, circumstances and the surrounding environment can play an important role in determining their time preferences(Frederick, 2005).Preferences in general influence supply and demand of goods, a fact that has incentivized researchers to gain greater insight into how preferences are formulated (Ariely, Loewenstein, & Prelec, 2003). In addition, poorly enforced property rights increase impatience which is an aspect of time preferences (Epper, Fehr-Duda, & Bruhin, 2009). Measuring time preferences has generally presented challenges to researchers and no single method is absolved of errors in measuring discount rates (Loewenstein et al., 2003). Although research contents that inter temporal time preferences exhibit hyperbolic discount rates, that is, discount rates tend to be lower as time frame for rewards gets longer (Epper, Fehr-Duda & Bruhin, 2009), a number of researchers have tended to use laboratory experiments to explain time preferences in real life situations (Ariely & Wertenbroch, 2002; Ausubel, 1999). Their findings reveal that individuals make time preference choices that maximize their utility and resemble real life behaviour.

There has also been a concerted effort to test whether laboratory experiment findings explain real behaviour of subjects in the practical world. The general consensus is that the measured time preferences lack the scope to explain actual human behaviour (Chabris, Laibson, Morris, Schuldt, & Taubinsky, 2008). However, a number of researchers concluded that there is a close relationship between experimental research findings and true human time preference choices (Benzion, Rapoport, & Yagil, 1989; Charness, Gneezy, & Imas, 2013; Meier & Sprenger, 2013). A research project in the district of Georgia in the US in 2008 concluded that drop-outs and referrals were positively correlated with impatient behaviour (Castillo, Ferraro, Jordan, & Petrie, 2011). The findings are, however, inconclusive in that the research project could not identify precisely what drives individual and group time preferences. On the other hand, financial literacy has been hailed for improving welfare of individuals and society. A study on elementary school students by Batty et al. (2015) found that financial education impacted attitudes. The findings indicate that one's level of financial literacy influences how one makes inter temporal choices and that financial knowledge influences time preferences. In addition to their findings, students that were exposed to financial literacy were able to save and were financially savvy. Another aspect that has been found to be important in moulding inter temporal choices is family background. In a study by (Sabri, MacDonald, Hira, & Masud, 2010) carried out in Malaysia, students that received financial literacy from their parents exhibited better financial outcomes and were more likely to save money. This suggests that knowledge within a household plays a pivotal role in shaping time preferences.

Time preferences represent an aspect of inter temporal choice and researchers have investigated how it is impacted by financial literacy level as well as gender orientation. In short, time preferences reveal one's choices over time while financial literacy has more to do with financial knowledge and the ability to apply financial knowledge (Güth, 2004; Huston, 2010). The direction of causality between financial literacy and time preferences seems difficult to tell, however, evidence suggests that interaction of the two influences life outcomes(Benjamin, Brown & Shapiro, 2013). Meir and Sprenger (2013) conducted an incentivized multiple price list experiment on individuals participating in a volunteer income tax assistance (VITA) credit counselling programme and concluded that participants in the VITA program had a higher discount rate.

Research evidence suggests that there are variations in time preferences across gender. For example, a research study investigating time preferences of high school students carried by Castillo et al. (2011) concluded that boys compared to girls had a higher discount rate - suggesting impatience amongst boys. Gender differences are mainly driven by variation in preferences (Croson & Gneezy, 2009). An increased number of literature on risk preferences found out that women are more risk averse compared to men (Charness & Gneezy, 2012; Eckel & Grossman, 2008; Powell & Ansic, 1997). Aside observing differences in risk preferences across gender, there is also evidence of variation in time preferences by gender and race (Norum, 2008; Adan & Natale, 2002). Married women were concluded to be investing less in common stock than married men (Bajtelsmit, 1999). However, there are some studies that could not conclude variation in time preferences across gender(Kim, Dueker, Hasher, & Goldstein, 2002). In a research study comparing risk and time preferences among students in the USA, no differences were found across gender (Bernheim, Garrett, & Maki, 2001). Evidence from previous work on time preferences and education remain inconclusive.

Financial literacy is a form of education on financial concepts and requires cognitive prowess to master. Research has concluded a correlation between education and time preferences (Van der Pol, 2011;Lawrance, 1991; Fuchs, 1980). Van der Pol (2011) and Lawrance (1991) observed that time preferences tend to decrease as the level of education increases. Their studies were confined to health and poverty but did not focus on financial literacy. Financial literacy level may or may not vary across university students in general. There is evidence of variation of financial literacy level by gender, degree being pursued, family background among others (Cull & Whitton, 2011; Lusardi, Mitchell & Curto, 2010;Chen & Volpe, 1998). Chen and Volpe (1998) found out that female students were less financially literate compared to their male counterparts. In a 2010 study in Romania, it was concluded that male university students had a higher level of financial literacy compared to females (Oanea & Dornean, 2012). If there is a correlation between time preferences and financial literacy then, this could partially explain variation in life outcomes. On the other hand, there are studies that conclude absence of differences in financial literacy especially for university students (Wagland & Taylor, 2009). Little research has been carried out to investigate the impact of financial literacy level on time preferences. More so, it is not clear whether there is reverse causality between financial literacy and time preferences. There is need to understand factors that influence time preferences of individuals given the fact that they play an important role in determining life outcomes. More needs to be explored with regard to time preferences and gender differences.

3. Methodology

The study used a modified stylized standard model version by Rabin (2002) given below, to explain how individuals make choices over time.

$$\max_{x_{i \in x_i}^t} \sum_{t=0}^{\infty} \delta^t \sum_{s_t \in S_t} p(S_t) U(x_i^t / S_t) \ldots\ldots\ldots\ldots\ldots\ldots \text{(1)}$$

where, individual university student *i* at time *t* maximizes expected utility subject to probability distribution *p(s)* of the states of the world s ∈ S"(DellaVigna, 2009; Rabin, 2002). The utility function *U(x/s)* is defined over pay-off of the experimental game x_i^t of subject (*i*) over one's state of the world (*s*) and future utility is discounted with a discount factor δ for naiveté assumed to be time consistent. *S,* the state of the university student's world explained by financial literacy level, highest level of education in a household, financial literacy perceptions, student characteristics and the demographic information. In the study, the minimum discount rate is set at 0 and the maximum discount rate is set at 5.The discount factorδ is calculated from the choices made by the subjects given as (columnA/columnB),where column A is the present time pay-off received after 2 weeks and column B is delayed consumption paid after 6 weeks(Meier & Sprenger, 2013).
To deal with present time bias, the initial payment is paid in the future period(Alan & Ertac, 2015) such that:

$$b_1 + \beta\delta b_2 \geq 0 \ldots\ldots\ldots\ldots\ldots\ldots \text{(2)}$$

where b_1 is pay-off in 2 weeks and b_2 is pay-off in 6 weeks. β represents unobservable self-control or patience problems and δ is the future utility discount rate. We adopted a simplified model used by Epper et al.(2009) and (Frederick, 2005), since our data could not capture risk parameters, we did not include the risk value. We formulated aNegative Binomial regression model as follows:
δ(timediscountrate) = f(financial literacy score, financial literacy perceptions, age, highest level of education in a household, number of family members in a household, income).

Our dependent variables time discount rate is discrete, the variance and mean are significantly different from each other which made a Negative Binomial regression model suitable for analysing our data instead of a Poisson regression model (Hilmer & Hilmer , 2014). We tested the Likelihood-ratio test of alpha for the Negative Binomial regression model and the Poisson regression model as a way of determining the appropriate model to use for our data analysis. Our results show a likelihood-ratio test of Alpha = 0: chibar2(01) =135.99 Pro>=chibar2=0.000, confirming over dispersion which allowed us to use the Negative Binomial regression model in our analysis. In addition, university students' preference choices were non-negative ranging between 0 and 5. Financial literacy is measured using the mark scored in the financial literacy test written before students are taught financial literacy concepts. This is the variable that measures the financial literacy or knowledge level of the university students. A number of studies have used financial literacy test to measure financial knowledge (LaBorde, Mottner, & Whalley, 2013; Mandell, 2008; Sayinzoga et al., 2016). Financial knowledge, perceptions and norms play a vital role in shaping financial attitudes and behaviour (Ajzen, 2011).To assess financial literacy perceptions, we asked the following three questions adopted from Lusardi et al., (2010)

i. On a scale from 1 to 7, where 1 means very low and 7 means very high, how would you assess your overall financial knowledge?
ii. Please give your answer on a scale of 1 to 7, where 1 = "Strongly Disagree," 7 = "Strongly Agree,"
a) I am good at dealing with day-to-day financial matters, such as checking accounts, credit and debit cards, and tracking expenses
b) I am pretty good at math

A single variable of perceptions was predicted using factor analysis. Self-reported age, highest level of education in the family, family size and individual income are some of the variables that were used. The highest level of education in the family was used as a proxy for family status, because number of education years has been found to be positively correlated with higher levels of income(Argent, Finn, Leibbrandt, & Woolard, 2009). A question in our questionnaire asked respondents to indicate the highest level of education in their households excluding themselves. The age of a respondents is normally associated with experience, as one gets older, bank of knowledge grows until retirement (Lusardi & Mitchell, 2005). Income is measured using self-reported cash and cash equivalence that university students were holding during the time of the study. The respondents also indicated the numbers of family members in their households. Family size, income and age are some of the variables that have been concluded to be influential in shaping time preferences in some studies(Andersen, Harrison, Lau, & Rutström, 2006;Meier & Sprenger, 2013).We further constructed variable time preference index (TPI) and ran an Ordinary least squares regression model on same variables indicated above. TPI represents time preferences choice over financial literacy.

$$\mathrm{TPI} = \frac{\mathrm{individualtimediscountrate}}{\mathrm{financialliteracytestscore}} \quad (3)$$

Variable TPI is a continuous variable which made it possible for us to analyse our data using an ordinary least squares regression model.

Time Preferences: Eliciting Individual Discount Rates: A simple binary choice time preference game was used to collect students' individual discount rates. In the time preference game, the subjects were asked to allocate five tokens between two periods; that is, after 2 weeks or after 6 weeks- resembling an investment or savings venture. The instruction for the experiment is as follows (Giné, Goldberg, Silverman, & Yang, 2011; Angerer et al., 2015):

"You are allocated 5 tokens. If you place the token in column A you will be paid R20 per token paid after 2 weeks. If you place the token in column B you will be paid R25 per token paid after 6 weeks. To receive payment for your choices you should pick a winning ticket from a raffle".

The choice for the price paid for each token is based on the interest levied on creditors by local loan sharks (credit providers) '*Mashonisas*', who charge an interest between 15% to 50% per month. To deal with the present time bias in the subject's choices a front end delay payment was used (Andersen, Harrison, Lau, & Rutström, 2008). Choices for column A were paid after 2 weeks (which resembled a present time pay-off or Smaller Sooner), whereas choices for column B were paid after 6 weeks(a future period pay-off or larger later) (Andreoni & Sprenger, 2012). To select the winners, the researcher used quota random sampling. Coupons equal to the number of participants were placed in a hat. Ten percent of the coupons were stamped and whoever picked the stamped coupon was paid the amount according to his/her choice in line with instructions provided in the experimental task above. The use of coupons placed in a hat provided all the university students who participated in the game with an equal chance to win according to their choices in the task. Selection of ten percent of university students who participated in the experimental task was informed by previous studies. In a Danish study focusing on eliciting risk and time preferences of adult population, only ten percent of the participants were selected and paid for their choices(Andersen et al., 2008). The names of the winners were listed and their contact details collected for administration purposes. The information collected was aggregated for analysis and no information traceable to an individual was used. Payment to the winners was made through e-wallet, a banking platform offered by FNB bank in South Africa. The researcher paid the university students on the days promised according to instructions of the game/task.

Procedure and Data: A total of 85 students (female=48%) studying a financial literacy module (known as Personal Finance module) at the University of the Free State in South Africa Qwaqwa Campus were conveniently sampled to participate in the study. The high cost of running an experiment and the easy accessibility of university students were the major reasons we settled for a convenient sample. Convenience sampling is a non-probability sampling method suitable for a target population meeting certain criteria, easily accessible, geographical proximity, available at a given time and willing to participate in the study (Etikan, 2016).Students pursuing a Bachelor of commerce degree in the faculty of Economic and Management Sciences were invited to participate in the study on the 28th July 2016 through their emails. The email was send via the university e-learning platform known as blackboard a week before the study was carried out. The target group was 86 undergraduate university students enrolled in a personal finance module. 85 students turned up and the participation rate was 99%. For a population of 100, assuming a margin of error of 3%, alpha of 1% and t=2.58 a sample of 68 observations can be used for continuous data regression while for a margin of error of 5%, probability of 50% and a t=2.58, a sample 87 observation can be used for categorical data (Kotrlik & Higgins, 2001). Sample size observations in our study fell within the required threshold. Participation in the study was voluntary. The study used a questionnaire which included demographic information, financial literacy perceptions, time preferences (a binary choice experimental task) and a financial literacy test. The test was administered before the students studied the financial literacy module.

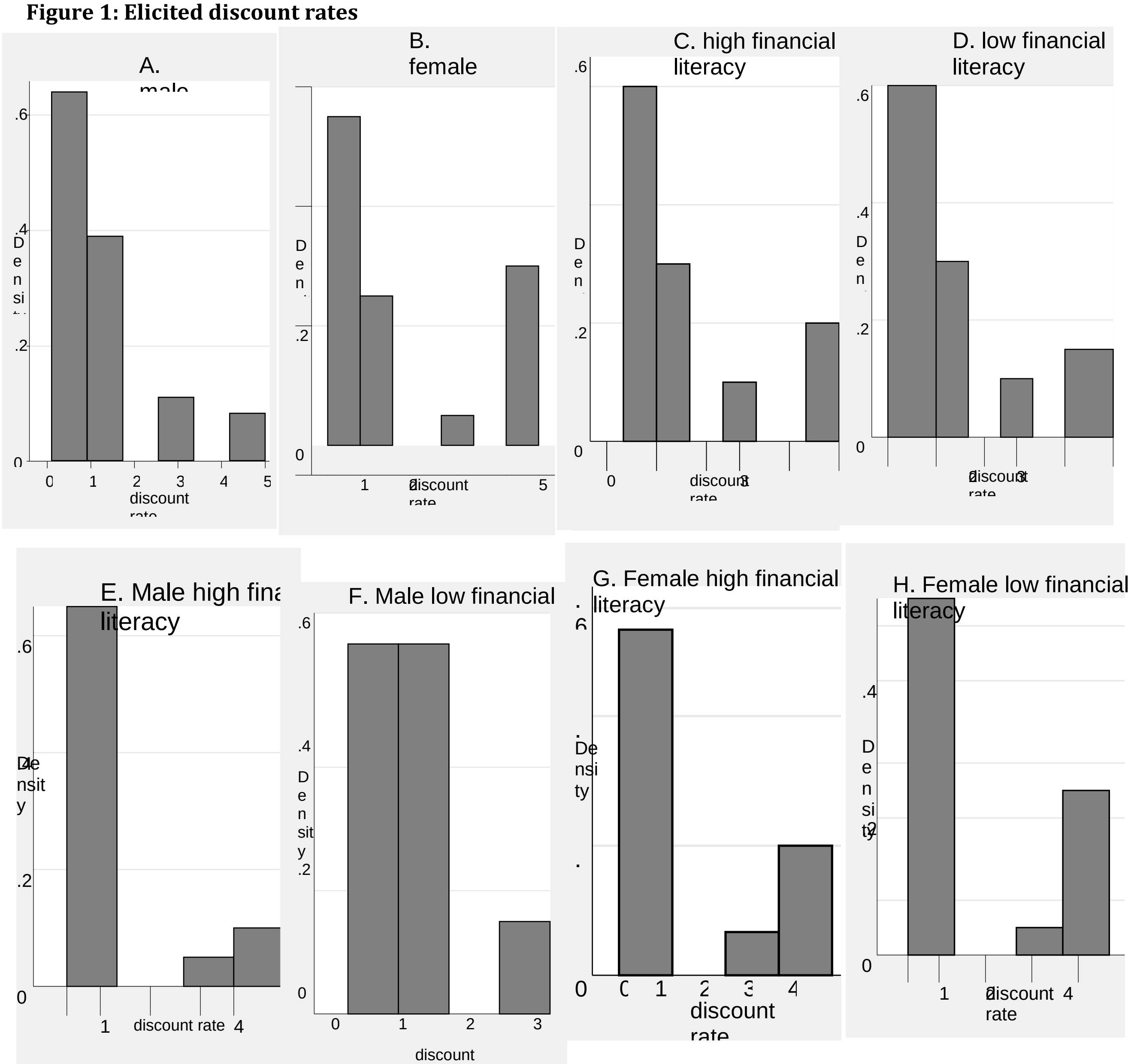
4. Results and Findings

Descriptive statistics: Self-reported evidence from the questionnaire revealed that 49% of the university students belonged to a household with matric as the highest level of education. These were followed by 32% of the university students that indicated that they belonged to a household with a degree as the highest level of education. About 56% of the university students were from households with at least a matric or less. This is a clear indication that the majority of the university students belonged to families with low levels of education. Students answered a total of 20 financial literacy questions which constituted a financial literacy test. The questions were adopted from jumpstart and National Financial Capability Survey (Lusardi & Mitchell, 2011;Mandell & Klein, 2009). The average financial literacy score for the group was very low at 43%. The highest and lowest mark scored in the financial literacy test were 65% and 15% respectively. A t-test analysis showed no significant difference between male and female university students' level of financial literacy although the average financial literacy level of females was slightly higher. Male participants scored an average of 43% while female participants scored an average of 44%. This confirmed similar findings in Australia where low financial literacy levels amongst university students was identified(Beal & Delpachitra, 2003). This shows that the university students under consideration had low levels financial literacy. This is also similar to earlier findings by (Wagland & Taylor, 2009) who compared performance of university students that received equal treatment across gender and found no difference in performance. In the case under consideration, university students were generally of a similar level of education, under-graduate students pursuing Bachelor of Commerce Degree.

Our results showed a variation in individual time discount rates across gender. In relative terms, female subjects reported higher time discount rates compared to their male counterparts. A t-test analysis on individual discount rates across gender showed a significant difference in the time preferences of female and male students at 5% level of significance (results can be provided on request). In addition, university students with higher financial literacy levels exhibited a higher average time discount rate when compared to those with low levels of financial literacy. On average, female university students reported a higher average individual income and cash equivalence of R798.15 compared to R699.48 for their male counterparts. The average family size for the whole group, males and females, was around five family members. On the other hand, the maximum age recorded for female university students was 40 years compared to 29 years for males. The average ages for male and female university students were 22 and 23 years respectively.

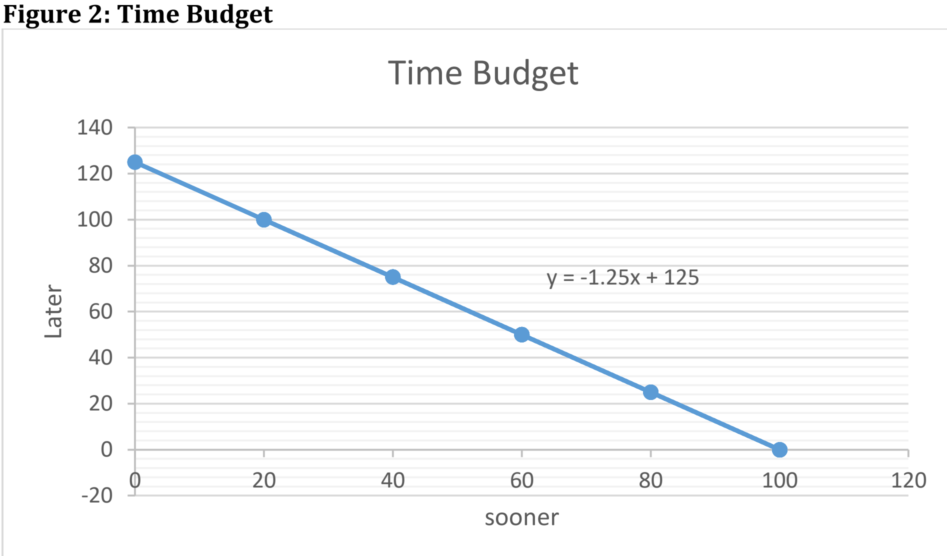
Histograms for elicited time discount rates: Plotted histograms show variations in time discount rates - especially across gender and financial literacy level. Figure 1A. shows that male subjects were more willing to accept delayed consumption compared to female subjects. There are lower densities for male subjects for highest discount rates as well as higher densities for lowest discount rates for male subjects in general when compared to female subjects. The discrete and non-negative nature of elicited time discount rates allowed us to make use of the Negative Binomial regression model.

Figure 1: Elicited discount rates



Time Budget: A graphical representation of simple binary choices made by subjects and the equivalent pay-off were presented in a time budget (TB) shown in Figure *2*. All university students chose optimal choices that maximised their utility subject to the total return they could earn from their choices. In this instance, all university students allocated all the five tokens into two columns. During quota random sampling, most of the subjects were eager to pick the winning coupon, an aspect which revealed their need to maximize their utility. Several researchers have used the Convex Time Budget(CTB) point due to its ease of understanding by subjects, making it an appropriate tool to elicit time preferences (Alan & Ertac, 2015; Andreoni et al., 2015). The CTB is known to be a better measure of intertemporal choice when compared to the double multiple price list (DMPL) used by Andersen et al. (2008). The corner solution provided by the TB has a predictive power of individual impatience or patience. It also forecasts the demand theory as well as the equality of an individual in allocating income over periods (Andreoni et al., 2015). A marginal rate of substitution of 1.25 shows the opportunity cost of allocating of monetary rewards over the present and future period. It also shows the return the subjects could earn in the event that they were patient enough to receive the pay-off after 6 weeks.

Figure 2: Time Budget



The return for a subject who is patient enough to receive all pay-off after 6 weeks compounded per annum is approximately 217%. This means that subjects who collected all their pay-off in 2weeks' time had a very high discount rate of the present pay-off. The maximum pay-off a participant could get in two weeks was 100 rands (7.7 USD) if all tokens were allocated in Column A, while those that collected all their pay-off after 6 weeks collected a maximum of 125 rands (9.7 USD) if all the tokens were allocated in Column B. The prevailing exchange rate during the time of the study was 1USD: 12.99 rands.

Regression Analysis

Time preferences and financial literacy level: Calculated marginal effects in Table 1 show that female university students had a higher individual discount rate compared to their male counterparts. Given that one is female, there is an 0.83% chance of a higher discount rate compared to male subjects at 5% level of significance. The first regression confirms that there is a significant variation in individual time discount rates across gender suggesting that female university students were generally impatient. A higher individual time discount rate for female university students compared to their male counterparts might be due gender disparities and girl child challenges regarding financial needs. These findings are contrary to a conclusion reached by Castillo et al., (2011) who found that boys were more impatient than girls in a 2008 study on time preference of high school students in the US. Other variables that significantly influenced time discount rates of all university students under consideration were the highest level of education in the household – matric, diploma or certificate and degree. There is a 2.74%, 7.50% and 3.47% chance of a high time discount rate for a respondent from a household with highest level of education of matric, diploma or certificate and degree respectively.

This reveals that the highest level of education in a household significantly influences respondents' level of patience, which shows an intergenerational education spill over. This confirms findings by (Smith & Barboza, 2014), who concluded that financial behaviour can be influenced by the parent/guardian's level of education. We split the subjects by their level of financial literacy. An investigation into the university students with high level of financial literacy showed that the time discount rate of university students from households with the highest level of education of a matric, diploma or certificate and degree had a 2.96%, 8.4% and 2.31% chance of being significantly higher respectively. There was no significant difference between time discount rates of female and male university students with high levels of financial literacy across gender, showing that if both males and females have high levels of financial literacy, their time preferences would not differ significantly. Turning to the regression analysis which focused on university students with low levels of financial literacy, if one is female, there is a 0.96% chance that one's discount rate will be higher at 5% level of significance. Female subjects with low levels of financial literacy were found to be impatient. If a respondent was from a household with the highest level of household education of matric, diploma/certificate and degree there was a 1.97%, 1.48% and 2.39% chance of an increase in time discount rate respectively. Findings suggest that highest level of education in a household influences time preferences of university students in the low financial literacy cohort. Further, there was a 0.07% significant chance of a decrease in time discount rate if one had low financial literacy as age increased at 10% level. In a study that looked at time preferences and participation in financial education programs in US, Meier and Sprenger (2013) found that as age increased individual discount rate of participants' decrease. This means that older and low financial literacy university students are more likely to be patient or willing to accept a larger later. This behaviour can be attributed to life experience (Frederick, 2005).

Table 1: Negative Binomial Regression marginal effects: Time discount rate

	All	all_literate	all_low_lit	high_lit_female	low_lit_female	high_lit_male	low_lit_male
female	0.83**	0.50	0.96**				
	(0.335)	(0.48)	(0.420)				
age	-0.04	0.000	-0.065*	-0.048	-0.16***	0.041	0.022
	(0.045)	(0.097)	(0.038)	(0.140)	(0.047)	(0.083)	(0.095)
family_size	0.095	0.094	0.077	0.088	0.066	0.20**	0.07
	(0.068)	(0.118)	(0.060)	(0.187)	(0.152)	(0.092)	(0.048)
matric	2.74***	2.96***	1.97***	7.02***	3.19	0.11	1.32
	(0.75)	(1.115)	(0.316)	(2.510)	(2.061)	(0.641)	(0.868)
Dip/cert	7.50*	8.40*	1.48**	18.99	2.71	5.79**	2.71
	(4.0)	(5.076)	(0.583)	(1.780)	(5.256)	(2.768)	(3.066)
degree	3.47***	2.31*	2.39***	5.38*	9.61	1.23*	1.72
	(1.102)	(1.180)	(0.417)	(2.81)	(6.440)	(0.643)	(1.881)
lincome	0.096	0.15	0.18	0.1867	0.58**	0.58***	0.09
	(0.156)	(0.210)	(0.187)	(0.324)	(0.223)	(0.186)	(0.191)
perceptions	0.35	0.030	0.30	-0.30	0.94	-0.57	0.18
	(0.224)	(0.440)	(0.439)	(0.845)	(0.609)	(0.351)	(0.109)
ltest	0.35	-0.557	-0.557	0.150	0.48	-4.40***	-1.33***
	(0.556)	(1.858)	(0.726)	(2.757)	(1.600)	(1.517)	(0.500)
N	85	48	37	24	17	24	20

Standard errors in parentheses
$^{*}p< 0.10$, $^{**}p< 0.05$, $^{***}p< 0.01$

The highest level of education in a household was the only variable that was concluded to be influencing discount rates of female university students with a higher level of financial literacy. The individual time discount rates had a significant chance to increase if the university students were from households with the highest level of education as matric and degree. The discount rates of female university students with low levels of financial literacy had a 0.16% significant chance to decrease at 1% level as age increased. This shows that older female university students were more patient, revealing that as one grows older, even if one has low levels of financial literacy, one would have an understanding of the value of money and would be willing to wait to receive a larger later prize. Discount rates of female university students with lower level of financial literacy had a 0.58% significant chance of increasing at 1 % level as income increased. The finding also confirmed conclusions by Meier and Sprenger (2013), that increase in gross income tends to increase discount rates of subjects. Higher income makes university students in this group impatient. This indicates that female university students with higher income in this cohort were not willing to wait up to six weeks to receive future income (larger later reward), rather, they preferred present consumption.

In cases where the highest level of education in a household was a diploma or certificate, there was a 5.79% significant chance that time preferences would be higher for male respondents with high level of financial literacy. A 1% increase in financial literacy test score leads to a 4.4% significant decrease in time preferences of male university students with higher levels of financial literacy. A higher test score is associated with a lower individual time discount rate for male university students. The findings are similar to what was concluded by Van der Pol (2011) where high levels of financial literacy were associated with lower discount rate for individuals. Further, a 1% increase in income level is associated with a 0.58% increase in time discount rate which suggests that university students with high income from this group are generally impatient. In addition, increase in household size for male university students with higher level of financial literacy is associated with a 0.2% significant increase in time preferences. Meier and Sprenger (2013) also concluded that there was a weak significant impact between number of dependents and time preferences. Large family sizes might have an effect of constraining household resources leading subjects to be impatient. Turning on to male subjects with low financial literacy, a 1% increase in financial literacy test score leads to a 1.33% decrease in one's time preferences. In a study on health and preferences Fuchs (1980) also concluded that an increase in knowledge levels is significantly associated with low discount rates. Our findings show that when subjects are split across gender and level of financial literacy, the highest level of education in a household only influence time preferences of subjects with higher levels of financial literacy. The findings submit that for male students, time preferences are influenced by financial literacy. This conclusion could not be confirmed from all female university students. This might imply that financial literacy knowledge influenced time preferences of male university students in this study.

Table 2: Negative Binomial Regression marginal effects: Time discount rate

	All	male	female	Male1	female1	all_female	all_male	all1
Ltest_score	0.11	0.04	0.12	-0.07	0.12	0.41	-0.15	0.14
	(0.593)	(0.580)	(1.124)	(0.539)	(0.560)	(1.064)	(0.498)	(0.616)
matric				1.29**	2.45***	5.64***	1.45**	3.07***
				(0.625)	(0.195)	(1.419)	(0.723)	(0.784)
Dip/cert				4.96*	1.57***	7.959**	7.19	7.12**
				(2.751)	(0.191)	(3.819)	(4.755)	(3.357)
degree				1.71**	2.28***	7.559***	2.42***	3.87***
				(0.725)	(0.267)	(2.656)	(1.21)	(1.142)
age						-0.08	-0.02	-0.02
						(0.064)	(0.074)	(0.050)
family_size						0.09	0.13**	0.09
						(0.132)	(0.067)	(0.081)

lincome						0.02 (0.249)	0.26 (0.180)	0.11 (0.166)
perceptions						0.35 (0.515)	0.08 (0.171)	0.22 (0.243)
N	85	44	41	44	41	41	44	85

Standard errors in parentheses $^{*}p< 0.10$, $^{**}p< 0.05$, $^{***}p< 0.01$

Time preferences and financial literacy: We ran a Negative Binomial regression model on time discount rate against financial literacy score for all participants across gender to investigate if there were gender differences in the sample of subjects under consideration. We also controlled for highest level of education in a household, age, family size, income and financial literacy perceptions. The regression analysis on time preference and financial literacy knowledge could not confirm the impact of financial literacy on time discount rates (Table 2). What is evident in all the regression analyses is the significance of highest level of education in a household in influencing time preferences, which shows an intergenerational education spill over. In all cases investigated in Table 2., the highest level of education in a household of matric, diploma/certificate and degree significantly influenced time preferences. The highest level of education in a household tend to increase the chance of a higher time discount rate for participants, showing that the highest level of education in a household increased chances of being impatient on subjects. In a Malaysian study, Sabri et al. (2010) found that discussing family finances with parents increased financial literacy on children. Findings confirm that the respondent's state of the world critically impacts on how they make choices over time. A regression analysis for all males also concluded that time preferences are influenced by family size. A 1% increase in family sizesignificantly increased time discount rate by 0.13% chance at 5%level. This finding also confirms that the state of the world where one lives is important in determining one's intertemporal choices.

Time preferences index: In order to carry out a robust investigation on variables that significantly influenced time preferences and financial literacy jointly, we constructed a time preference index (TPI) by dividing individual time discount rate by the financial literacy test score. The variable represented the individual's intertemporal choice over their financial knowledge. The TPI is a continuous dependent variable which permitted us to run a set of Ordinary Least Square regressions (Table 3). In our first regression analyses, all the university students were included. If one were female, there wasa 0.11% chance that their time discount rate would be significantly higher at 5% level of significance. This was a confirmation that gender differences significantly influence time preference choices given an individual's financial literacy level. A study on young Australians confirmed a significant variation of patience levels across gender (Booth & Katic, 2013). The highest level of education in a household significantly influence TPI variable. Individuals who indicated that they belonged to a household with the highest level of education as matric, certificate/diploma and degree significantly increased the TPI variable by 0.16%,0.21% and 0.18% chance respectively, showing that intergenerational education significantly influence intertemporal choices. Further, a 1% increase in a test score led to 0.55% decrease in the TPI variable, showing that financial literacy significantly influences time preferences.

According to our results, increase in financial literacy increased patience amongst university students, a trait which is important for an individual to earn a higher return from time preference choices. In the high financial literacy group, the highest level of education in a household which significantly influence the TPI variable were matric and Diploma/certificate. At higher levels of financial literacy, gender difference did not significantly influence TPI variable confirming findings from Table 1. These findings show that if both female and male university students attained higher levels of financial literacy, the TPI variable will not be significantly different. A regression analysis of all university students with low financial literacy indicated that gender differences weakly significantly influenced TPI variable at 10%. At low levels of financial literacy, gender differences were prevalent. If one were a female with low levels of financial literacy, there was a 0.17% chance that the TPI variable would be higher. Another variable that influenced TPI variable at low levels of financial literacy was the highest level of education in a household of degree. Only highest level of education in household of matric significantly influenced TPI variable for female university students with higher levels of financial literacy. If one were a female with higher level of financial literacy, there would be a 0.31% significant chance that the TPI variable would be higher if they belonged to a household with highest level of education of matric. For female subjects with lower levels of financial literacy, as age increased TPI variable significantly decreased by 0.041% at 5% level, a finding which confirmed the impact of age on financial experience indicated by Frederick (2005). Highest level of education in a household of diploma/certificate significantly influenced TPI variable with a 0.31% significant chance of increasing TPI for male university students with higher levels of financial literacy. An increase in financial literacy increased patience levels among male university students categorised by financial literacy level.

Financial literacy weakly significantly influenced TPI for male subjects with high and low level of financial literacy. When university students were split into males and females with lower or higher levels of financial literacy, only the highest level of education in a household significantly influenced TPI variable for university students with higher levels of financial literacy, a finding also highlighted in table 1, showing that the highest level of education in a household significantly impacts time preferences of university students with high financial literacy levels. The findings are in line with findings by Sabri et al. (2010), who indicated in a Malaysian study that students who received financial literacy from their parents were found to be financially literate. The study concluded that the highest level of household education causes university students to be impatient, since their time discount rates are more likely to increase. The ordinary least squares regression analysis shows that increase in financial literacy generally makes university studentspatient. Other variables that were concluded to influence time preferences were income, age and family size.

Table 3: OLS Regression: Time preference index marginal effect

	All	all_literate	all_low_lit	highlit_female	lowlit_female	high_lit_male	low_lit_male
female	0.11**	0.047	0.17*				
	(0.054)	(0.060)	(0.101)				
test	-0.55**	-0.38	-1.08	-0.26	-1.03	-0.81*	-1.73*
	(0.262)	(0.375)	(0.843)	(0.597)	(1.714)	(0.461)	(0.810)
age	-0.0063	0.0013	-0.014	-0.0023	-0.041**	-0.0019	-0.0013
	(0.007)	(0.011)	(0.011)	(0.017)	(0.014)	(0.013)	(0.022)
Family size	0.017	0.0086	0.026	0.0095	0.036	0.017	0.013
	(0.013)	(0.013)	(0.020)	(0.027)	(0.048)	(0.016)	(0.017)
matric	0.16***	0.15**	0.14	0.31**	0.074	0.021	-0.0082
	(0.053)	(0.058)	(0.108)	(0.134)	(0.249)	(0.053)	(0.221)
diploma	0.21**	0.23**	0.099	0.15	-0.14	0.31**	-0.0098
	(0.086)	(0.113)	(0.122)	(0.172)	(0.452)	(0.124)	(0.223)
degree	0.18***	0.088	0.26*	0.15	0.42	0.077	-0.052
	(0.058)	(0.053)	(0.144)	(0.113)	(0.323)	(0.051)	(0.260)
income	0.0097	0.013	0.022	0.016	0.16*	0.054	-0.013
	(0.022)	(0.031)	(0.045)	(0.048)	(0.084)	(0.045)	(0.058)
perceptions	0.063*	0.0074	0.075	-0.026	0.22	-0.053	0.028
	(0.036)	(0.057)	(0.056)	(0.122)	(0.136)	(0.060)	(0.043)
N	85	48	37	24	17	24	20
R^2	0.192	0.153	0.312	0.199	0.456	0.446	0.472

Standard errors in parentheses $^{*}p< 0.10$, $^{**}p< 0.05$, $^{***}p< 0.01$

5. Conclusion

This study used a questionnaire that included a simple binary experimental game of tokens(toelicit time preferences of subjects) and a financial literacy test.Time discount rates of categoriseduniversity students with higher or lower financial literacy levels weresignificantly influenced by the household's highest level of education and gender differences.When subjects were split according to gender and literacy levels, the highest level of education in a household only influenced subjects with higher levels of financial literacy. These findingsreveal that highest level of education in ahousehold significantly influence time preference choices of individuals, showing the effect of education externality across generations. Elicited time discount rates from the experimental game also show that female university students' time discount rates were more likely to be higher than those of their male counterparts - reflecting that females under considerationwere more impatient especially if they belong to a low financial literacy level group. Our findingsreveal that gender differences impact time preferences, especially after factoring financial literacy level. This may be explained by the different financial challenges faced by the girl child. Providing financial literacy to university students can play an important role in reducing time preference differences across gender. The study shows that financial literacy significantly impacts time preferences of male subjects with low and high levels of financial literacy. As financial literacy increases, male university students are more likely to be patient. Being patient is a trait associated with waiting longer to earn a larger later reward with a high return. Increasing financial literacy to male university students will help to improve their welfare.

A robust check using the OLS model on time preference index (TPI) variable confirmed that the highest level of education in a household significantly influences time preferences of subjects, especially students with higher level of financial literacy, showing that education has a generational spill over effect. Providing education to the current generation will impact the welfare of future generations. The OLS regression model for the whole group also showed that financial literacy significantly influenced university students' time preferences. Increasing financial literacy amongst university students induces them to be patient. Our study shows that provision of financial literacy to university students will improve their welfare by impacting their time preferences. Other variables concluded to significantly influence university students' time preferences were age, income and family size. It is critical to understand how time preferences of individuals are formulated as they influence perseverance and patience which are vital for future welfare and investment choices. The findings are however not exhaustive; a deeper investigation into how household levels of education influence time preferences is required. The list of independent variables can be stretched to include more characteristics. More so, factors that tend to increase time discount rates for female university students need further exploration. It will be important to understand how university students react to high and low time preference incentives at varying time stretches. Further research may investigate whether time preferences change as the level of income changes.

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Ethical considerations: Permission to carry out the study was granted by the University of the Free State Ethics Committee (Number: UFS-HSD2016/0079). Participation in the experiment was voluntary and students were allowed to stop participating in the experiment at any time. The participants were made aware of the purpose of the study.

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Does Liquidity Risk Explain the Time-Variation in Asset Correlations? Evidence from Stocks, Bonds and Commodities

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Abstract: The time-variation in asset correlations have broad implications in asset pricing, portfolio management and hedging. Numerous studies in the literature have found that the change in correlations is mainly related to the magnitude of market movements, hence volatility. However, recent research finds that the size of markets fluctuations is not necessarily the primary driver for the time-variation in correlations, but that the effect of market movements is amplified in times of high financial distress, characterised by low liquidity. This paper seeks to investigate the effect of liquidity on time-varying correlations among different asset classes, namely stocks, corporate bonds and commodities. Our findings show that liquidity indeed has a significant effect on the time-variation in asset correlations, particularly in the case of how bond returns co-move with other asset classes. We observe that higher liquidity risk is associated with lower correlation of bond returns with stocks as well as commodities. Our findings suggest that measures of liquidity risk can improve models of correlations; and potentially help improve the effectiveness of risk management strategies during periods of financial distress.

Keywords: *Conditional correlation, Asset Classes, Liquidity and Volatility*

1. Introduction

Correlations are critical in portfolio allocation decisions and assessing risks associated with investment positions. The modern portfolio theory (Markowitz, 1952) is built upon the notion that investors can diversify away asset specific risks by allocating investment positions to assets with low correlations in order to eliminate as much diversifiable risk as possible in the portfolio. As such, investors measure the correlation coefficients between the returns of different assets and strategically identify asset combinations that will result in a balanced portfolio composition. However, the empirical evidence from the finance literature suggests that correlations are not stable and are in fact highly variable, depending on the state of the market. As Engle (2002) notes, return correlation and volatilities follow a dynamic pattern as asset co-movements adjust to the most recent information. Hence, in order to maintain an optimally diversified portfolio, it is of critical importance to identify the drivers of correlations in order to accurately forecast correlations of returns (Engle, 2002).

There has been extensive work in measuring and understanding the basis for the time-variation in correlations, specifically when it comes to their relation to market movements. Clearly, from a risk averse investor's perspective, diversification is needed the most during periods of market turbulence. Campbell, Koedijk, and Koftnan (2002) state that thecorrelation estimates that are conditional on the size of market movements are mostly relevant to investment analysts in times of extreme market conditions characterized by large price movements. During bearish market periods, investors can benefit from diversification as a decline in the value of some assets can be offset by a rise in the value of the others. Consequently, a number of studies including Ramchand and Susmel (1998), Longin and Solnik (1995), Boyer, Gibson and Loretan, (1999), and Loretan and English (2000) have proposed correlation estimates conditional on market returns below or above a specific threshold. However, Campbell, Koedijk, and Koftnan (2002) suggest that these studies suffer from a theoretical estimation bias, as correlation is not only dependent on the size of market movements, but is affected by the market state asymmetrically in that it increases specifically in bearish market states. This observation suggests that the state of the market serves as an indirect driver of correlation and instead, there is an underlying market factor that brings about the market state effect on correlations. Our goal in this study is to examine whether market liquidity plays a role as the underlying market factor.

The motivation of our study stems primarily from Moro and Beker(2016) who characterise financial crises as the combination of asymmetric information and illiquidity that gives rise to the possibility of a funding crisis, a situation whereby all depositors want their cash back. In line with an earlier study by Amihud, Mendelson and Wood (1990) which found that the crash of 1987 occurred particularly due to the rise in market illiquidity, Moro and Beker (2016) further state that a security crisis is associated with an increase in demand for more liquid securities. In another related work, Pástor and Stambaugh (2003) also found that their liquidity measure sharply dropped in times of severe financial distress. In fact, in a recent study, examining the time-varying correlations between equity and currency returns, Jung (2017) argue that idiosyncratic volatility driven by the volatility in market liquidity acts as a channel that drives the time-variation in currency-equity correlations.All this evidence raises a question as to whether liquidity could possibly serve as the underlying factor, drivingthe time-variation incorrelations and/or amplifying the effect of volatility on correlations among asset classses, particularly in times of financial distress.

This paper examines the effect of liquidity on the time-variation in the correlations among three major asset classes, particularly stocks, corporate bonds and commodities. Given the evidence in the literature, it seems reasonable to expect investors to require higher returns for illiquid assets (Pastor & Stambaugh, 2003). Hence, it is hypothesized that asset correlations will partially be driven by their exposure to market liquidity shocks, leading to a liquidity effect on correlation, negative or positive, depending on the financial market environment. Understanding the potential liquidity effect on asset correlations would allow portfolio managers to make more informed decision on optimal portfolio allocation decisions, especially in times of financial distress when liquidity is low. Thus, by including liquidity as a predictor variable in forecasting models for correlation, fund managers can formulate optimal portfolio allocations conditional on the state of liquidity in the market. To that end, the analysis can open the path to a liquidity-based investment strategy in which liquidity proxies are used to predict asset correlations and compute optimal asset positions accordingly.

Our findings suggest that liquidity indeed has a significant effect on the time-variation in asset correlations, particularly in the case of how bond returns co-move with other asset classes. We observe that higher liquidity risk is associated with lower correlation of bond returns with stocks as well as commodities. While higher volatility is generally found to be associated with increased correlations, consistent with earlier research, we argue that the negative effect of liquidity on correlations is driven by shifts in risk aversion that drives investors to shift funds out of relatively riskier asset classes during periods of market stress. This argument is further supported by the analysis of sub-periods based on the structural breaks in the time series. We see that the negative liquidity effect on correlations is driven by strong results observed during the sub-sample that corresponds to the global financial crisis period when investors' aversion to risk likely experienced a significant regime shift. Interestingly however, we observe the opposite effect when it comes to commodity-equity market correlations. Although we do not observe a significant liquidity effect for the full sample, we find a positive liquidity effect on commodity-stock market correlations during the crisis period, most likely due to investors shifting their funds out of these risky assets into the relatively safer bonds, hence creating a positive correlation effect captured by rising liquidity risk during that period. Nevertheless, our findings suggest that measures of liquidity risk can improve models of correlations and potentially help improve the effectiveness of risk management strategies during periods of turbulence. The rest of the paper is structured as follows: Section 2 will explore past literature on conditional correlation, how to measure it and possible factors that drive the time-variation in correlation. Section 3 will explain the data and methodology employed in the study. Section 4 will discuss the empirical results and section 5 will provide a brief summary to conclude the paper.

2. Literature Review

Time varying correlation: Reliable estimates of correlation between financial assets have been the subject of extensive research. As mentioned earlier, correlation plays a critical role in asset pricing and risk allocation exercises. Modern portfolio theory developed by Harry Markowitz (1952) states that diversification plays an imperative role in hedging against individual securities' downturns within a portfolio, placing correlation as the basis of diversification. An optimal decision in forming a portfolio would be to include securities that have low correlations, so that downward movements in one security could be offset by an upward movement in another. Later works by Levy and Sarnat (1970), Grubel and Fadner (1971), Lessard (1973) and Solnik (1974) have also emphasized the important role correlation plays in constructing an optimal portfolio in an international context.

The literature offers numerous studies that have tried to explore the nature of correlation. Kaplanis (1988) studied the stability of correlation and covariance matrices between the returns of ten major stock markets. Comparing correlations estimated over sub-periods of 46 months using the likelihood ratio tests, he failed to reject the null hypothesis that the correlation matrix is constant over two adjacent sub-periods, hence concluded that correlation was stable over time. Ratner (1992) also claimed that the international correlations remained constant over the period between 1973 and 1989. However, contrast to this literature, studies by Koch and Koch (1991), Von Furstenberg and Jeon (1989), King, Sentana and Wadhwani (1994) and Longin and Solnik (1995) reported opposite results. Koch and Koch (1991) investigated how dynamic linkages among the daily rates of return of eight national stock indexes have evolved since 1972. A dynamic simultaneous equations model (the Chow test) was employed to show that correlation was time varying. A similar conclusion was reached by Von Furstenberg and Jeon (1989) using a vector autoregression model (VAR) for four markets and a very short time period between 1986 and 1988, which King, Sentana and Wadhwani (1992) claimed was possibly due to a transitory increase caused by the 1987 crises. Longin and Solnik (1995) studied the correlation of monthly excess returns for seven major countries over a longer period between 1960 and 1990. They used a multivariate generalized autoregressive conditional heteroskedasticity (GARCH) model and found that the international covariance and correlation matrices are unstable over time. Recent papers including Moskowitz (2003), DeMiguel, Garlappi and Uppal (2009), Chong and Miffre (2010) and Adrian and Brunnermeier (2016) also recognized that correlation was non-stationary. All this evidence, therefore has led to a general consensus that correlations among financial assets have time-varying patterns driven by changes in market characteristics.

Measures of time-varying correlation: With the variety of measures that can be used to measure co-movement, the mission for reliable estimates of correlations between financial asset returns has been the motivation for numerous academic studies. Engle, Granger, and Kraft (1984) present an early version as "a bivariate generalization of Engle's ARCH model". This view is conceptually appealing and has found widespread use in practice. This was later extended to GARCH-type models. According to Tse and Tsui (2002), this extension follows a traditional autoregressive moving average time series analogy. It is very broad and includes a large number of parameters while empirical applications require further limitations. Because of its computational simplicity, the CC-MGARCH model is widely used in empirical research. However, although the constant-correlation assumption in this framework provides a convenient MGARCH model for estimation, many studies find that this assumption is not supported by financial data (e.g. Tse and Tsui, 2002). In a recent study, Adams, Füss, and Glück (2017) provide evidence that spurious correlation dynamics occur in response to financial shocks that are large enough to cause a structural break in the time-series of correlations. As a result, they argue that a rolling-window sample correlation is often a better choice for empirical applications in finance. Not only are rolling-window sample correlations simple, they are an effective way to measure dynamic correlations and lead to better portfolio performance.

Determinants of conditional correlation: Fang , Yu, and Lia (2017) stated that not only is correlation important for investment diversification and risk management, it is helpful for policy makers and portfolio managers to understand the factors driving the long-run correlations related to macroeconomic variables. Studying how the changes in correlation between crude oil and the US stock market movements are related to economic policy uncertainty, the authors found that policy uncertainty has a positive impact on correlation. Most studies in the literature, however, found that correlation changes with the size of market movements (or the volatility of market returns). Examining the time-varying correlations between fixed income securities, stocks and commodities, Chong and Miffre (2010) found that the correlation between commodities and stocks fall in times when market risk is high. Furthermore, the correlation between fixed income securities and stocks were found to decrease in times of high volatility with a rise in volatility in fixed income securities accompanied by a decrease in correlation between the two asset classes. This suggests that diversification benefits of commodities are not as large in periods of volatile long-term interest rates, unlike stocks and short-term interest rate instruments.

Although the findings that correlations vary over time does not necessarily imply that correlations depend on the size of market movements, evidence was found that correlations increase during periods of decreasing global market returns. Campbell, Koedijk and Koftnan (2002) found that correlations among international equity returns increase in bear markets. This suggests that large negative returns from international equity markets tend to increase co-movements among asset classes. This was also evident during the past financial crises. Moro and Beker (2016) characterize financial crises as the combination of asymmetric information and illiquidity that gives rise to the possibility of a banking crisis, a situation whereby all depositors want their cash back. They further state that a security crisis is associated with an increase in demand for liquidity or more liquid securities. These findings are in line with the earlier finding by Amihud, Mendelson and Wood (1990) that the crash of 1987 occurred in part because of a rise in market illiquidity. This then raises a question as to whether liquidity actually does affect the time-variation in correlations between two asset classes and/or amplifies the effect of volatility on correlation dynamics.

Liquidity: Liquidity, a fundamental concept in finance, can be characterized as the capacity to trade an asset quickly and at low cost. Standard equilibrium asset pricing models assume that markets are free from imperfections, hence disregard the trading costs as well as whether or not an asset can be traded in a reasonable amount of time. The recent financial crises, however, suggested that at times of severe market conditions, liquidity can decline or even vanish. Such liquidity shocks are a potential channel through which asset prices are influenced beyond which can be explained by standard models. Amihud and Mendelson (1986) stated that improved liquidity is expected to increase security values because rational investors dicount secutrities more heavily in the presence of higher trading costs (holding other things equal). This was further supported by Pástor amd Stambaugh (2003) who stated that it is reasonable to expect investors to require higher returns for illiquid assets, implying that liquidity does have an impact on returns. Other studies by Gady , David and Gottesman (2000);Jones (2002) and Amihud (2002) also show that liquidity has predictive power over expected returns. A number of studies documented liquidity to be low in times of financial distress. Chordia, Roll and Subrahmanyam (2001) observed that liquidity measures plummeted in down markets and Jones (2002) found that the sharp decline in liquidity often coincided with market downturns. These studies, however, haveproposed different measures of liquidity in their empirical analysis (Muneer et al., 2011). Pástor and Stambaugh (2003) who also proposed an alternative measure of liquidity based on the dollar volume of stocks in the market, found that liquidity showed a sharp decline during Russian debt crises, the political unrest of 1970 in the US and the Asian fiancial crises in 1997. These are events characterised by high volatility in financial markets and increased correlation between different asset classes as they all experience a large decline in market returns.

Earlier studies on liquidity were primarily focused on its cross-sectional determinants, and were limited to equity markets (e.g., Benston and Hagerman, 1974; and Stoll, 1978)). As more data became available, recent studies have moved their attention to the time-series properties of liquidity in equity and fixed-income markets. Chordia, Roll and Subrahmanyam (2000), Huberman and Halka (2001) and Hasbrouck and Seppi (2001) reported shared characteristics in trading activity and liquidity in the equity markets. Chordia, Roll and Subrahmanyam, (2001) studied daily aggregate equity market spreads, depths and trading activity over an extended period to show weekly regularities in equity liquidity and the influence of market returns, volatility and interest rates on liquidity. In other studies, Fleming (2003) analyzed the time-series of a set of liquidity measures for the bond market; Huang, Cai and Wang (2001) related liquidity to return volatility, while Brandt and Kavajecz (2004) studied the relationship between liquidity, order flow and the yield curve. Similarly, Fleming and Remolona (1999) and Balduzzi, Elton and Clifton (2001) analyzed returns, spreads, and trading volume in bond markets around economic announcements. However, there have been very few studies on how the time-variation in market liquidity relates to correlation dynamics. Although it has been found that correlation increases in times of bearish markets and times of extreme financial distress, i.e. periods that can be characterized with low liquidity, there have been limited studies on how liquidity could potentially amplify the effect of volatility of conditional correlations. Therefore, this paper investigates the role of market liquidity on the time-variation in the correlations across major asset classes.

3. Data and Methodology

Data: The dataset includes daily returns for the S&P 500 index; the S&P 500 high yield corporate bond index and the S&P Goldman Sachs commodity index to represent the broad asset classes of equities, bonds and commodities, respectively. The data is sourced from Data stream of Thomson Reuters. Note that daily data is used to compute correlations using rolling windows for each month and all subsequent estimations are performed using monthly data. The data period chosen is solely based on the availability of the data. Since the liquidity data is available from 1988, the S&P Goldman Sachs commodity index and the S&P equity index data starts in 1988, while the S&P 500 high yield corporate bond index data starts in 1995 when it becomes available. In the case of market liquidity, the liquidity measure by Pástor and Stambaugh (2003) is publicly available on Lubos Pastor's website.

Variables Specification: Table 1 presents the descriptions of the primary variables of interest in our estimations. The measure of liquidity used in this paper follows the work of Pástor and Stambaugh (2003). In their model, market liquidity in a given month is estimated as an equally weighted average of liquidity measures of individual stocks computed using daily data within a month. In this methodology, the liquidity of stock i in month t is estimated as the OLS estimate for$\gamma_{i,t}$ in the following regression:

$$r^e_{i,d+1,t} = \theta_{i,t} + \Phi_i r_{i,d,t} + \gamma_{i,t} sign\left(r^e_{i,d,t}\right). v_{i,d,t} + \epsilon_{i,d+1,t} \qquad (1)$$

where $r_{i,d,t}$ is the return on stock i on day d in month t, $r^e_{i,d,t}$ $=r_{i,d,t} - r_{m,d,t}$ with $r_{m,d,t}$as the value-weighted market return on day d in month t. $v_{i,d,t}$ is the dollar volume for stock i on day d in month t. Although the OLS slope coefficient $\hat{\gamma}_{i,t}$ is an imprecise estimate of a given stock's $\gamma_{i,t}$, the market-wide average liquidity in month $t$is estimated more precisely. Pástor and Stambaugh, (2003) argue that the disturbances in equation (1) are less than perfectly correlated across stocks, therefore, the higher the number (N) of stocks included in the portfolio, the more precisely liquidity can be estimated as

$$\hat{\gamma}_t = \left(\frac{1}{N}\right) \sum_{i=1}^{N} \hat{\gamma}_{i,t} \qquad (2)$$

Having estimated the liquidity betas for each stock, Pástor and Stambaugh, (2003) then sort the stocks by their liquidity betas and assign stocks to 10 portfolios based on their risk exposures with respect to liquidity. The traded liquidity factor is the value-weighted return on the 10-1 portfolio, reflecting the return spread between stock portfolios with high and low liquidity exposures. Finally, the authors show that this traded liquidity factor has a positive and significant alpha, implying that liquidity risk is indeed priced in the cross-section of returns. Hence, their measure of liquidity is more of a measure of the cost of liquidity or liquidity risk rather than liquidity itself. In our application, we use the traded liquidity factor as our measure of liquidity, i.e. $Liquidity_t$, in month t.

In the case of volatility, we use daily return data to calculate the realised volatility each month as the sum of daily squared returns over a month (Andersen and Bollerslev, 1998) for each asset (commodities, stocks and bonds) using the formula

$$RV_t = \sum_{i=1}^{M} r_i^2 \qquad (3)$$

where r_i is the return on the asset class on day i and M is the number of daily returns in the month. Having computed the realised volatility values for each asset class (i) for each month (t), we then create a dummy variable $D_RV_{i,t}$to represent months of high volatility for each asset class so that the dummy takes on the value of one if the realised volatility for asset class (i) in a given month exceeds the median realised volatility and zero otherwise.

Model Specification

Rolling-window sample correlation: Before we test the effect liquidity on time-varying correlations, we first examine whether correlations between commodities, stocks and corporate bonds change overtime. As mentioned above, Adams, Füss and Glück (2017) argue that a rolling- window sample correlation is often a better choice for empirical applications in finance. As the authors note, not only is rolling-window sample correlation simple, but it is also an effective way to measure dynamic correlations and lead to better portfolio performance. Rolling analysis in this context is outlined by Zivot and Wong (2006) who state that rolling analysis of a time series model is often used to assess the model's stability over time. The factors that drive fluctuations in financial time series often change with the economic environment. Hence, a common technique to assess the stability of a model's parameters is to compute parameter estimates over a rolling-window of a fixed size through the sample. In the event that the parameters are really consistent over the whole sample, then the estimates over the rolling-windows should be consistent with this pattern.

In our empirical study, we estimate the time-varying correlations using a rolling window size of 60 months. We then test the significance of the estimated correlations using the following t-statistics:

$$t - stat = \frac{\hat{\rho}_{ij,t}\sqrt{n-2}}{\sqrt{1-\hat{\rho}_{ij,t}{}^{2}}} \quad (4)$$

where $\hat{\rho}_{ij,t}$ is the correlation between asset i and $j$in month$t$, n is the window size, i.e. 60 months. The t-statistics are then evaluated with the critical t-statistic at 5% confidence level of $\pm$ 1.96 in order to ascertain the significance of the correlations.

Regression analysis with structural breaks: Having computed time-varying correlations, we then estimate the following model to determine whether liquidity has any effect on the correlations and whether the liquidity effect is amplified during periods of high volatility

$$\hat{\rho}_{ij,t} = \alpha + \beta_1 * liquidity_t + \beta_2 * D\_RV_{i,t} + \beta_3 * D\_RV_{j,t} + \varepsilon_t \quad (5)$$

where $\hat{\rho}_{ij,t}$ is the rolling correlation between asset i and j, estimated using 60-monthrolling window size,$D_RV_{i,t}$is the dummy for high realised volatility for asset class$i$. In addition to the whole sample estimations, the model is also estimated with multiple breaks in order to account for structural changes in the data with unknown dates using Bai and Perron (2003) test of multiple structural breaks. In particular, we apply the powerful $UDmax$ and $WDmax$ tests to detect 1 to M structural breaks in the relationship between the correlations and the explanatory variables, allowing for heterogenous error distributions across the breaks.

4. Empirical Results

Full sample and rolling correlations: Table 2 presents the unconditional correlations among all asset classes over the whole sample period. We observe that the correlations are all positive and statistically significant although they are rather weak, suggesting that these assets classes can serve as diversifiers for each other. Figure 1 presents the estimated rolling correlations for commodities and stocks along with the rolling-window t-stats computed. The t-statistic critical value at 5% significance level (i.e., +1.96 and -1.96) is represented by the red dotted lines in the plots for t-stats. Examining the correlations for commodities and stocks, we observe notable variation in correlation dynamics across all pairs of assets. Examining the t-stats in Figure 1, we see that correlation is significant specifically between the year 1992 and 1994, as well as during the period between 2008 and 2016.[14] The positive correlations observed during the post global financial crisis period suggest a coupling of these two asset classes, driving directional similarity in their returns. This period is also characterized by a strong coupling of oil market movements with the stock market (Bernanke, 2016). Similar results are observed in Figure 2 for the correlation between commodities and bonds, with significant correlations observed in 2001 as well as between 2008 and 2014, following the global financial crisis. Likewise, we observe significant time-variation in the correlation between stocks and bonds presented in Figure 3, with significant positive correlations observed during the post-global financial crisis period. These correlation estimates are consistent with the earlier studies by Koch and Koch (1991), Von Furstenberg and Jeon (1989), King, Sentana and Wadhwani (1994) and Longin and Solnik (1995) which found that correlation is time variant. Hence, we proceed to investigate whether liquidity plays any role in this process, and if yes, how it affects the time-variation in correlations, especially during periods of high volatility.

[14] We also used a rolling window approach with 120 observations. Our results were qualitatively similar and are available upon request from the authors.

OLS regression results with breaks: Having estimated the time-varying correlations, we next estimate equation (5) for each pair of assets. Table 3 presents the findings for commodity-stock market correlations. Looking at the results for the full sample, we see that the realised volatility of commodities and stocks have a positive impact on changes in correlation between the two asset classes, although only realised volatility of commodities is significant. When breaks are introduced, realised volatility is found to have a significant positive relationship with conditional correlation between 1992 and 1996, as well as 2001 and 2008. Considering that the period between 1992 and 1996 was the dot-com era where investors were over excited on the new technology stocks driving the bubble during that period, and the commodity boom took place during the 2001-2008 period, the findings are in line with the previous evidence that high volatility has a positive effect on conditional correlations in times of bullish markets (Campbell, Koedijk and Koftnan, (2002)). Campbell et al (2002) also found that high volatility has a positive relationship with conditional correlation in times of bearish markets, supporting the general positive relationship between conditional correlation and high volatility.

In the case of liquidity, we see that liquidity has a negative effect on the correlation between commodities and stocks. When breaks are introduced, we see that liquidity has a significant negative effect, particularly during the boom years of the dot-com era between 1992 and 1996. However, during the 2008 financial crises, liquidity is found to have a positive effect on conditional correlation. Hence, it seems that liquidity tends to affect correlations negatively during volatile periods. However, in times of high volatility accompanied by financial distress, liquidity has a positive relationship with correlation. During recessions or financial crises liquidity tends to be low and correlation between commodities and stocks rises, hence, the negative relationship between liquidity and time-varying correlation between the two securities. A significant investment implication of this finding is that active managers can use liquidity fluctuations to shift funds and in and out of these asset classes in order to generate excess returns. For example, by tracing market liquidity measures, one can devise a conditional investment strategy that shifts between staying focused during periods of high liquidity and diversifying into other assets during periods of low liquidity. Furthermore, given the interaction of volatility with liquidity, the above strategy can further be conditioned on the state of the market in terms of volatility.

Examining Table 4 for the correlation between commodities and bonds, we see that realized volatility of commodities and bonds both have a negative relationship with conditional correlation, although they are not significant in the full sample. When breaks are introduced, realized volatility of bonds is significant with a negative sign between 2000 and 2003, the commodity boom period. In the same period, high volatility of commodities had a positive effect of correlation. This is in line with Chong and Miffre (2010) who found that a rise in volatility in fixed-income securities such as bonds is accompanied by a decrease in correlation between the two asset classes. This suggests that unlike bonds, the benefits of diversification coming from commodities have less impact in periods when market returns are highly volatile. However, considering the time of the financial crises of 2008, time varying correlation of both assets had a positive relationship with conditional correlation. On the other hand, liquidity is found to generally have a negative relationship with correlation. When the breaks are introduced, unlike correlation between commodities and stocks where liquidity was found to have a positive effect on conditional correlation during the 2008 crises, liquidity now has a negative relationship with conditional correlation during the same period. This suggests in times of high volatility both asset classes are good for diversification as they experience lower correlation. However, considering the years between 2006 and 2009, the financial crises period, the high volatility in both securities had a positive effect on correlation. This suggests that the two asset classes are good for diversification in times of high liquidity, but not as much in times of low liquidity when markets are under stress.

In the case of correlation between stocks and bonds reported in Table 5, we observe similar results for the volatility effect on correlations as we observed for the other assets. We see that the realised volatility of stocks has a significant and positive effect on correlation. When breaks are introduced, however, we observe that realised volatility of both asset classes have a negative impact on time-varying correlations during the commodity boom years. It is possible that the financializing commodities during this period created an influx of stock market investors shifting funds across stock and commodity funds, thus creating a coupling of stock and commodity markets (consistent with the positive volatility effect in Table 3), leading to a lower association between bond and stock markets. However, considering the years between 2008 and 2011, the financial crises period, the high volatility in both securities has a positive effect on correlation, implying that these two asset classes are good for diversification in times of high liquidity, but not as much in times of low liquidity when financial markets are under stress.

Consistent with the earlier results, looking at the full sample results, we see that liquidity has a negative effect on time-varying correlations. When breaks are introduced, liquidity is found to have a significant negative effect, particularly in the aftermath of the dot-com crash and the financial crises of 2008. Fang, Yu and Lia (2017) find that during recessions or financial crises when uncertainty tends to be high, correlation between stocks and bonds rises. Times of high uncertainty tend to have low liquidity, hence, the negative relationship between liquidity and time-varying correlation between the two securities. In short, we show that correlations indeed have a time-varying nature and liquidity serves as a strong driver of correlations with heterogeneous effects across different asset classes. Particularly in the case of the correlations of bonds with stocks and commodities, we see that liquidity has a negative effect on correlations, while volatility has a positive marginal effect. Hence, based on these results, one can argue that the combinations of commodities and bonds particularly can yield diversification benefits during normal times and not times of market stress. This implies that investors should use an amended variance-covariance matrix for portfolio analysis and risk management when concerned about downside risk (Campbell, Koedijk and Koftnan, 2002) and measures of liquidity can be used to improve the efficiency of portfolio and/or risk management models.

5. Conclusion

Correlations are critical inputs for many of the common tasks of financial management, specifically in forming an optimal investment portfolio. Furthermore, it is of high importance for policy makers and portfolio managers to understand the factors driving the long-run correlations related to macroeconomic and financial variables. There has been extensive work in measuring and understanding the basis for the time-variation in correlations. Moro and Beker (2016) characterise financial crises as the combination of asymmetric information and illiquidity that gives rise to the possibility of a banking crisis, a situation whereby all depositors want their cash back. They further state that a security crisis is associated with an increase in demand for more liquid securities. This suggests that correlation between two securities would possibly be affected by liquidity, which raises a question as to whether the change in liquidity could potentially be the driver of conditional correlations among different asset classes.

Our findings suggest that liquidity indeed has a direct effect on the time-variation in asset correlations, particularly in the case of how bond returns comove with other asset classes. We observe that higher liquidity risk is associated with lower correlation of bond returns with stock as well as commodities. While higher volatility is generally found to be associated with increased correlations, consistent with earlier research, it can be argued that the negative effect of liquidity on correlations is driven by shifts in risk aversion that drives investors to shift funds out of relatively riskier asset classes during periods of market stress. This argument is further supported by the analysis of sub-periods based on the structural breaks in the time series. We see that the negative liquidity effect on correlations is driven by strong results observed during the sub-sample that corresponds to the global financial crisis period when investors' aversion to risk likely experienced a significant regime shift. Interestingly however, we observe the opposite effect when it comes to commodity-equity market correlations. Although we do not observe a significant liquidity effect for the full sample, we find a positive liquidity effect on commodity-stock market correlations during the crisis period, most likely due to investors shifting their funds out of these risky assets into the relatively safer bonds, hence creating a positive correlation effect captured by rising liquidity risk during that period.

The liquidity effect on asset correlations and its interaction with market volatility can be utilized to devise active portfolio management strategies, conditional on the state of market liquidity. Since the traded liquidity factor used in our empirical analysis can be computed and updated using stock price data, one can identify thresholds on the level of liquidity and use this threshold as a signal to shift funds and in and out of these asset classes in order to generate excess returns. For example, by tracing market liquidity measures, one can devise a conditional investment strategy that shifts between staying focused during periods of high liquidity and diversifying into other assets during periods of low liquidity. Furthermore, given the interaction of volatility with liquidity, the above strategy can further be conditioned on the state of the market in terms of volatility in order to avoid large losses that can be sustained due to increased asset correlations. Overall, our findings suggest that measures of liquidity risk can improve models of correlations and potentially help improve the effectiveness of diversification strategies during periods of turbulence. There relationships are important to consider, especially in times of financial distress where huge losses could be experienced.

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Table 1: Variable names and description

Name	Description
$\hat{\rho}_{ij,t}$	Time-varying correlation between asset i and j in month t.
$Liquidity_t$	Traded liquidity in month t.
$D\_RV_{i,t}$	Dummy on realized volatility for asset$i$ in month t.

Table 2: Full sample correlations

	Commodities	Stocks	Bonds
Commodities	1		
Stocks	0.1003*** [2.0165]	1	
Bonds	0.1030** [1.6735]	0.1455** [2.3757]	1

Note: ***,**,* represent 1%, 5% and 10% significance levels respectively with t-statistics in square brackets.

Table 3: commodities and stocks

$\hat{\rho}_{cs,t}$	$D\_RV_{c,t}$	$D\_RV_{s,t}$	$liquidity_t$
Full sub-sample	*0.137**** *(0.000)* *[4.822]*	*0.014* *(0.618)* *[0.499]*	*-0.509* *(0.176)* *[-1.356]*
Breaks:			
1988M03 - 1992M05	*-0.039* *(0.241)* *[-1.175]*	*0.022* *(0.422)* *[0.804]*	*0.335* *(0.297)* *[1.044]*
1992M06 - 1996M08	*0.184**** *(0.000)* *[4.594]*	*0.145**** *(0.000)* *[3.913]*	*-0.915**** *(0.004)* *[-2.868]*
1996M09 - 2001M01	*-0.016* *(0.443)* *[-0.768]*	*-0.095**** *(0.000)* *[-3.563]*	*-0.080* *(0.782)* *[-0.278]*
2001M02 - 2008M06	*0.059**** *(0.004)* *[2.916]*	*-0.017* *(0.290)* *[-1.059]*	*-0.151* *(0.500)* *[-0.675]*
2008M07 - 2012M09	*-0.041* *(0.183)* *[-1.334]*	*-0.026* *(0.457)* *[-0.745]*	*0.517*** *(0.037)* *[2.095]*
2012M10 – 2016M12	*-0.085* *(0.000)* *[-3.752]*	*0.003* *(0.919)* *[0.101]*	*-0.373* *(0.456)* *[-0.747]*

Note: ***,**,* represent 1%, 5% and 10% significance levels respectively with p-values in parentheses and t-statistics in square brackets.

Table 4: commodities and bonds

$\hat{\rho}_{cb,t}$	$D\_RV_{c,t}$	$D\_RV_{b,t}$	$liquidity_t$
Full sub-sample	*-0.032* *(0.319)* *[-0.998]*	*-0.012* *(0.714)* *[-0.367]*	*-1.146**** *(0.007)* *[-2.694]*
Breaks:			
2000M02 *2003M04*	*0.018* *(0.488)* *[0.695]*	*-0.052** *(0.058)* *[-1.908]*	*-0.467* *(0.142)* *[-1.476]*
2003M05 *2005M12*	*0.007* *(0.826)* *[0.220]*	*-0.044* *(0.134)* *[-1.505]*	*-0.069* *(0.896)* *[-0.131]*
2006M01	*0.053**	*0.134****	*-0.592***

2009M07	*(0.067)*	*(0.000)*	*(0.021)*
	[1.838]	*[4.829]*	*[-2.323]*
2009M08	*-0.000*	*0.008*	*0.106*
2013M10	*(0.996)*	*(0.736)*	*(0.779)*
	[-0.005]	*[0.338]*	*[0.282]*
2013M11	*0.041*	*-0.057**	*-0.005*
2016M12	*(0.154)*	*(0.057)*	*(0.994)*
	[1.430]	*[-1.919]*	*[-0.008]*

Note: ***,**,* represent 1%, 5% and 10% significance levels respectively with p-values in parentheses and t-statistics in square brackets.

Table 5: stocks and bonds

$\hat{\rho}_{bs,t}$	$D\_RV_{b,t}$	$D\_RV_{s,t}$	$liquidity_t$
Full sub-sample	*-0.025*	*0.089****	*-0.800****
	(0.322)	*(0.000)*	*(0.014)*
	[-0.993]	*[3.594]*	*[-2.519]*
Breaks:			
2000M02	*-0.090****	*-0.053*	*-0.549***
2002M08	*(0.000)*	*(0.153)*	*(0.024)*
	[-4.121]	*[-1.435]*	*[-2.284]*
2002M09	*-0.015*	*-0.042**	*-0.218*
2006M02	*(0.465)*	*(0.062)*	*(0.519)*
	[-0.732]	*[-1.877]*	*[-0.646]*
2006M03	*0.015*	*0.023*	*-0.041*
2008M09	*(0.630)*	*(0.443)*	*(0.855)*
	[0.482]	*[0.769]*	*[-0.183]*
2008M10	*0.020*	*0.038***	*-0.694****
2013M10	*(0.231)*	*(0.022)*	*(0.001)*
	[1.201]	*[2.305]*	*[-3.242]*
2013M11	*-0.036**	*-0.004*	*-0.150*
2016M12	*(0.080)*	*(-0.145)*	*(0.727)*
	[-1.758]	*[0.476]*	*[-0.165]*

Note: ***,**,* represent 1%, 5% and 10% significance levels respectively with p-values in parentheses and t-statistics in square brackets.

Figure 1: correlation between commodities and stocks

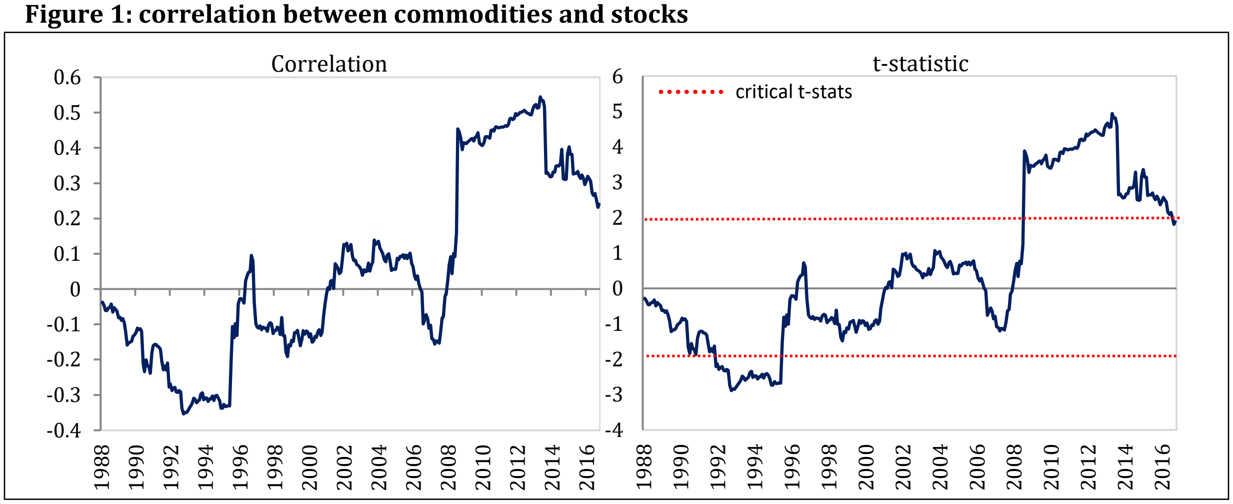


Figure 2: correlation between commodities and bonds

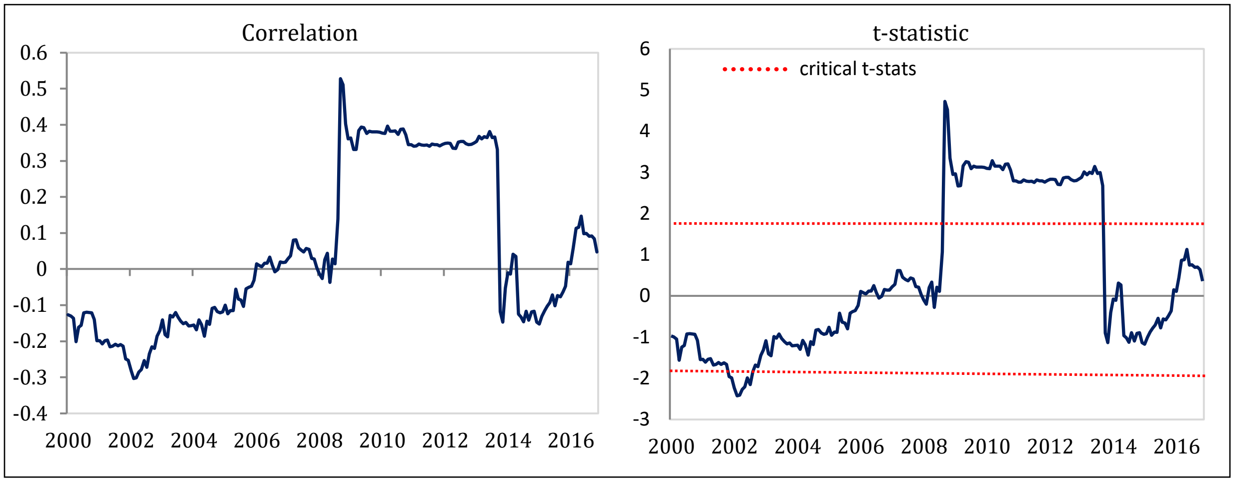
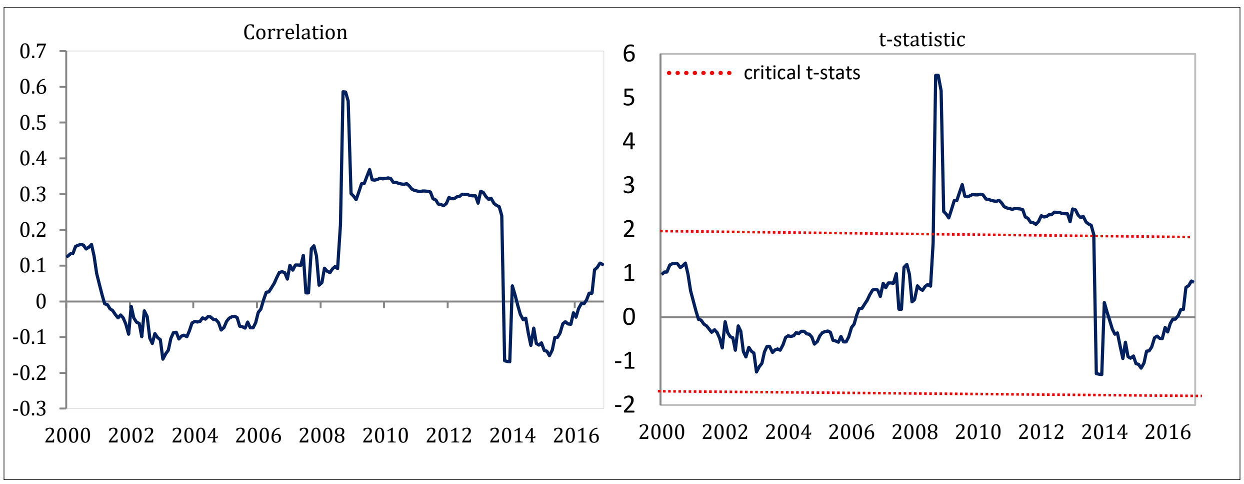


Figure 3: correlation between stocks and bonds



A Website Quality Model Investigating the Loyalty of South African Consumers towards Travel Websites

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Abstract: Due to the increase in the need for travel by international visitors, it is important that organisations consider key attributes of website quality, namely information quality and system quality to encourage and enhance consumer loyalty overtime. Drawing from Delone and McLean's theory, this research argues that information quality and system quality are antecedents of travel website quality, of which the latter is a predictor of consumer loyalty. A quantitative research approach was adopted by way of a survey methodology and data were analysed usingSmart PLS software for structural equation modelling (SEM). Based on the theoretical review, a research framework detailing the hypotheses relationships among the research constructs was developed. Based on the research findings, the results provide support for the proposed positive relationships among the research constructs.

Keywords: *Information quality, system quality, travel websites quality, loyalty*

1. Introduction

The concept of quality is well known and widely researched globally due to the importance of quality assessment-relatedissues present in almost every organisation (Cai & Jun, 2003; Elassy, 2015; Wu & Chang, 2016). Therefore, website quality should be the top priority of travel websites. This is because the absence of quality as a fundamental principle of sound business management to address customer-specific needs and expectations could result in brand destruction, poor customer confidence, a decrease in performance and the gradual and continuous erosion of profits, performance and competitive position. According to Monczka, Handfield, Giunipero and Patterson (2016:287), quality can be defined as "the total composite of product and service characteristics of marketing, engineering, manufacturing and maintenance through which the product or service in use will meet or exceed the expectations of the customer". The International Standards Organisation (ISO, 9000) defines quality as the totality of features and characteristics of a product or service that seeks to enhance customer satisfaction and continual improvement based on quality standards (ISO, 2009). Therefore, ensuring the overall website quality is key to website competitive success and business development. The conceptualisation of quality differs and may be somewhat subjective or understood differently depending on the context in which it is used. For example, in businesses, manufacturing and in the engineering sectors, quality is construed only as non-inferiority, superiority and fitness for use of something whereas in public service sectors, quality is viewed as nothing more than simple conformance to standards (Elassy, 2015). On the other hand, service marketers regard quality within the customer's perceptual lens after a service encounter, thereby viewing the phenomenon as the "evaluation of employee interaction, the service environment and the service outcome" (Chumpitaz & Paparoidamis, 2004). Interestingly, within the healthcare sector, quality is related to structure, processes and outcomes that are consistent with current professional knowledge that surpassed the desire outcome (Hillner, Smith & Desch, 2000).

DeLone and McLean consider quality to be an essential component in determining success within an information system (Roy & Balaji, 2015). In their view, quality should be improved, strategically because of its significant impact on consumers' views and responses to online products or services. Because of their proposition, contemporary scholars now believe that the increase in competition among marketing organisations has proffered the need for significant capital investments in both system and online information quality (Roger-Monzo, Marti-Sanchez & Guijarro-Garcia, 2015; Zhao, 2016; Silva & Goncalves, 2016). Specifically, among online businesses, quality is related to both data quality (content richness) and website quality (ease of use) (Law & Bai, 2008). The latter definition is the focus of this study. Due to increase competition among travel industries, the use of information technology, especially in terms of 'internet of things' as the biggest agent of change, is changing the way travel organisations operate and changing customer's interaction and perception towards travel website. With this, it is therefore important to address the antecedent of customer loyalty towards travel organisations website. To efficiently and effectively satisfy the needs of the new digital consumers, the research model proposed that the level information quality as well as system quality significantly influence travel website quality and thereby enhancing customer loyalty towards the website.

2. Theoretical Background and Hypotheses Development

DeLone and Mclean's information system success theory has been used by many researchers to measure dependent variables (Zhang, Min, Liu & Liu, 2013; Lwoga, 2013; Hazen, Huscroft, Hall, Weigel & Hanna, 2014; Xinli, 2015). In the theory, six latent variables, namely information quality, system quality, use, user satisfaction, individual impact and organisational impact were used to provide a compressive definition of information systems success (Delone & McLean, 2002; Bokhari, 2005; Petter & McLean, 2009; Moghavvemi & Salleh, 2014; Tam & Oliveira, 2016). Therefore, the model is important to understanding the value and efficacy of investing in online information quality as well as system quality management along websites. The theory evaluates the importance of information quality and system quality as determinants of online user satisfaction and websites organisational success impact (Xinli, 2015; Roy & Balaji, 2015). While the theory is beset with integrated undertones, the focus of this paper is domain-specific; hence, the need to focus only on the quality attributes that are relevant within the realms of travel websites. Notably, quality is a predictor of the effectiveness of a website from the perspective of the consumer (Lin, 2007). Thus, website quality is expected to be a determinant of online retailer success as well.

Travel website quality: According to Stats SA 2015, travel organisations in South Africa have contributed significantly to economic development. For example, 32 186 new jobs were created in 2015 and contributed about 3.1 percent to the GDP, which makes the travel industry an important sector in the South Africa economy. The reliance on travel websites by consumers for effective information, travel planning, decision-making and destination priority forecasting has increased and will continue increasing as travel organisations continue to offer greater products/service selection and quality efficiency (Bai, Law & Wen, 2008; Cao & Yang, 2016). South Africa, is a rainbow economy with renowned tourist attractions; hence, fuelling the evident trajectory in the demand for efficient travel websites. One key enabler, the Internet as "the digital revolution's biggest enabler and meta information source", drives the efficacy of travel websites (Wang, Law, Hung & Fong, 2015). In particular, internet technology has become an amazing tool for marketing organisations to promote their products while simultaneously communicating helpful information resources such as restaurants, transportation, attractions and hotels to consumers (Amaro & Duarte, 2015; Isfandyari-Moghaddam, 2016; Cao & Yang, 2016; Bronner & De Hoog, 2016). The Internet bridges the gap between marketing organisations and consumers seeking to make reservations pertaining to airlines, cruise lines, lodging as well as car rentals (Amaro& Duarte, 2015). Consumers use websites as a sources of up-to-date travel information for first-hand visual experience of the destination image (pictures, maps, reference rate and facilities) across local and international travel destinations (Ghasemaghaei & Hassanein 2015; Sowteret al., 2016; Tseng & Wang, 2016). In doing so, both existing and potential customers tend to assess the efficacy of companies within the travel industry based on service quality specifications corresponding with customer expectations (Chen et al., 2017).

Aladwani and Palvia (2002:469) define website quality as "users' evaluation of a website's features, regarding the extent to which the site meets users' needs and expectations, thereby reflecting overall excellence of the website". While there exist too many bones of contention within the literature regarding the constituents of website quality, Dedeke (2016) states that determining travel websites quality should incorporate an assessment of the "travel website's product information and its non-product-related website attributes such as ease of use, entertainment, visual appeal, responsiveness, speed and web security". This study considers the predictive power of website quality on behavioural loyalty of consumers towards travel websites in South Africa. Consistent with Roky and Al Meriouh (2015), both information quality and system quality are regarded as value components of overall travel website quality, should consumers or suppliers be expected to initiate transactions and return to websites on a regular basis.

Information quality: The amount of information available globally is increasingly growing particularly on the Internet (King, Walpole & Lamon, 2007; Cheema & Papatla, 2010; Chen, Huang & Davison, 2017). However, for information to be effective to its readers, it should be of quality (Sowter, Astin, Dye, Marshall &

Knapp, 2016). Of note, leisure travellers, business travellers, tourists and travel professionals rely on website information to optimise and maximise their travel planning decisions (Xiang, Magnini & Fesenmaier, 2015). As such, the emergence of the information age along with new technology and related applications, information explosion from different sources as well as the growth in the method of information dissemination has called for the need for improvement in information quality (Ghasemaghaei & Hassanein 2015). According to Chavez et al. (2015), information quality refers to information richness rather than the amount thereof, thereby determining the success of travel websites. This could include content-related aspects such as accuracy, timeliness, completeness, relevance, understandability, consistency and security of online information (DeLone & McLean, 2003). Webster and Williams (2005) included that the readability, accessibility of information on the website as well as the effective use of technology, accurate timely feedback, website design and website content determine website quality.

As already pointed out, the significance of information quality is based on essential characteristic features including the accuracy, sufficiency and completeness of information (Kuan, Bock & Vathanophas, 2008; Ponte, Carvajal-Trujillo & Escobar-Rodriguez, 2015). In the same vein, other scholars have added the elements of ease of use and relevance of the information (Bai, Law & Wen, 2008; Chavez, Yu, Gimenez, Fynes & Wiengarten, 2015; Marinagi, Trivellas & Reklitis, 2015). Nevertheless, the quality of information depends on how the information is perceived, trusted and used by consumers (Ghasemaghaei & Hassanein, 2015). Chua and Banerjee (2016) adopt a triple-perspective approach upon conceptualising information quality whereby they incorporate comprehensibility, specificity and reliability of the information. The scholars assert that comprehensibility refers to the extent to which the information is easy to understand, while specificity relates to the extent to which the information is relevant to aid travel website quality and purchase decisions. On the other hand, reliability refers to the extent to which the information is dependable for consumers. In this work, information quality isoperationalised as consumer's perceptions about the completeness and accuracy of information presented on a travel website'. Therefore, information quality of a travel website is deemed to impact positively on the usefulness of travel websites, thereby evoking overall website quality evaluations by consumers. This study then proposed that:
H*₁*: *information quality has a significant positive influence on travel websites quality*.

System quality: Owing to the growing competition among travel organisations, enhancing and providing enhanced system quality that increase consumers' satisfaction and builds long-term consumer loyalty is important. Websites system quality is defined as the "navigational scheme and hierarchy used on a website together with its design, comprising elements such as visual appeal, innovativeness, aesthetics and use of colours and shapes" (Dedeke, 2016:542). According to Zheng, Zhao and Stylianou (2009), website system quality depends largely on the website's design attributes, such as navigation, content organisation and security. Relatedly, within the D&M, system, quality is measured by elements of technical success such as ease-of-use, functionality, reliability, flexibility, data quality, portability, integration and importance (Delone & McLean2002). Of note, system quality has been identified as a valid dimension of overall website quality, with the latter contributing significantly to repeat visits and loyalty towards websites (Hsuet al., 2014). Dedeke (2016) posits that online shoppers do not shop on poorly designed websites. Nevertheless, consumers can only commit to a travel website owing to the quality design attributes of that particular travel website. Relatedly, the literature revealed that the content of a website coupled with its design elements could impact positively on overall quality evaluations, thereby leading to enhanced trust and loyalty towards the website (Petter & McLean, 2009). Therefore, this study proposed that:
H*₂*: *system quality has a significant positive influence on travel websites quality.*

Website quality and behavioural loyalty of consumers: A high quality website gains trust from consumers and thereby boosts overall product sales. In other words, whatever influences the intention to make travel reservations on travel websites largely depends on the consumer quality perceptions about the travel website (Law & Bai, 2008). According to Wolfinbarger and Gilly (2003), website quality is related to customer satisfaction, retention and loyalty in both product and service settings. Consequently, it seems reasonable to suggest that the quality the consumer perceives along travel websites could have a direct influence on overall loyalty towards the site. Loyalty is determined greatly by the re-patronage intentions of consumers towards a particular website, which may be due to positive quality perceptions and/or satisfaction with the system quality in general. Therefore, this implies that website quality plays a significant role in determining online

consumer loyalty. Wang et al. (2015) define consumer loyalty as the consumer's willingness to continuously purchase and participate in an online deal (travel websites). Relatedly, Cry, Hassanein, Head and Ivanov (2007:45) define online loyalty as "consumers' intention to re-visit a website or to purchase from it in the future". Toufaily, Ricard and Perrien (2013:1437) conceptualised online consumer loyalty as "the consumer's willingness to maintain a stable relationship and to engage in repeat visitation or purchases online, while using the company's website as the first choice among alternatives". The definitions proffered by these scholars attest to the behavioural component of customer loyalty, which is the variable of interest in this research. This is because while attitudinal loyalty may trigger purchases, it is usually of a latent nature and could be viewed as inadequate with regard to explaining the behaviour of consumers who make reservations and purchases on travel websites. This study, therefore, purports that website quality is a strategic force that could lead to consumer loyalty towards travel websites. Thus:
H*$_3$*: Website quality has a significant positive influence on consumer loyalty.

Following on from the extant literature as well as the hypotheses developed in this research, a conceptual model was developed and tested (Figure 1). In the model, both information quality and system quality are considered the predictor variables that explain the overall website quality perceptions of South African travel consumers, whereas the latter evokes behavioural loyalty.

3. Methodology

This study adopted a quantitative approach to evaluate a research model of travel website quality. The approach was deemed appropriate as it enabled the researchers to objectively test and confirm the hypotheses and to explain the influence of the selected website quality attributes on overall customer loyalty towards travel websites.

Instrument and data collection: The data collection process involved consumers currently residing within the Southern Gauteng, South Africa. Due to the nature of the research, the targeted research participants comprised consumers who had previous experience with making travel reservations from selected South African travel websites. A structured questionnaire comprising four research constructs was used in line with the work of previous scholars. In particular, the scales used by Kuan, Bock and Vathanophas (2008) as well as Zhang and Seydel (2005) were adapted to measure both information quality and system quality, respectively. In addition, the overall website quality scale developed by Yoo and Donthu (2001) as well as the behavioural loyalty scale used by Bernardo, Marimon and Alonso-Almeida (2012) were used with necessary modifications made to fit the present research context and purpose. The scale items were anchored along a five-point Likert-type scale covering the questions relating to the four annotated constructs (IQ, SQ, WQ and LO). The scale items used in this work are included as Appendix 1. Moreover, the questionnaire comprised demographic questions, which incorporated information relating to the website habits of travel consumers. This data was needed to establish a detailed profile for the sample. To eliminate differences in response patterns due to different reference points, the respondents were requested to answer the questionnaire with reference to their favourite travel website, where they have previously made a reservation, within the past 12 months. Where the respondents were not sure, the research assistants guided them as they answered the questionnaire. The sample side decision was based on previous studies. Researchers such asLaw and Bai (2008), Tung (2012), Hsu, Chang, Chu and Lee (2014), Tsao, Hsieh & Lin (2016), Jeon &Jeong (2017), examines the influence of information quality and system quality on travel website quality using sample size ranging from 250 to 800. Based on this evidence, the sample size for this study was set at 300.Of the 300 questionnaires distributed, 189 were considered usable for eventual data analysis after conducting a data-sort cleaning procedure, thereby representing a response rate of 63 percent.

4. Results

To analyse statistically the measurement and structural models, this study used SEM technique (Ringle, Wende & Will, 2005). This study commences the data analysis section by coding the data in Excel spreadsheet and cleaning the data for missing entries and double entries. This was followed by descriptive statistics and confirmatory factor analysis. Finally, the path modelling, which tested the hypothesised relationships, was performed and research findings were discussed.

Profile of the respondents: The respondents were asked to report their demographic information, including gender, age, marital status and education. Out of a sample set of 189 responses that were considered usable for the eventual run of data analysis, most of the respondents were female (59.5% of the sample). In addition, the median age group of the respondents was between 31 to 40 years (55.4% of the sample). Nevertheless, approximately 58 percent of the respondents were single while 79.4 percent of the respondents had either high school (53% of the sample) or university degree as the highest level of education (26.4% of the sample).

Preliminary descriptive results: Table 1 presents the descriptive statistics extracted from the study. The higher mean values (above 3.0) indicated below are associated as reflecting greater agreement by participants considering that a five-point Likert scale was utilised. The items included in this study reported acceptable mean values along information quality ($3.029 \leq \bar{x} \leq 3.854$), system quality ($3.315 \leq \bar{x} \leq 3.894$), website quality ($3.298 \leq \bar{x} \leq 3.645$) and loyalty ($3.037 \leq \bar{x} \leq 3.648$). In addition, standard deviation values close to 1.00 were reported in this research, inferring the proximity of the scale items around the arithmetic mean.

SMART-PLS measurement model results: To analyze statistically the measurement and structural models, this study used Smart PLS software for SEM technique (Ringle, Wende & Will, 2005). In SEM, the measurement model refers to the linkages between the latent variables and their manifest variables and the structural model captures the hypothesised causal relationships among the research constructs (Wetzels, Odekerken-Schroder & Van Oppen, 2009). Unlike AMOS and LISREL, which are covariance-based approaches, Smart PLS is a regression-based technique that originates from path analysis. Smart PLS has emerged as a powerful approach to study causal models involving multiple constructs with multiple indicators. Smart PLS – a component-based method – has an ability to model latent constructs that are uncontaminated by measurement error under conditions of non-normality. It can handle complex predictive models in small-to-medium sample sizes. Since the current study sample size is relatively small (189), Smart PLS was found more appropriate and befitting for this work. In this respect, bootstrapping resampling method was used to test the statistical significance of the relationships. This procedure entailed generating 200 sub-samples of cases randomly selected, with replacement from the original data.

Table 1: SMART-PLS results

Research constructs	Indicators	Descriptive statistics		Reliability statistics			Validity statistics				Collinearity
		Mean ($\bar{x}$)	SD	Alpha (α)	*Rho*	CR	AVE	√AVE	Factor loading	Item-total correlation	VIF
Information quality	IQ1	3.854	1.505	0.749	0.748	0.856	0.665	0.815	0.774	0.655	1.015
	IQ2	3.287	1.390						0.843	0.565	
	IQ3	3.029	1.507						0.828	0.760	
System quality	SQ1	3.315	1.478	0.818	0.827	0.879	0.644	0.803	0.806	0.782	1.015
	SQ2	3.894	1.402						0.810	0.570	
	SQ3	3.416	1.299						0.817	0.497	
Travel website quality	WQ1	3.347	1.431	0.770	0.791	0.866	0.682	0.826	0.777	0.482	1.000
	WQ2	3.363	1.272						0.838	0.469	
	WQ3	3.298	1.293						0.781	0.534	
	WQ4	3.645	1.443						0.857	0.366	
Loyalty	LO1	3.433	1.373	0.711	0.719	0.812	0.521	0.722	0.778	0.605	1.049
	LO2	3.648	1.394						0.733	0.523	
	LO3	3.037	1.218						0.749	0.496	
	LO4	3.079	1.227						0.616	0.578	

Note: Alpha (α) = Cronbach's alpha; Rho= Dillon-Goldstein's *rho; CR=Composite reliability; AVE=Average variance extracted*

Reliability of this research was assessed by evaluating three statistical measures. According to Table 1, Cronbach's alpha coefficient values (ranging between 0.711 and 0.818), Dillon-Goldstein's *rho* estimates (ranging between 0.719 and 0.827) as well as CR values (ranging between 0.812 and 0.879) all exceeded the expected threshold of 0.70 inferring internallyconsistent scale reliability in this work. The reported results indicate that this research was reliable (Hair et al., 2011). To ensure convergent validity, the researcher checked if items loaded on their respective (*a priori*) constructs with loadings greater than 0.70 (save for indicator LO4=0.616) were reported across the scale used in this research, which Malhotra (2010) considers ideal. Nevertheless, the individual items satisfied the 0.50 minimum threshold recommended by Anderson and Gerbing (1988) while an observation of the inter-total correlation value (LO4=0.578) for the indicator, which was greater than 0.30 (Field, 2009) suggested that the indicator could be retained. In addition, LO4 was retained in this study based on review feedback from an expert debriefing session, which noted that the elimination of this indicator would have theoretical implications for the overall explanation of the loyalty construct. While this is so, the AVE values were computed to evaluate if the scale indicators resonated in theoretically accurate ways with their respective constructs. All AVE values were above 0.50, which is regarded as acceptable by Fraering and Minor (2006) since more than 50 percent of each item's variance was shared with its respective construct. Together, these results provided evidence for acceptable convergent validity in this research. Fornell and Larcker's (1981) criterion was employed upon assessing discriminant validity of this study as shown on Table 2.

Table 2: Correlation analysis results and discriminant validity measures

Construct	Information quality	System quality	Website quality	Loyalty
Information quality	1			
System quality	0.123**	1		
Website quality	0.417**	0.664**	1	
Loyalty	0.610**	0.189**	0.527**	1
Square root of AVE	0.815	0.826	0.722	0.803

HTMT: *IQ→LO= 0.610; IQ→SQ=0.123; IQ→WQ=0.417; LO→SQ=0.189; LO→WQ=0.527; SQ→WQ=0.606*

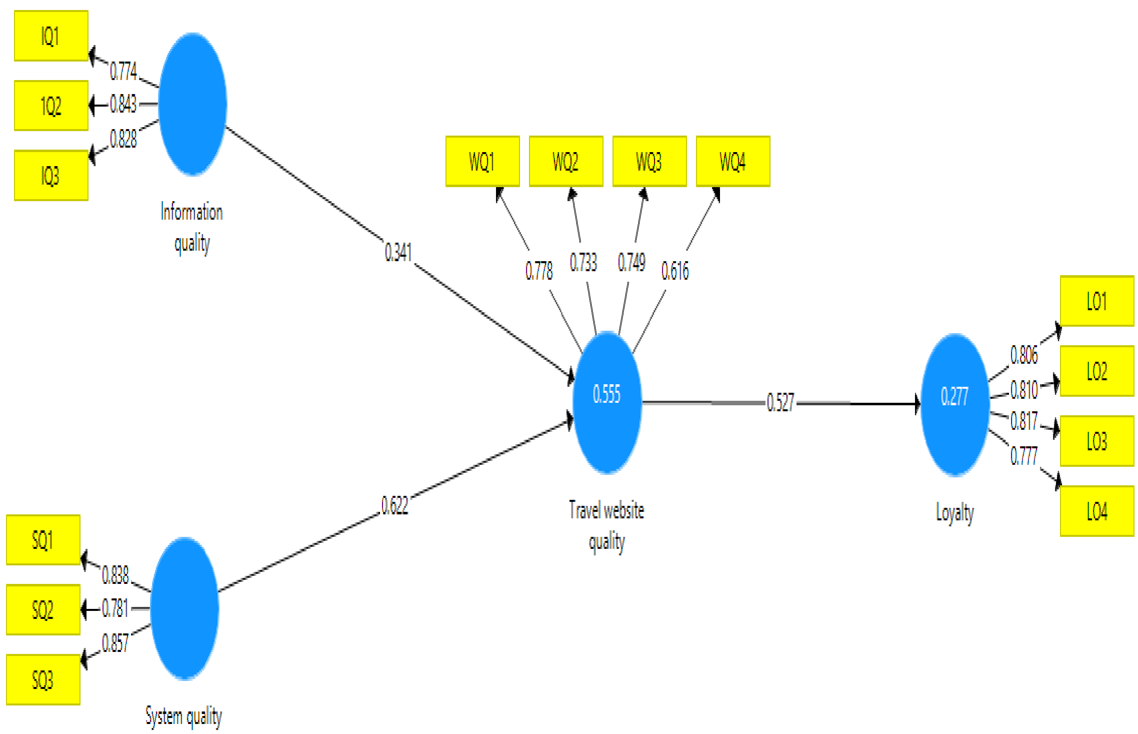
**Correlation is significant at the 0.01 level (2-tailed)

The square root of AVE values should be greater than the highest correlation coefficient for the constructs to bear theoretical and practical uniqueness (Fornell & Larcker, 1981). Furthermore, if the estimated HTMT values are below 0.90, discriminant validity has been established between the reflective constructs of a study (Henseler et al., 2015). In this study, the square roots of the AVE values range between 0.722 and 0.826, which is greater than the highest inter-construct correlation value (r=0.664). Relatedly, the computed HTMT ratios were in the range between 0.123 and 0.610, which is sufficient evidence of the uniqueness of each construct in the research model.

Multicollinearity assessment: In terms of multicollinearity assessment, Hair et al. (2011) posit that VIF values greater than 5.0 indicate that the levels of collinearity within a data set are very high, therefore, problematic. An alternative method to evaluate collinearity concerns is by computing a bivariate matrix with correlation coefficients greater than 0.60 (r>0.60) signalling collinearity issues in PLS path models. According to Table 2, all reported correlation values were less than 0.80 (highest r=0.664) while the VIF values ranged between 1.000 and 1.049, evidencing absence of multicollinearity in this research while t-statistics derived from bootstrapping (200 resamples) were greater than 1.96, implying statistical significant loadings at p=0.001. As such, this confirms that all the measurement items converged well on their respective constructs, therefore, are acceptable measures.

Path model results: PLS 3.0 also generates the path coefficients for the relationships modelled among the constructs. The significance of these coefficients was assessed using the bootstrap procedure that provided the t-values for each path estimate. Figure 1 and Table 3 present the results of the PLS analysis on the structural model along with the path estimates and t-values. Support for the study hypotheses, which are labelled on their corresponding paths in Figure 1, could be ascertained by examining the directionality (positive or negative) of the path coefficients and the significance of the t-values (greater than 1.96). Moreover, the standardised path coefficients are expected to be at least 0.20 and preferably greater than 0.3 (Chin, 1998).

Figure 1: PLS 3.0 model results



The results provide support for the proposed positive relationships between the three relationships (H_1, H_2 and H_3). Figure 1 and Table 3 provide the inner model results and subsequent decision to conclude the supported hypotheses.

Table 3: Final Model Fit

Proposed path relationship	Hypothesis	Path coefficient	T-value	Outcome
WQ ⟵ IQ	H_1	0.341	4.836	Supported
WQ ⟵ SQ	H_2	0.622	9.561	Supported
LO ⟵ WQ	H_3	0.527	7.978	Supported

Following formulae provided by Tenenhaus, Vinzi, Chatelin & Lauro, (2005), the global goodness-of-fit (GoF) statistic for the research model was calculated. Generally, GoF may still be useful in assessing which PLS-SEM datasets explain better. While GoF values vary from zero to one, higher values reflect better explanations (Henseler et al., 2015). The calculated global GoF is 0.64, while NFI is reported 0.903. Thus, this study concludes that the research model has a good overall fit.

Discussion: The main goal of this study was to propose and empirically test an integrated model of the antecedents of South African consumers' loyalty towards travel websites, while proving the importance of website quality as a second-order construct in the model. Figure 1 and Table 3 indicate that both information quality (path estimate=0.341; p=0.00<0.05) and systems quality (path estimate=0.622; p=0.00<0.05) have a significant positive influence on travel website quality. Together, the two dimensions, namely information quality and systems quality (R^2=0.555) explain about 56 percent of consumers' overall perceptions regarding the quality of South Africa travel websites as convergence points for making holiday reservations. Moreover, website quality has a direct effect on loyalty (path estimate=0.527; p=0.00<0.05) with only 28 percent explanatory power (R^2=0.277). Consistent with the first hypothesis formulated in this work, the significant path shows that information quality is a predictor of the overall quality of travel websites; hence, H_1 is supported. Relatedly, Tung (2012); Ghasemaghaei and Hassanein (2015); Sampaio, Dong & Sampaio (2015), provide additional support that information quality is a predictor of overall website quality in the sense that, as competition grow wide, travel organisation having their stores online tend to focus on the quality level of website information to interest customer loyalty. In addition, the study byChua and Banerjee (2016) and Marinagi et al. (2015) supports the relationship between information quality and website quality by confirming that information accuracy, reliability as well as the understandability of the information positively influences website quality.

It was indicated in Figure 1 and Table 3 that system quality significantly influences website quality. According to Lee and Kozar (2006) and Bai et al. (2008), the success of travel website organisations not only depends on the quality of the information but also to a greater extent on the continual development of the system's quality aspects to provide higher levels of website quality, especially in cases where consumers evaluate one website among numerous alternatives. Hence, H_2 is also supported in this study. This finding is supported by Bronner and de Hoog (2016) and Dedeke (2016), stating that maintaining website system quality enhance travel website business performance and motivate customer's perception to browse and purchasesintention due to the effectiveness of the website. The result supporting the path between overall website quality and customer loyalty (H_3) is consistent with previous empiricalfindings that travel website quality significantly influences consumer loyalty to the website and thereby enhance the customer willingness to re-visit the website (Flavia, Guinali & Gurrea, 2006; Kim, Jin & Swinney, 2009; Tsao et al., 2016). According to (Roger-Monzoet al., 2015; Sun, Fong & He, 2017), travel website information quality and system quality not only enhance the overall travel website quality but also significantly reduce customer online dissatisfaction and complaints, which further aid customer loyalty to the website.

5. Conclusion and Recommendations

The purpose of this study was to test statistically and apply selected quality components of DeLone and McLean's information success theory within a South African context. This study proposed three hypotheses using data that were collected from targeted research participants comprising consumers who had previous experience with making travel reservations from selected South African travel websites. All three hypotheses were supported significantly in this work. Prominently, this study provided evidence that consumer loyalty towards travel websites is influenced greatly by three essential and strategic concepts, namely information quality, system quality and website quality. This, therefore, provokes the need for South African organisations hosting travel websites to invest strategically in developing and improving their website quality to gain consumer loyalty and thereby enhance overall website success.However, to improve on website effectiveness, hospitality and tourism practitioners should adopt appropriate online strategy that accommodate the improvement of website in terms of the website information quality, system quality as well as the overall travel website quality in order to encourage customer loyalty to the website.

Limitations and Implications for Future Research: The supported hypotheses of this study as stipulated in the research model prove that a study of this nature makes asignificant contribution to travel and tourism practitioners andweb-managers. However, the findings cannot be generalised in their entirety since only a sample size of 189 online South African travel consumers was used in the eventual analysis. Therefore, future studies may be conducted by using and including data from other countries to be more informative in terms of cross-validation and investigating possible cultural invariance. Furthermore, a result comparison using a modified research model could be extended to other African countries to enhance further the current line of work. This ultimately will contribute new knowledge to the existing body of literature on the antecedents of consumer loyalty towards travel websites. Finally, travel organisations and consumers' loyalty to their respective websites were the focus of this study and did not cater for all other types of e-marketing and e-commerce websites. This shortcoming could be improved on with future research.

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Appendix 1

SYSTEM QUALITY
- The travel website uses audio elements properly
- The travel website uses animations/graphics properly
- The travel website uses multimedia features properly

INFORMATION QUALITY
- The travel website provides accurate information about the reservations that I want to make
- The travel website provides sufficient information when I try to make a transaction
- The information in the travel website is clear for me to make a travel reservation

LOYALTY
- I encourage friends and relatives to do business with this travel website
- I say positive things about this travel website to other people
- I will not switch from this travel website to making reservations any other way
- I will do more business with this site in the next few years

WEBSITE QUALITY (OVERALL)
- This travel website is of high quality
- The likely quality of this travel website is extremely high
- This travel website must be of very good quality
- Overall, this travel website is of very good quality

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Relationship between National Culture and Development

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Abstract: Culture, as it is defined and well understood, differentiates one group from the other; in more general form, one country from the other. Culture then influences the behaviour and how we think in our everyday lives but so far culture of any group can only be measured in terms of a collection of cultural dimensions. This has made it difficult to establish whether there is any relationship between culture and any other social factors. In this study we derived national culture index from the four (4) Hofstede cultural dimensions (power (equality versus inequality), collectivism (versus individualism), uncertainty avoidance (versus uncertainty tolerance), masculinity (versus femininity)) using geo-mean formula. We then investigated whether there is any relationship between national culture index and national development index. In doing this we endeavoured to answer the question "Is There Really a Relationship Between Culture and Development?" posed by Mbakogu (2004:38). The data used for our experiments for Hofstede's dimensions of national culture values were retrieved from Hofstede website that has an open licence for academic researchers. Data for human development national index were retrieved from UNDP website (Letter of consent was obtained from UNDP officials). The Pearson correlation coefficient was calculated ($r=0.083$, $p=0.502>0.05$), which indicated that there is very negligible positive relationship between cultural index values and the development index values. Since the value of p is greater than the significance level of 0.05, we concluded that there is inconclusive evidence about the significance of the association established between National Culture Index and National Development Index. Since we currently have a national culture index, researchers can now talk about culture as a homogeneous unit. Researchers may use the national culture index to investigate relationship between culture and any other social factors. In future we intend to use other cultural dimensions proposed by other researchers to present a national culture index.

Keywords: *Hofstede cultural dimensions, National development index, National cultural index*

1. Introduction

National culture and national development are very complex concepts and difficult to define. Many authors gave their view of culture and development thus there are so many definitions in literature (Morden, 2016; Albu, 2006; Aluko, 2003). Researchers endeavoured to measure national culture and national development, giving a vast array of cultural measurements and developmental measurements of nations (Hofstede, 2011; Schwartz, 2008). Through these measurements researchers endeavoured to establish relationships within culture and development (Sempere, 2011; Grosser & Lombard, 2008). In order to establish relationships using culture and/or development these concepts have been dimensionalized. Authors have been able to establish relationships between cultural dimensions and development dimensions then concluded by saying either there is relationship or not between culture and development. The first challenge in conducting research involving culture is arriving at an understanding of what culture is, given the myriad of definitions, conceptualizations, and dimensions used to describe this concept.

Culture as it is defined, well understood and differentiates one group from the other, in more general form one country from the other. Culture then influences the behaviour and how people think in their everyday lives but so far culture of any group can only be measured in terms of a collection of cultural dimensions (Mazur, 2010). This has made it difficult to establish if there is any relationship between culture and any other social factors. In an event that one wants to find the influence of culture to society then one needs to find the influence of the individual dimensions of culture while at the same time talking about culture as a unit. The dimensionalization of culture entails we cannot talk about culture as a homogeneous unit but as a heterogeneous unit. Although there are measurements for cultural distance between nations to enable multinational companies to know the cultural distance between host-home countries, there is still no national culture index that can be used to measure any relationship with other social or economic factors (Zuva & Worku, 2016). Researchers so far have relied on cultural dimensions to establish relationship between culture and other factors. Hofstede and Schwartz's cultural dimensions have usually been used for any relationship required (Beukelaer, 2013). It is therefore imperative to derive national culture index from the cultural dimensions available. Due to the absence of national cultural index there is no conclusive relationship that have been established between culture and other factors.

This research endeavoured to put the components/dimensions of culture together in order to visualize culture as a homogeneous unit and then attempted to find if there is any relationship between national culture and national development. The goal of the research is to derive national cultural index that can be used for effective investigation into relationship between culture and any other social or economic factors, in this case development of nations. This was accomplished by implementing the following primary objectives:

- To identify an appropriate formula to calculate national culture index using cultural dimensions
- To calculate/identify national development index of all the countries whose development dimensions are available
- To establish if there is any relationship between culture and development using the national culture index and the national development index.

The significance of finding the relationship between culture and development is that there is need to find out if culture impedes development or it facilitates development. This will enable people to consider changing their culture in order to facilitate development. If there is no relationship, then everyone can keep their culture without being forced to do so due to its negative effect on the societal development. This paper is arranged as follows: section 2-literature review, section 3-Methodology, section 4-Results and finally section 5-Conclusion.

2. Literature Review

According to (Minkov & Hofstede, 2012) culture have an overwhelming tendency to form fairly distinct national clusters, therefore culture can be used to distinguish nations. They also acknowledge that despite the existence of in-country regional differences, the national culture is a meaningful concept and a legitimate unit of analysis. This means national culture can be used in establishing relationships with other social factors, it must be noted that this does not belittle the differences of culture within a nation. Many researchers have been trying to establish if there is any relationship between culture and development. The definition of the concepts of culture and development are so complex as seen from the definitions in (Morden, 2016; Orji & Job, 2013; Minkov & Hofstede, 2012; Albu, 2006; Aluko, 2003) to enable researchers to establish if there is any relationship between culture and development. This leads researchers to use dimensions of culture and dimensions of development to investigate if there is any relationship between culture and development (Beukelaer, 2013; Sempere, 2011; Maraña, 2010; Grosser & Lombard, 2008; Mbakogu, 2004). Most of these researcher found out that some of the dimensions of culture have positive influence to development and others impedes development. The commonly used cultural dimensions are the ones proposed by Hofstede that are: power distance, uncertainty avoidance, individualism and masculinity as seen in (Yasemin Hancıoğlu, Ülkühan Bike Doğan, & Yıldırım, 2014; McFarlin & Coget, 2013; Gorodnichenko & Roland, 2012; Parumasur, 2012). Some of the samples of conclusions of the relationship between national culture and other social factors are that Gross National Product (GNP) per capita was positively related to individualism and negatively related to power distance (Cox, Friedman, & Tribunella, 2011). According to Tang and Koveos (2008), who proposed the use of a curvilinear relationship between GDP per capita and Hofstede's dimensions, found out that power distance first increase and then decrease with GDP per capita.

Hofstede national culture dimensions: The theory is based on the idea that value can be placed upon six cultural dimensions. These are power (equality versus inequality), collectivism (versus individualism), uncertainty avoidance (versus uncertainty tolerance), masculinity (versus femininity), temporal orientation, and indulgence (versus restraint). Hofstede gathered most of his data on world cultural values through surveys conducted by IBM, a US-based technology and consulting firm (Qamar et al., 2013). He then proposed a scoring system using a scale from 1 to 120. Hofstede stresses that the cultural dimensions are only a framework to help assess a given culture and thus better guide decision making. There are other factors to take into consideration such as personality, family history, and personal wealth. The proposed dimensions cannot predict individual behaviours and do not take into account individual personalities (Hofstede, 2011).

Power distance is explained as the level to which members of the society accept that power is distributed unequally. Collectivism indicates the degree to which individuals are integrated into groups. Uncertainity-avoidance entails society's tolerance for uncertainty and ambiguity while masculinity depicts the level of how a society places on stereotypical masculine values such as assertiveness, ambition, power and materialism (Gouveia & Ros, 2011). Temporal orientation describes a society's time horizon and indulgence measures a culture's ability to satisfy the immediate needs and personal desires of its members (Hofstede, 2011).

3. Methodology

This research will be using quantitative research method. The numerical representation of cultural dimensions will be used to derive the cultural index using Hofstede cultural dimensions. The geometric mean is used to calculate the cultural index as in equation 1.

$$CI = \sqrt[4]{PD * UA * MS * In} \qquad \mathbf{1}$$

A linear regression approach is used for modeling the relationship between a scalar dependent variable (in this case it is the cultural index) and the explanatory variables (independent variables) (in this case Hofstede cultural dimensions) as in equation 2.

$$CI = a(PD) + b(UA) + c(MS) + d(In) \qquad \mathbf{2}$$

where PD is the power distance, UA uncertainty avoidance, MS masculinity and In is individualism.
Development index is calculated using the numerical representation of life expectancy index (LEI), gross domestic income per capita (GDI per C) and education index (EI) (Bank, 2017).
The geometric mean is used to calculate the Development Index (DI) per year as given in equation 3.

$$DI_y = \sqrt[3]{(LEI) * (EI) * (GDI\ per\ C)} \qquad \mathbf{3}$$

where LEI is life expectancy index, GDI per C is national Gross Domestic Income per Capita index and EI is education index.
The data used for the calculation of development indexes was taken from 2010 to 2014 UNDP data source and an average was obtained for the development index of nations as given in equation 4.

$$DI = \frac{\sum_{y=1}^{n} DI_y}{n} \qquad 4$$

The relationship between culture and development is tested using Pearson Correlation Coefficient (r) and Coefficient of determination (r-squared). The Cultural Index and Development Index data are used. Pearson Correlation is calculated using the formula 5.

$$r = \frac{\sum_{i=1}^{n}(CI_i - \overline{CI})(DI_i - \overline{DI})}{\sqrt{\sum_{i=1}^{n}(CI_i - \overline{CI})^2 \sum_{i=1}^{n}(DI_i - \overline{DI})^2}} \qquad \mathbf{5}$$

where CI is cultural index and DI is the development index.
The important characteristics of r are as follows:

- If r = -1, then there is a perfect negative linear relationship between CI and DI.
- If r = 1, then there is a perfect positive linear relationship between CI and DI.
- If r = 0, then there is no linear relationship between CI and DI.

Coefficient of determination is calculated using the formula 6.

$$r^2 = \frac{SSR}{SSTO} = 1 - \frac{SSE}{SSTO} \qquad \mathbf{6}$$

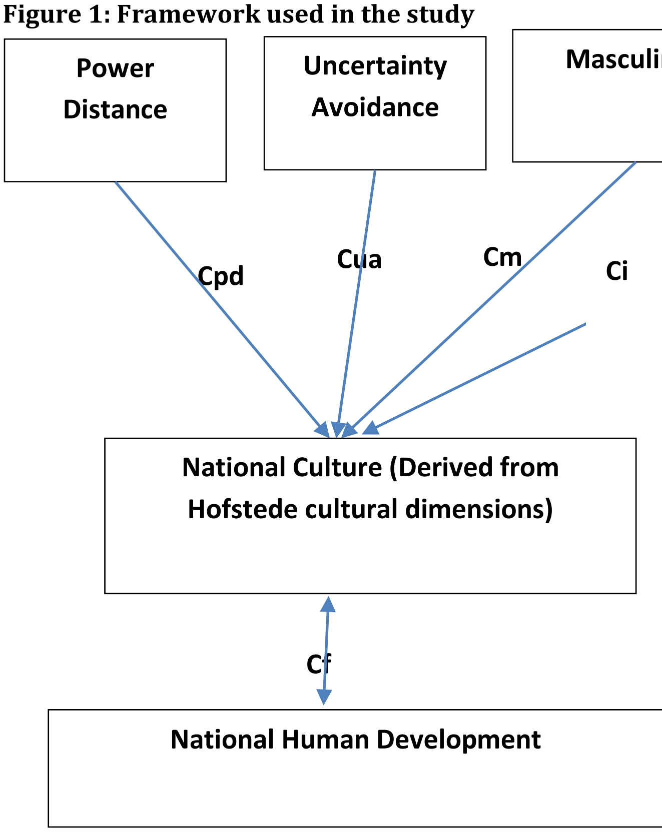
where SSR is the "regression sum of squares" and quantifies how far the estimated sloped regression line is from the horizontal "no relationship line," the sample mean, SSE is the "error sum of squares" and quantifies how much the data points vary around the estimated regression line and SSTO is the "total sum of squares" and quantifies how much the data points vary around their mean.

The important characteristics of r-squared are as follows:

- Since r-squared is a proportion, it is always a number between 0 and 1.
- If $r^2 = 1$, all of the data points fall perfectly on the regression line. The predictor CI accounts for all of the variation in DI!
- If $r^2 = 0$, the estimated regression line is perfectly horizontal. The predictor CI accounts for none of the variation in DI!

The coefficient of determination r-squared and the correlation coefficient r quantify the strength of a linear relationship. The framework used in this study is shown in figure 1. In the framework the Cpd, Cua, Cm, Ci and Cf represent the correlation between the two entities. The values of these variables were found from the data used.

Figure 1: Framework used in the study



Data collection and analysis methods: This section describes how the data was collected and analyzed.

Data Collection Methods: Data collection can be divided into two categories – secondary and primary. Primary data is type of data which never existed before, hence it was not previously published. Primary data is collected for a specific purpose. Primary data collection methods can be divided into two categories: qualitative and quantitative. On the other hand, secondary data refers to a type of data that has been previously published in for example journals, magazines, newspapers, books, online portals and other sources. This research will be using secondary data. There are several reasons for using secondary data in this research. Secondary data that is available is entirely appropriate and wholly adequate to draw conclusions and answer the question or solve the problem. In this case primary data collection is not necessary. It is far cheaper to collect secondary data than to obtain primary data. The time involved in searching secondary sources is much less than that needed to complete primary data collection. Secondary sources of information can yield more accurate data than that obtained through primary research. This is not always true but where a government or international agency has undertaken a large-scale survey, or even a census, this is likely to yield far more accurate results than custom designed and executed surveys when these are based on relatively small sample sizes. These reasons have made us to use secondary data.

The secondary data used in this study is taken from Hofstede cultural dimensions' data that is freely available for academics on the Internet. Geert Hofstede conducted what many consider as the most comprehensive study of how values in the workplace are influenced by culture. He analysed a large database of employee values scores collected by IBM, between 1967 and 1973, covering more than 70 countries, from which he first used the 40 largest only and afterwards extended the analysis to 50 countries and 3 regions. In the editions of Geert Hofstede's work since 2001, scores are listed for 76 countries and regions, partly based on replications and extensions of the IBM study on different international populations. http://geerthofstede.com/research-and-vsm/.The other secondary data used for development is taken from United Nation Development Programme (UNDP) website http://hdr.undp.org/en/data. The permission to use the data was requested and was granted. The Data for Gross National Income per Capita is retrieved from The World Bank website http://data.worldbank.org/ that have an open license.

Analysis Methods: This research used quantitative data analysis and a quantitative data analysis software SPSS. Chart, table, histogram, diagram is used in the analysis of data where appropriate.

Sampling: This research used homogeneous purposive sampling a non-probability sampling method. The method was chosen because the research requires nations that have all the cultural dimension's data and also the human development national index data.

Ethical consideration: To address issues related to ethical consideration in a research there is need the methods of data collection that the research study is going to use. In studies that involve primary data collection ethical issues can be addressed by making sure that the following commitments are adhered to:
a) Respondents are going to participate in the survey voluntarily;
b) Questionnaire/Interview/Focus group questions are not going to contain offensive, discriminatory, or other unacceptable language;
c) Privacy and anonymity of sample group members are going to be maintained etc.;
d) The works of other authors that are going to be used in any part of the proposed study are going to be acknowledged with the use of referencing system such as Harvard, APA, etc.
e) The author will attempt to maintain high levels of objectivity in discussions and analyses throughout the research.
In studies that do not involve primary data collection, on the other hand, ethical issues are going to be limited to the points d) and e) above.
In this research, the ethical issues are limited to the point d) and e) since the research is going to use secondary data.
Data source for our experiments for Hofstede dimensions of national cultures values will be retrieved from Hofstede website (Hofstede & Hofstede, 2015). The license of use is as given below:

"Academic use: The VSM is freely available for academic research purposes under the following conditions of good practice:

- The researcher has qualified her- or himself by the careful study of at least one of the following books: Geert Hofstede (2001), "Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations", second edition, or Geert Hofstede, Gert Jan Hofstede and Michael Minkov (2010), "Cultures and Organizations: Software of the Mind", third edition.
- The VSM is used for the purpose for which it was designed, that is the comparison of culturally relevant values between matched respondent samples from two or more societies (countries, nations or regions).
- The VSM is not used for comparing organizations, occupations, other social categories or individuals.
- The VSM is not used for one-country replications without a match to compare with.
- The research findings are freely available to the academic community."

Data for human development national index was retrieved from UNDP website (Jahan, 2015) (Letter of consent was sent to the authors).

4. Results

The regression analysis was done in order to get the estimated relationship between the dependent variable (Cultural Index) and the independent variables (Uncertainty avoidance, Masculinity, Individualism and Power distance). The size of the regression coefficients for each independent variable represents the mean change in the dependent variable for one unit of change in the independent variable while holding other independent variables in the model constant. The p-value of a coefficient is also important in regression analysis in that when it is less than the chosen significance level, such as 0.05, the relationship between the independent and the dependentvariables is statistically significant otherwise insignificant.R-squared of the regression is another variable that needs to be considered; it is defined as the fraction of the variation in dependent variable that is accounted for (or predicted by) the independent variables.Table 1 shows the results from SPSS application and the equation below shows the relationship.

Table 1: Regression analysis results

Notes

Output Created	24-FEB-2017 16:05:57

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Uncertainity Avo, Masculinity, Individualism, Power Distance[b]	.	Enter

a. Dependent Variable: GCDI

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.962[a]	.925	.921	3.158

a. Predictors: (Constant), Uncertainity Avo, Masculinity, Individualism, Power Distance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7668.702	4	1917.175	192.287	.000[b]
	Residual	618.164	62	9.970		
	Total	8286.866	66			

a. Dependent Variable: GCDI

b. Predictors: (Constant), Uncertainity Avo, Masculinity, Individualism, Power Distance

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-14.127	2.453		-5.758	.000
	Power Distance	.277	.024	.530	11.368	.000
	Individualism	.343	.021	.746	16.195	.000
	Masculinity	.295	.020	.512	14.379	.000
	Uncertainity Avo	.261	.017	.540	15.063	.000

a. Dependent Variable: GCDI

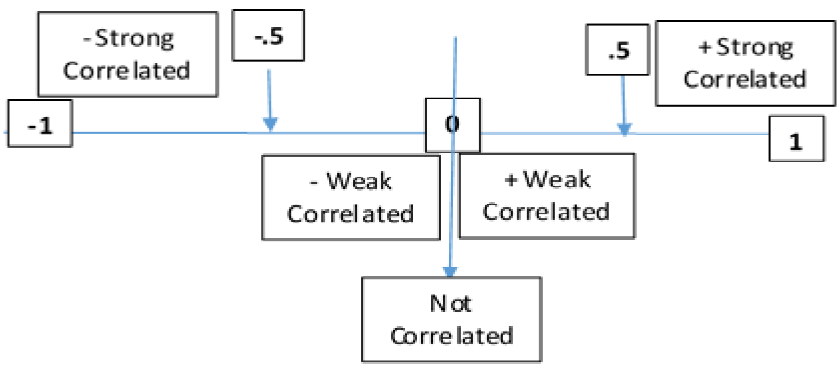
The results in table 1 show that the R-squared is approximately ninety-three percent (93%), which is a very good fraction of the variation in our dependent variable that is accounted for (or predicted by) our independent variables. The R-squared is also very important to us since we would like to use the regression equation to make accurate predictions. The regression coefficients are all positive (Power Distance=0.277, $p<0.01$, Individualism=0.343, $p<0.01$, Masculinity=0.296, $p<0.01$, Uncertainty Avoidance=0.261, $p<0.01$) with a p value less than one percent indicating that the coefficients are statistically significant.

The formula for the Cultural Index (CDI) is given in equation 7:

$$CDI = 0.277PD + 0.343IDV + 0.295MAS + 0.261UAI - 14.127 \quad (7)$$

The correlation between the national Cultural Index and Hofstede's cultural dimensions' index was done in order to find the degree to which they are associated. Correlation is a statistic that measures the linear relationship between two variables. The range of possible values for correlation coefficient (r) is from -1.0 to +1.0. Numbers less than zero represent a negative relationship between variables and numbers greater than zero represent a positive relationship. The value zero (0) means there is no relationship that exists between the two variables. The analysis of our results on correlation coefficients used the interpretation in Figure 2.

Figure 2: Correlation coefficient interpretation



In our study the correlation coefficients were found through the use of SPSS application. The results are shown in Table 2.

Table 2: The strength of relationship between national Cultural Index and Hofstede Cultural Dimensions Index

Correlations

		GCDI	Power Distance	Individualism	Masculinity	Uncertainity Avo
GCDI	Pearson Correlation	1	.240*	.316**	.594**	.479**
	Sig. (2-tailed)		.050	.009	.000	.000
	N	67	67	67	67	67
Power Distance	Pearson Correlation	.240*	1	-.641**	.127	.229
	Sig. (2-tailed)	.050		.000	.308	.062
	N	67	67	67	67	67
Individualism	Pearson Correlation	.316**	-.641**	1	.051	-.216
	Sig. (2-tailed)	.009	.000		.679	.080
	N	67	67	67	67	67
Masculinity	Pearson Correlation	.594**	.127	.051	1	-.042
	Sig. (2-tailed)	.000	.308	.679		.733
	N	67	67	67	67	67
Uncertainity Avo	Pearson Correlation	.479**	.229	-.216	-.042	1
	Sig. (2-tailed)	.000	.062	.080	.733	
	N	67	67	67	67	67

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

The results show that the calculated culture index is positively correlated to all the Hofstede's cultural dimensions. It can be noted that culture index has a weak correlation with power distance ($r=0.240$, $p<0.05$) and individualism ($r=0.316$, $p<0.01$), has a relatively positive strong correlation with uncertainty avoidance ($r=0.478$, $p<0.01$) and a positive strong correlation with masculinity ($r=0.594$, $p<0.01$). All the p values are less than 0.05 indicating that the correlations are significant. In answering the research question of the study we then computed the correlation of the National Cultural Index and National Development Index. The results are shown in Table 3.

Table 3: The strength of relationship between National Cultural Index and Average National Development Index

Correlations

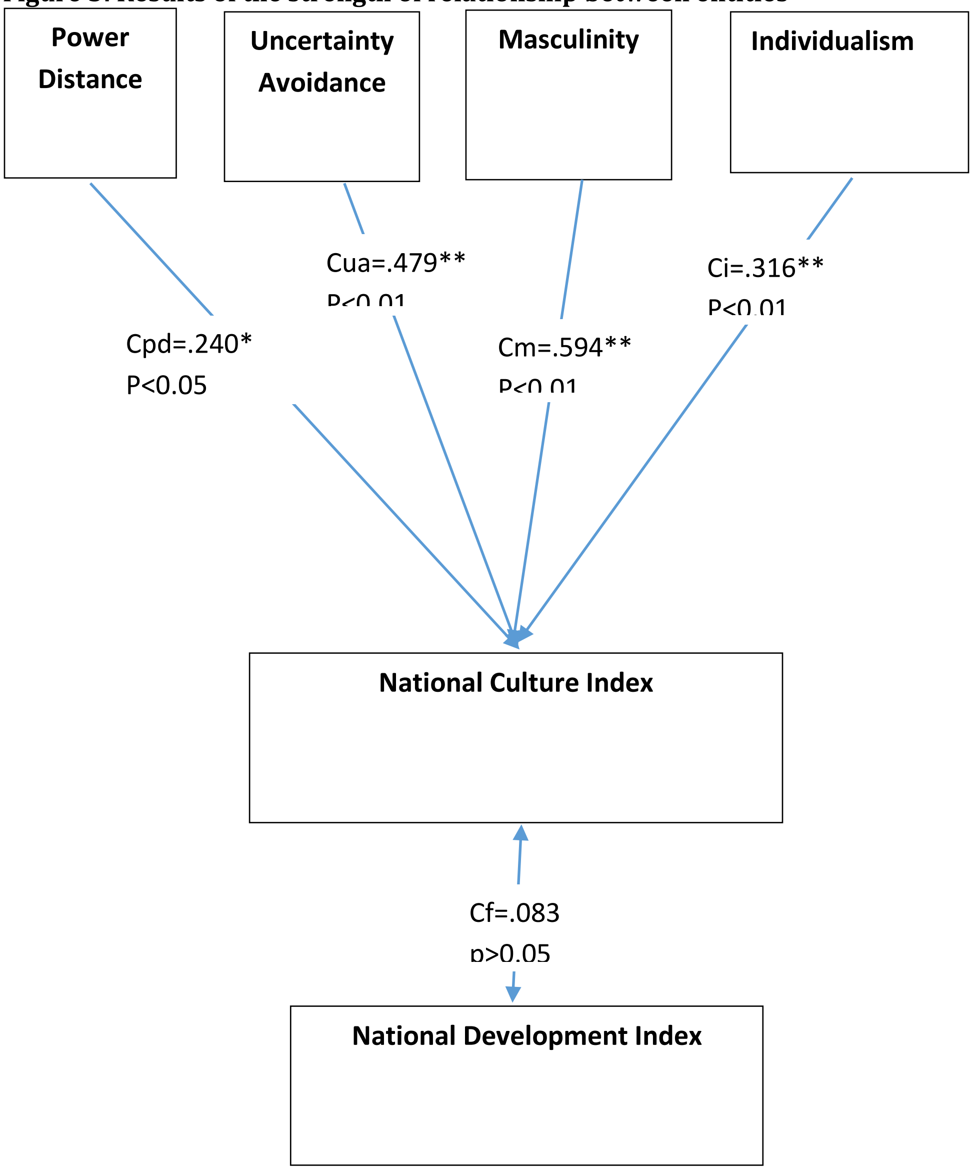
Correlations

		Human index	GCDI
Human index	Pearson Correlation	1	.083
	Sig. (2-tailed)		.502
	N	67	67
GCDI	Pearson Correlation	.083	1
	Sig. (2-tailed)	.502	
	N	67	67

The results show that the correlation of National Culture Index and National Development Index is a very weak positive correlation ($r=0.083$, $p=0.502>0.05$). Due to the fact that p-value is greater than the significance level of 0.05, there is inconclusive evidence about the significance of the association between the variables that is National Culture Index and National Development Index. The results obtained in Table 2 and Table 3 are illustrated in Figure 3.

The results show that Hofstede's cultural dimensions are positively correlated to the national culture index with the minimum degree of association of 0.24 with p less than five percent (5%)indicating that the correlations are all significant. The correlation of national culture index and national development index is 0.083 which is approximately zero, showing lack of any meaningful or significant relationship between culture as a homogeneous entity and national development also as a homogeneous entity. Due to the value of p which is greater than the significance level of 0.05, we conclude that there is inconclusive evidence about the significance of the association established between National Culture Index and National Development Index.

Figure 3: Results of the strength of relationship between entities



5. Conclusion

This study fulfilled the purpose and the study objective set out at the beginning. We managed to present a credible measure of culture as a unit. The national culture index may now be used in many other fields. In our case we wanted to establish whether there is any relationship between national culture and national development. We managed to use the national culture index to investigate the relationship. We can conclude that there is a very weak positive relationship between culture and development but this assertion is not conclusive. Further research needs to be undertaken to establish a conclusive conclusion. We recommend that the national culture index may be used to establish whether there is any relationship between culture and any of the dimensions of development. It can also be used to establish if there is any relationship between culture and any other social/economic factors.

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Employment Relations, Service Quality and Professionalism within the Nigerian Public Service

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Abstract: This paper was written with the following in mind: (1) to determine the effect of employee wellness on public servants' professionalism, and (2) to establish the relationship between trade union activities and employee professionalism. Within organisations, employment relations are established to facilitate an interactive working relationship between an employer and an employee as well as determine how labour and social security law provisions addressed to employees are applied. We reviewed pertinent literature that guides employment relations and adopted the mixed methods to enable a rigorous study that will offer profound insight into the employment relations climate in Nigeria and how it affects professionalism. Subjects were drawn from the database of a public funded training provider, whichcaters exclusively for senior public servants. The data are presented in a graphical and narrative form owing to our use of themes in analysing the focus group interviews. Some interesting and at the same time confusing revelations emerge from this study. The distinct difference in the responses holds implications for research and practice. A future study that can clarify this confusion may start by identifying champions (trade unionists, managers at the coalface with unions and other employers) and then engaging them through in-depth interviews to understand the real conditions which public servants are exposed. On a practical side, as confusing as the responses seem, they provide a serious opportunity for enhanced studies on Nigeria's public service constitution. We make this call against the backdrop of what some social scientists have termed intense structural decay in the Nigerian public service.

Keywords: *Public service, Servqual, Professionalism, Employment relations, Trade unions*

1. Introduction

Employment relations is an essential part of human resource management that oversees the relationship and interaction between employees and employers by ensuring that the two parties operate within the legislative provisions of the state. According to ILO (2006), employment relations signifies the formal coming together of an employer and an employee and generally defines the "reciprocal rights and obligations … created between the employee and the employer" (Pg. 3). Thus, employment relations are established to create an interactive working relationship between an employer and an employee. It is the "key point of reference for determining the nature and extent of employers' rights and obligations towards their workers" (Pg. 10). It also exists to determine how labour and social security law provisions addressed to employees are applied. Several factors hinder the smooth facilitation of the employment relationship. These factors include collective bargaining, employee wellness and dispute resolution mechanism. If these factors are not managed properly, a negative consequence ensues which affects the overall professional output. Negative consequences of ill-applied employment relations abound. For instance, because of job insecurity, workers may react to their duties and responsibilities with lacklustre attitude, which may compromise their health and safety (Ale, 2008; Idubor and Oisamoje, 2013). An effective human resource management approach is one that looks after each employee's welfare - health and safety, training and development, compensation and so on (Salawu, Hassan and Adefeso, 2010). Employers are thus expected to have a holistic interest in finding and placing employees within the work setting and as well prioritise their welfare.

Therefore, the study examines the relationship between employment relations and public servants' professionalism in the Nigerian public service. The intention is to determine the:

- effect of employee wellness on public servants' professionalism, and
- relationship between trade union activities and employee professionalism.

Public servants are burdened with a different responsibility from that of employees in other employment sectors. Part of their job responsibility is to strive for a balance between their political allegiances and work responsibility (Sarmavicius, 2006). This goes to show that the public service is complex because government is both the employer and custodian of the law. Nonetheless, Venter and Levy (2014) reckon that when the state is also playing the role of employer in an employment relationship, the provisions of the legislation it provides also bind it.

The rest of the paper is presented as follows: In the next section, we review pertinent literature that guides employment relations. An important adjunct to our review is the concept of service quality, which we are convinced, is articulated better within the servqual paradigm. Following that is a discussion of the research design. The paper concludes by uncovering some important ramifications.

2. Theoretical perspectives

Employment relations is guided by some theories amongst which Pluralist, Marxist, and Unitary theories are most popular. These theories are briefly discussed below to provide some scope to this study. In addition, service quality with specific reference to the servqual model is briefly discussed in relation to professionalism.

Pluralist theory: This theory is characterised by its style of involving employees in decision-making and bargaining process through their unions. Pluralist theory is considered to be the best of all the three theories (Budd, Gomez, and Meltz, 2004; Venter and Levy, 2014) that we have adopted in this study. The terms and conditions of employment are determined through collective bargaining, conflict resolution and negotiation between parties' representatives in this approach (Aborisade, 2008). In addition, preference is given to stakeholders such as government, trade unions, employers' organisation, consumer associations and professional bodies on employment related issues (Budd et al., 2004).

Marxist theory: Karl Marx advocates that employees should be allowed to take ownership of their productand jointly own resources. Thus, his doctrine discourages capitalism in all forms. Hence, workers should not be disconnected from their final product by earning a salary or wage (Okey and Onyishi, 2011). Employees through their unions should be involved in economic, political and decision-making of the state (Venter and Levy, 2014). The continuous rift between employer and employee about ownership of resources creates political and social unrest. Although, the duties and responsibility of the state are not clearly stated in the theory, emphasis is on the state promoting socialist ideologies (Okey and Onyishi, 2011).

Unitary theory: This approach is about the power and influence an employer seems to have over employees. Due to the power and influence possessed by the employer, wages and conditions of service are unilaterally determined without consulting the other party. This approach is characterised by industrial unrests and conflicts that disrupt productivity (Nel, Kirsten, Swanepoel, Erasmus and Jordaan, 2016). Issues such as job insecurity, unclear communication, remuneration and poor working conditions, which in turn may thwart employee and employer output especially if industrial relations are poorly practised (Venter and Levy, 2014), can cause industrial conflicts.

Service quality (Servqual): This concept of servqual gives preference to customer's perception of service and rates the employee or organisation according to how the recipients of their service is perceived (Chingang, Lukong and Isberg, 2010). Customers' perception of service is measured based on their experience, expectation, word of mouth and communication. Essentially, servqual measures the difference between customer's expectation and perception. Although Untaru, Ispas and Dan (2015) acknowledge that quality service can only be contextually described based, certain generic standards are used to measure service delivery. These include tangibles, reliability, responsiveness empathy and assurance (Ilyas, Nasir, Malik, Munir and Sajid, 2013). There have also been replicas of the servqual model such as Service Compact or Servicom, which was introduced in Nigeria's public service in order to reorient professional customer service. Agboola (2016) and Oyedele (2015) however contend that the failure of the system to improve service delivery is a function of the discrepancy between customer expectations and perceptions of service. This somewhat aligns with Shahin's (2004) argument that whatever quality service model is in place must unravel both the customer's service expectations and perceptions and an employee's perceptions of management's wellness programmes. We are therefore convinced that the servqual model makes an important contribution in the discussion of professionalism within the Nigerian public service.

The state of Nigeria's public service: Onyejeli (2011) reckons that Nigerian public servants are among the least paid in Africa. With rising inflation and unemployment, the conditions of service are equally deplorable. It is not uncommon to hear that wages are discretionally decided by the government without any form of input or consultation from the workforce, financial experts or other stakeholders. Lack of consultation and consideration has led to various industrial actions. In the event of an industrial action, the Nigerian public is subjected to school closure, often including sporadic violent protests. According to Agba and Ushie (2013), a situation such as this further regress the economy as those who are expected to lead the country are unable to attend school while workers stay away from work. Another common problem within the Nigerian public service is the weak incentive system which is mostly seen as hampering productivity promoting corruptive practices and generally destabilising ministries, departments and agencies (MDAs) (Akinwale, 2011). Okey and Onyishi (2010) refer to an 'alien job grading system' which was introduced within the public service without due consideration for public servants working conditions, payment and promotion system. Because of the job grading system there has been growing resentment in the Nigerian public service. Despite the unhappiness arising from the grading system, public servants complain about outdated and dysfunctional apparatus they have to work with (Anyim, Chidi and Ogunyomi, 2012).

Notwithstanding collective measures put in place to address workplace-related issues, employee wellness is also given little or no consideration. This is evidence that the prevailing discontent within the Nigerian public service results from a lack of collective bargaining. Ordinarily, collective bargaining is expected to promote professional standards, grievance handling, mutual interests and service to the public, the sharing of occupational skills and experience amongst employees and employers instead of the prevailing discontent (Anyim, Ekwoaba, and Shonuga, 2013; Anyim, Osekola and Olusiji, 2011).Collective bargaining is one of the most powerful tools for management and employee representation in order to reach mutual agreements on employment related issues right from recruitment to retirement (Paul, Michael and Chukwurah, 2013). When such a tool lacks in the workplace, there is possible tendency for repeated industrial action. A report by Sanes and Schmitt (2014) shows that, administration of collective bargaining, wage negotiation and industrial action seem to be very complex and ambiguous in some states in USA. However, industrial relations thrive where human resource management practices are functional and produce a better response to collective bargaining for all categories of employees (Brewster, 1995; Silva, n.d). Huselid (1995) adds that the involvement of employees in decision-making can increase the knowledge, skill and ability of current and future employees of an organisation, improve motivation, reduce redundancy and enhance retention of quality employees.

Professionalism is described within job requirements and ethics. Hence, public servants' professionalism is determined based on public service job requirements and the professional ethics of the specific job (Pope, 2000; Ssonko, 2010; UNDESA, 2000). Having a public service with all qualities of professionalism will ensure that interests are prioritised, service delivery is efficient and effective and political affiliation will not be given preference at the expenses of career obligations. On-going learning will also be part of the organisational culture to enhance the organisational ethics and standard (Gebrekidan, 2011). In order to achieve these professional qualities in the public service, government should provide an enabling environment to facilitate constant interaction amongst all stakeholders.

3. Methodology

The mixed method of research was deployed to facilitate a rigorous study that would offer profound insight into the employment relations climate in Nigeria and how it affects professionalism. According to Bless, Higson-Smith and Sithole (2013), quantitative research is aimed to give explanation, identify a relationship between variables, expressing 'social law' and generalisation of findings, while qualitative research is aimed to understand a phenomenon in its natural setting and generalise those findings to other similar situations. Hence, the deployment of the mixed method is justified for its capacity to support a holistic inquiry that unpacks a phenomenon. Subjects were drawn from the database of Administrative Staff College of Nigeria (ASCON). ASCON is a public funded training provider, which caters exclusively for senior public servants (normally from grades 7 to 17). The subjects were randomly selected from the cohort of 2013 trainees. Brynard, Hanekom and Brynard (2015) describe random sampling as when every subject within the unit of analysis has the same chance of taking part in the study. We considered senior public servants appropriate for the study because of their privileged position to offer better insight into employment relations climate of the Nigerian public service. We distributed more than one thousand two hundred questionnaires but made use of four hundred and seventy-nine (479) of them because they were properly filled out. The data were collected over six months including focus group discussions. With respect to focus group discussions, three groups consisting of 10-12 people were formed. The quantitative part of the questionnaire is descriptive in nature while the relationship between employment relations variables and professionalism is also established. Creswell, Ebersohn, Eloff, Ferreieira, Ivankova, Jansen, Nieuwenhuis, Pietersen and Plano Clark (2016) mention that quantitative research tests theories about reality, examine the possible cause and effect, and measures to gather data to test hypotheses or answers to research questions. The questionnaire used for quantitative data collection was close-ended, with the options to agree, disagree and or uncertain.

4. Data Analysis and Results

The data are presented in a graphical and narrative form. The focus group discussion is analysed thematically, while the correlative group responses are narrated under each group. Pertinent employment relations variables such as trade unionism, collective bargaining, and workplace participation and employee welfare were examined together. 'Employment relations' is described as the legislative framework that guides the relationship between employees and employers in the workplace within a country. The study sought to examine the relationship between the Nigerian Public Service (employer) and its employees' professionalism. Employment relations consists of trade unionism, collective bargaining, employee wellness and disciplinary and grievance procedures. These constituted the items in the data collection instrument. The Cronbach's Alpha used to test the reliability of the instrument achieved 0.745 thus proving that the results were reliable. To determine the validity of all the questions that address employment relations and their effect on professionalism, factor correlation was adopted. The average outcome of all responses was used to evaluate their relationship with one another. The factor correlation was therefore used to determine the level of significance of the relationship as well as the coefficient of determination.

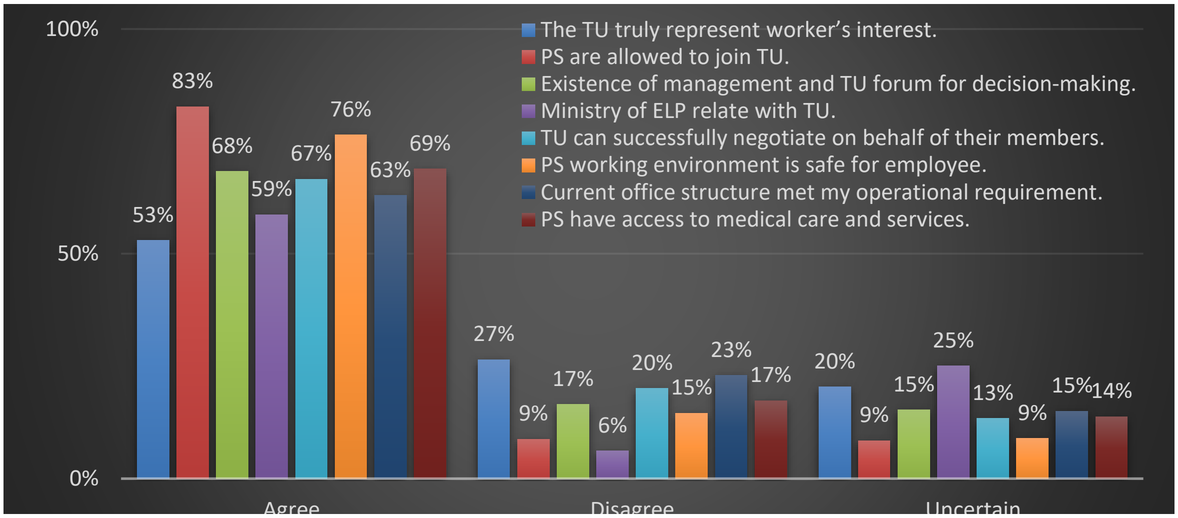
Table 1: Factor correlations for all variables

		Professionalism	**Employment relation management**
Professionalism	Pearson Correlation	1	.515**
	p-value (2-tailed)		.000
	N	477	469
Employment relations management	Pearson Correlation	.515**	1
	p-value (2-tailed)	.000	.000
	N	469	469

p-value is significant at ≥ 0.05
Pearson correlation range from 0-1 (The closer to 1 the higher the R)

There is a significant relationship between employment relations and professionalism as shown in Table 1 above. The graphical illustration of the research finding is shown and analysed below.

Figure 1: Graphical illustration of participant's responses to employee relations in Nigerian public service



*TU = Trade union; PS=Public service/servants

The above graphic illustration depicts the existence of trade union and its operation. It is shown in the Figure 1 that 53% of the participants agreed that their interests are truly represented by their trade union, 27% disagreed and 20% were uncertain. The figure also shows participants' responses to how civil service policy provide employees the freedom to join TU's. Here, 83% of the participants' agreed that the civil service policy offers employee's freedom to join trade unions, 9% disagreed and 8 % were unsure. The figure above also shows how respondents reacted to collective bargaining related issues. Respondents answered to how management interacts with trade union officials: 68% of the respondents agreed that there is a meeting point between management and union officials, 17% disagreed and 15% were not sure. The relationship between the Ministry of Employment, Labour and Productivity (ELP) and trade unions is also depicted in the figure; 59% agreed that the ministry and trade union have a good working relationship, 16% disagreed and 25% were uncertain. Likewise, the union negotiation ability was examined and 67% of the participant agreed that their union have negotiation skills, while 20% disagreed and 13% were not sure.

The well-being of employees in the ministry is also depicted in the figure above. The figure shows that 76% of the respondents agreed that their ministry's work environment is safe, 15% disagreed and 9% were uncertain. The figure also explains responses to operational requirements of public servants: 63% of the participants' responded that the office structure was in line with their operational requirements, 23% disagreed while 15% were uncertain. With respect to access to medical care and facilities, 69% agreed that public servants have access to medical facilities, while 17% disagreed and 14% were not sure. The results depicted above indicate a positive feeling amongst the participants regarding their trade union federations' activities, the collective bargaining tools and employee wellness programmes. This result sharply contrasts with those of Anyim, Elegbede and Gbajumo-Sherif (2011) as well as Ibietan (2013) who maintain that what most workers regard as collective bargaining is mostly a fiat expression of government orders while the trade unions are relegated to the background. Below, the focus group interview is discussed in the form of a summary.

Focus Group Interviews

Question 1: *How do employment processes in the public service affect employees' attitudes to work*?
Group 1: The recruitment process in the public service is different from state to state. Basically, in some states, recruitment exercise takes place only when there is a vacancy. However, priority is not placed on the discipline or credentials of the person that will occupy the position rather someone with "connection" to a higher authority or to a popular political figure. Even though the process may be properly constituted, one finds massive political interference because in the end a noticeable link is made between the new hire and a

popular political figure. Irrespective of the qualification and professional measures put in place, once the candidate is related to any political office holder, due process becomes irrelevant. Lack of due process jeopardises any form of responsibility from an employee since the position was not earned on merit. Such employees know that they can always cry to the godfather that influenced the employment in the first place whenever things go wrong and get away with the possible consequences. Hence, the employee will not show any sign of commitment to the duties and responsibilities at work. In this case, the new hire will very likely not take instructions or defer to his superiors. As Chukwuemeka (2012) points out, god-fatherism has delegitimized public service recruitment process and as a result, negatively influenced its outcomes.

Group 2: All intending and existing employees are expected to be provided with equal opportunity but some people seem to be getting preferential treatment above others. For example, intending employees that are connected to "people in power" in Nigeria seem to get the job, with little or no reference to their qualifications. Such employees are always egotistical and irresponsible with their duties. Those who are subjected to thorough recruitment procedure may have less chance of getting the job if they have no "connection". Managers of departments including HR units are often side-lined during recruitment. Similar situation is also applicable to promotion system; the set standard is mostly ignored while power play takes precedence. The public servants are not ignorant of this power play, hence, majority ignore their primary responsibility of quality professional service delivery in order to curry favour. The common perception therefore is that those who join the public service are there either to use the service as a platform for their next employment or to partake in corruptive practices.

Group 3: Undeserved promotion is rife within the Nigerian public service leading to recalcitrant work attitudes and low morale among workers. Those who are randomly promoted miss important on-boarding programmes such as coaching and mentoring, hence, a big vacuum is created in the employment chain. Application of the quota system in government recruitment and promotion structure has discouraged consistent application of merit. Some geographical zones have more educated persons than others yet the policy insists on equal representation at all levels of employment irrespective of qualification and skills possessed. A fresh graduate from a particular geographical location can be on a level far above his contemporary or an older employee from another geographical location with similar qualification and years of experience. There is possibility that the fresh graduate with no experience that is placed on higher level due to his state of origin may become arrogant and think he or she is better than others are. Apart from the quota system, another known factor that influences employment process in the Nigerian public service is "god-fatherism". This defies all forms of norms in the recruitment process and irrespective of qualifications, skills or experience, the godfather candidate will always emerge the preferred candidate. A god-father candidate is only answerable to the god-father with no regard for any employment policy or norm.

Question 2: *What is the role of Nigerian Civil Service Union in the relationship between the Civil Service Commission and its employees?*

Group 1: Apparently, all participants in this group are paid-up members of Nigerian Civil Service Union. They all mentioned that the union is very active when it comes to wage negotiation and seems not to be doing well in the area of condition of service. In addition, the union is seen to be the conduit for government and employees.

Group 2: Most participants from this group mentioned that the union is only negotiated and mediate in issues that affect all members but not involved when individual members are in trouble with the employer. However, there is a contrary opinion that in most cases unions are not aware of the individual problems and as a result are not able to mediate, that the union will support their member in any case as long as it is not criminally related.

Group 3: The public service has roughly eight industrial unions, which ought to serve as worker representatives notwithstanding unions' involvement in politics. It is not uncommon to find worker union leaders joining or fronting for political parties once they are elected into office. This gives rise to conflict of interest as some of the parties are in contention with the objectives of the workforce. Therefore, they find it difficult to differentiate the union agenda from the management interest, hence, in most cases management is favoured at the expense of workers.

Question 3: *Is there any avenue for the employees (unions/union federation) and employer (state) to meet and discuss work-related issues?*
Group 1: Yes.
Group 2: The Labour Consultative Forum provides such avenue.
Group 3: This group's opinion is similar to the previous two groups.

Discussion: Contrary to Adeniji's (2015) and Uzoh's (2015), description of a poorly established collective bargaining system in the Nigerian public service, the research participants seem not to see anything wrong with employment relations climate of NPS. Some of the participants in this study indicated that ER policies are adhered to. This leaves one to wonder why there is so much negativity associated with the NPS. The best one can make of the results here is that Nigerian public servants squabble over selfish interests because of the diminishing quality of life in the country. Therefore, while there may be systems in place to deal with ER issues as reported by the participants, attention may not necessarily focus on the functionality of the systems. Having said this, we also note some misgivings regarding the findings. Firstly, the subjects were senior public servants who may have little or no issues outside of wage/salary considerations. Secondly, focused group discussions have noted that senior appointments and promotions are made based on political loyalty. Therefore, if the political party in power influences appointments, we suspect that the responses may have been coloured to fit the interest of the superiors.

Other employment related issues such as job security and occupational health and safety were discussed as they affect employee's attitude to work. For instance, there are government establishments that are responsible for developing the skills of health inspectors, medical and safety officers and specifically how to handle work related health and safety issues as well as legal guidance (Ale, 2008: Idubor and Oisamoje, 2013, Kalejaiye, 2013 and Employment Compensation Acts, 2010). Despite the provisions of the ministries and legal recourse, any injury or illness that does not happen right in the workplace is not taken care of in the legislative framework. Policies such as wage dispute and compensation that are put in place are not well implemented to serve its purpose.

Lastly, Okaka and Eriaguna (2011) reckon that most people hired by the Ministry of Employment, Labour and Productivity to implement these policies are not qualified or possess the needed skill to effectively carry out the job. This corroborates responses that unions do not give support to individual employees on personal employment related issues. Another problematic issue in the Nigerian public service is that there is no proper record of workplace injury; hence, affected employees are not compensated. In addition, wage dispute is an ongoing issue within Nigeria public service because they are never adequately resolved; instead, quick temporary solutions are usually sought. Every employment relations problem deserves holistic attention from the human resource management of all MDAs (Salawu, Hassan, and Adefeso, 2010). HR is responsible for job design, job description and job grading and wage and conditions of service; it should be allowed to conduct its affairs accordingly. This will ensure that the right people with the right skills are employed and adequately compensated, instead of unprofessional and incompetent employees who only care about their wages, even when they cannot do the job.

5. Conclusion and Ramifications

Some interesting and at the same time confusing revelations have emerged from this study. Firstly, the participants have hailed their labour unions for effectively looking after them during crisis. This leaves us wondering whether the unions are not complicit. Considering the focus group narratives of god-fatherism, laxity, and so on, one would expect the labour unions to stand against these instead of simply standing by their members when things go wrong. Does this mean that the unions' role is now limited to providing support to their members in times of trouble? Can one say that because the unions perceive the system as corrupt, and are unable to clean it up, they should rather come to the defence of their members who should not be blamed because the system is already messy? Secondly, the Figure 1shows positive work relations, access to medical service, and safe workplaces. This is surprising again, in relation to what we obtained during focus group discussions. This magnifies the difference between responses from the questionnaire and the interviews. The results obtained through quantitative means is not consistent with literature (see Onyejeli, 2011; Kalejaiye, 2013; and Okey and Onyishi, 2011) that portrays the Nigerian public service to be lacking conducive work environment. The distinct difference in the responses holds implications for research and practice. A future study that can clarify this confusion may start by identifying champions (trade unionists, managers at the coalface with unions and other employers) and then engaging them through in-depth interviews to understand the real conditions which public servants are exposed.

Our choice of senior public servants as participants may have also affected the outcome of this study. Therefore, a future study may consider lower cadre staff's opinions on a range of issues including junior staff wellness. On a practical side, as confusing as the responses seem, they provide a serious opportunity for enhanced studies on Nigeria's public service constitution. This call is made against the backdrop of what some social scientists have termed intense structural decay in the Nigerian public service.In closing, it is necessary, given the findings that the following points are noted: (1) there is a serious misalignment of employment priorities within the Nigerian public service; (2) Nigeria ranks poorly in the global transparency index including the ease of doing business index; (3) countries that fare much better are known to have very strong governance systems and infrastructure; (4)dedicated professionals within public service produce good governance;(5) functional systems are supported by infrastructure. Therefore, to do away with the consistent low rating on both local and international fronts, Nigeria requires a public service that is focused, thorough in its operations and sincere to its people.

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Dynamic Capabilities as Determinants of Supply Chain Performance in Small to Medium Enterprises in Gauteng Province

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Abstract: The objective of the study is to investigate dynamic capabilities, service quality and relationship longevity as determinates of supply chain performance in small to medium enterprises in Gauteng province by focusing on small and medium enterprises in the Vaal region. The study will contribute to the body of knowledge by addressing dynamic capabilities as determinates of supply chain performance in small to medium enterprises. The study employs a quantitative method of data collection. Permission was sought from SME owners. Once permission was granted, the questionnaires were sent out to SME owners. A total 425 participates were chosen to participate in this study. The researcher used the Statistical Package for the Social Sciences (SPSS 24.0) and Analysis of Moment Structures (AMOS 24.0) to analyse the data. Sample data from SME owners/managers of Vaal region was collected for the final data analysis of this project. The sample data were analysed by performing a confirmatory factor analysis (CFA) and structural equation modelling (SEM). The principal finding of this study reveals that dynamic capabilities, relationship longevity and service quality have an impact on supply chain performance. The conclusions and implications of the research findings are provided and recommendations are suggested.

Keywords: *Dynamic capabilities, Supply chain longevity, Supply chain performance, Dynamic capabilities theory*

1. Introduction

The importance of the study is to investigate the influence dynamic capabilities, service quality and relationship longevity on supply chain performance. SMEs, by nature are flexible and adaptable organisations that can respond quickly to market changes (Hudson & Smith, 2008). In South-Africa, SMEs are widely considered to be heterogeneous groups of businesses ranging from a single artisan worker in a village market to a more sophisticated firm selling in the market (Christensen & Poulfet, 2010). However, in order for them to survive, SMEs have to adopt supply chain management practices (Bayraktar, Gunasekaran, Koh, Tatoglu, Demirbag & Zaim, 2010). Supply chain management is the flow of materials, information and service from the original supplier until the final stage (Branch, 2009). It may also be defined as the material and informational interchanges in the logistical process, stretching from acquisition of raw materials to the delivery of finished products to the end users (Vitasek, 2008). The adoption of supply chain management is important in that it enhances the productivity of shorter life cycles products, encourages stronger competitiveness amongst businesses and leads to levels of customer satisfaction in the vast and uneven global market (Manzouri, Rahman, Arshad & Ismail, 2010). Within SMEs, supply chain management practices are renowned for increasing effectiveness and efficiency in operations (Trkman & McCormack, 2010). This makes the adoption of supply chain management practices an important priority for SMEs. Another emergent issue that is important to supply chain management in SMEs of today is the subject of dynamic capabilities (DC). Augier and Teece (2008) have described DC as the tool that is concerned with how the SMEs create new knowledge, distribute it internally, plant it into new services or products and launch them into the market. DC permit an organisation to create new combinations of ordinary capabilities (Pavlou & Eisawy, 2011). A brief example is when the product development processes or routines are higher-order DC that are employed in order to reconfigure the types of products as a firm manufactures or produces the service it offers (Danneels, 2008). In the context of SMEs, DC explore how changes in the world are likely to result in changes in the SMEs and improve their capabilities (Augier & Teece, 2008). This means that introducing DC will give SMEs opportunities to acquire new skills and improve the existing ones (Terziovski, 2010).

Problem Statement: SMEs across the world and in South Africa in particular continuously face numerous challenges that inhibit entrepreneurial growth (Charles, 2009). Apart from SME funding and access to finance, SMEs in South Africa also suffer from poor management skills, which are a result of lack of adequate training and education, resulting in high rates of business failure (Gunasekaran & Kobu, 2007). Despite various support programmes implemented by the Government, SMEs are failing to achieve the Government's desired performance and growth rate of 5 percent per annum (Olawale & Garwe, 2010). This failure of SMEs to reach the desired performance levels has motivated this study to examine other areas of SMEs management and supply chain that could potentially stimulate higher performance in SME supply chains. This study aims to provide a deeper understanding on the key factors that can improve the performance of supply chains in which SMEs operate in South Africa by exploring the matter from the perspective of critical supply chain management practices such as dynamic capabilities (DC), relationship longevity (RL) and service quality (SQ). This potentially may yield information that is useful in the prevention of continued SME business failure in South Africa.

Given the challenges of maintaining competitive edge by SMEs, various research endeavours (Adams, Khoja & Kauffman, 2012; Chinomona & Chinomona, 2013; Mafini & Omoruyi, 2013) have been made, which are directed to the implementation of supply chain management activities to enhance SME supply chain performance (SCP). This fact notwithstanding, there is scant evidence of previous studies that attempted to test the conceptual framework put forward in this study in the South African SME economic sector. Hence, the previous literature has very little content regarding the impact of the DC on SCP in South African SMEs. The relationship between DC, RL and SQ on SCP is established, this study exploits the gaps that exist currently in this potentially interesting research area. This study will clarify the importance of DC, RL and SQ in SMEs and determine their importance on SCP. The study will also provide information on how DC can be manipulated in order to stimulate RL between buyers and suppliers as well as superior SQ within SMEs. This provides further clarity on the interplay between these constructs from the perspective of an emerging economy in an African context.

2. Literature Review

Dynamic Capabilities View Theory (DVC): The theoretical background informing this study draws from a dynamic capability view (DCV) theory which, in essence, is an extension of the resource-based view of the firm, which highlights how the firm develops and sustains competitive advantage and superior profitability (Cavusgil, Seggie & Talay, 2007). As an extension, the DCV stresses the key role of management to appropriately adjust, integrate and reshape organisational skills and resources as well as internal and external functional competences (Borch & Madsen, 2007). Capabilities are said to be dynamic when they provide organisations with the ability to implement different strategies to adopt to varying market conditions (Barreto, 2010). A firm's DC are characterised by its capacities to sense and shape opportunities and threats, grab opportunities and maintain competitiveness through enhancing, combining, protecting and when necessary, reconfiguring the business enterprise's intangible and tangible assets (Teece, 2007). DC also includes the ability to identify the need for change, to formulate a response and to implement appropriate measures, which is necessary for the success of the enterprise (Helfat, 2008). The DCV theory contends that in a business environment where the competitive landscape is continuously shifting, a firm's DCs become the source of sustained competitive advantage (Morgan, Neil, Vorhies, Douglas, Charlotte, 2009). As such, in a business environment where the competitive landscape is constantly shifting, supply chain managers need to utilise capabilities offered by the use of electronic toll collection systems and service delivery in order to sustain RL in supply chains and to make suppliers perform at a higher level (Pavlou & ElSawy, 2011). Therefore, DCs represent the capacity of an organisation to purposefully create, extend or modify its resource base and thus represents a dynamic extension of RBV theory (Helfat & Peteraf, 2009).

Service quality: Service quality (SQ) can be defined as a performance that one party can offer to another that is essentially intangible and does not result in the ownership of anything (Kotler & Keller, 2010). SQ can also be defined as the overall assessment of service by customers (Eshghi, Roy & Ganguli, 2008). In any economy, SMEs tend to be the backbone to general business health (Supyuenyong, Islam & Kulkarni, 2009). This being the case, SMEs that intend to remain relevant, competitive and constant must persevere towards delivering the best high quality service to customers (Ladhari, 2008). Factors influencing SQ include organisational culture, management style, job satisfaction, resource availability, skills and expertise, performance monitoring and feedback, organisational communication, employee job fit and quality of teamwork (Ihtiyar & Ahmad, 2012). Some of the benefits that SMEs stand to enjoy by emphasising SQ include getting a competitive edge, high customer satisfaction, excellence in design, all of which lead to high overall SME performance

(Ghylin, Green, Drury & Chen, 2008). Since effective SQ results in a wide spectrum of benefits to the SMEs, it may be stated that SQ determines the long-term survival of such enterprises.

Relationship longevity: Relationship longevity (RL) can be defined as the way in which the firms relate with suppliers. RL with the supplier can also be referred to as the value and inclination of both parties towards the relationship, as they consider the required levels of commitment, advantages, limitations and most buyers and sellers recognise the need for teamwork between buyers and suppliers as the best way to reduce costs and ensure quality, delivery, time and other measures of performance. The relationship is two sided, as both parties have the power to shape their future direction (Lai, Wong & Cheng, 2010). According to some authors (Prajogo & Olhager, 2012), given that firms such as SME firms are getting more focused on their core competences, there are three key aspects of long-term relationships with suppliers. First, the trend is to build a long-term relationship with suppliers rather than shorter contracts. Secondly, SMEs now tend to use fewer suppliers over longer periods rather keeping a large base of suppliers, which allows them to change suppliers at almost every contract. Thirdly, the relationship with suppliers has been enhanced into strategic levels where the suppliers are now considered as integral parts of the firm operations. Relationships with suppliers are likely to improve once these three parameters are satisfied. Nurturing long-lasting relationships requires communication effectiveness, cooperation and transparency, which constitute key factors for trust development between buyers and suppliers (Paiva, Phonlor & D'avila, 2008). In turn, once such mutually reciprocal relationships are established, they lead to improvements in such areas as process integration, collaboration, information sharing and usually it leads to high levels of client's satisfaction (Cousins, Lawson & Squire, 2008). Furthermore, improvements in costs, quality, delivery and flexibility and operational performance may be realised when the supplier is committed with the buyer (Chinomona, 2013). This makes it important that volatile organisations such as SMEs embrace the building of long-lasting relationships with their suppliers, in order for them to enjoy the benefits emanating from such practices.

Supply chain performance: According to Olugu and Wong (2009), supply chain performance (SCP) may be perceived as the feedback on operations, which are geared towards customer satisfaction and strategic decisions and objectives within supply chains. Shephered and Gunter (2011) define SCP as the process of quantifying the effectiveness and efficiency of action within supply chains. SCP can also be regarded as a tool for managing competitive advantage (Deshpande, 2012). It creates an understanding of supply chain's processes, guides collaboration efforts and optimises supply chain excellence (Faweet, Ellram & Ogden, 2007). As indicated by Gunasekaran and Kobu (2007), SCP is essential to measure the right things at the right time in a supply chain so that timely action can be taken. With reference to SMEs, the survival and growth of small and medium companies can be difficult in current competitive business environments and the global marketplace since customers are demanding to have better and cheaper products, higher SQ levels, more product varieties and faster product and service delivery (Chin, Hamid, Rasli & Baharun, 2012). In addition, the changes of business models such as lower production cost, delivery of ever-increasing customer value, flexibility with superior service and the unescapable impact of information and communication technology are increasingly creating enormous challenges for SMEs to survive (Thakkar, Kanda & Deshmukh, 2009). Fortunately, these developments can be mitigated through improvements in SCP, which means that the higher the SCP, the greater the possibility of superior performance within SMEs (Chin et al., 2012). Therefore, SMEs have the prerogative of monitoring and controlling their operations on a daily basis in order to get the performance desired from their supply chain.

Research Model: Based on the literature reviewed, the following research model has been developed. Hypotheses relationships between variables will be developed thereafter. In the conceptualised research model, DC form the predictor variable, which feeds into SQ, RL that are the mediators. SCP is the outcome variable.

Hypotheses statements

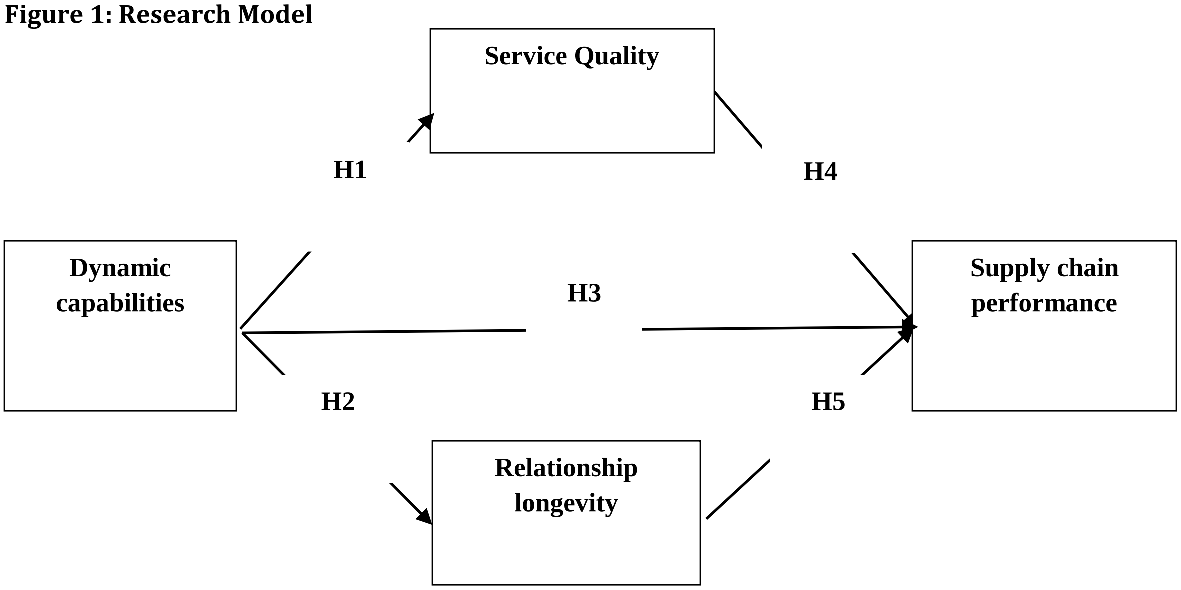
Based on the conceptual model above, the following hypotheses statements have been proposed.

H1: There is a positive relationship between dynamic capabilities and service quality amongst SMEs in the province of Gauteng;

H2: There is a positive relationship between dynamic capabilities and relationship longevity amongst SMEs in the province of Gauteng;

H3: There is a positive relationship between dynamic capabilities and supply chain performance amongst SMEs in the province of Gauteng;
H4: There is a positive relationship between service quality and supply chain performance amongst SMEs in the province of Gauteng;
H5: There is a positive relationship between relationship longevity and supply chain performance amongst SMEs in the province of Gauteng.

Figure 1: Research Model



3. Method

A non-probability convenience sampling method was chosen for the purpose of this study since the characteristics of this method have particular appeal to financial and time constraints. Convenience sampling allows a large number of respondents to be interviewed within a relatively short period of time. Moreover, the convenience sampling procedure was used in selecting the participants because of the ease of the researcher's access to these cohorts of business owners and their willingness to participate in the study. The sample size was set at 425. Of all the self- administered questionnaires distributed, only 288 were usable for final analysis. 137 were either not returned or incomplete and could not be used because some of the sections were completed partially. This yielded a valid response rate of 68 percent. This response rate was acceptable because it is above the 50 percent minimum threshold suggested by Kidder (1981). Use of self-administered questionnaire is employed because of its cost effectiveness and easy to administer. The method also ensured a greater possibility of anonymity and greater convenience for the respondents since they could complete the questionnaire at their own time and pace.

4. Data Analysis and Results

Reliability Test: In this study, three tests were conducted, namely Cronbach's alpha, CR and AVE, in order to assess reliability and validity. The Cronbach alpha test measures reliability, while CR and AVE tests seek to confirm and validate the measurement instruments.
Cronbach's alpha test: From the results provided in Table 1, the Cronbach alpha for each research construct ranges from 0.757 to 0.804 and as these are above the required threshold of 0.6, which is recommended by Nunally and Berstein (1994). Furthermore, the item to total values range from 0.660 to 0.891. The Cronbach alpha results are indicated in Table 1 and validate the reliability of measures used for the current study. A Composite reliability (CR) index that is greater than 0.6 signifies sufficient internal consistency of the construct. In this regard, the results of CR that range from 0.757to 0.805 in Table 1 confirms the existence of internal reliability for all constructs. A good representation of the latent construct by the item is identified when the variance extracted estimate is above 0.5 (Sarstedt, Ringle, Smith, Reams & Hair,2014). Therefore,

the results of average variance extracted (AVE) that range from 0.533 to 0.717 in Table 1 authenticate good representation of the latent construct by the items.

Discriminant validity: To check if there is discriminant validity is to assess if the correlation between the researches constructs is less than 1.0 as recommended by Chinomona (2011:110). As indicated in Table 2, the inter-correlation values for all paired latent variables are less than 1.0 hence confirming the existence of discriminant validity.

Table 1: Accuracy analysis statistics

Research constructs		Descriptive statistics Mean	Std. Dev.	Cronbach's test Item-total	α Value	C.R.	AVE	Factor loading
DYNAMIC CAPABILITIES	DC1	3.79	0.989	0.771	0.766	0.767	0.713	0.822
	DC2			0.845				0.863
	DC3			0.855				0.850
	DC4			0.834				0.844
SERVICE QUALITY	SQ1	3.87	1.025	0.797	0.760	0.759	0.533	0.800
	SQ2			0.660				0.648
	SQ3			0.629				0.681
	SQ4			0.656				0.683
RELATIONSHIP LONGEVITY	RL1	4.00	0.907	0.740	0.757	0.757	0.717	0.791
	RL2			0.849				0.842
	RL3			0.859				0.857
	RL4			0.825				0.857
	RL5			0.844				0.880
	RL6			0.810				0.854
SUPPLY CHAIN PERFORMANCE	SCP1	3.96	0.949	0.880	0.804	0.805	0.555	0.719
	SCP2			0.853				0.523
	SCP3			0.667				0.823
	SCP4			0.725				0.623
	SCP5			0.834				0.861
	SCP6			0.612				0.719
	SCP7			0.891				0.753
	SCP8			0.656				0.812

Table 2: Correlations: dynamic capability, service quality, relationship longevity and supply chain performance

RESEARCH CONSTRUCTS	DC	SQ	RL	SCP
DYNAMIC CAPABILITIES	1			
SERVICE QUALITY	0.604**	1		
RELATIONSHIP LONGEVITY	0.608**	0.565**	1	
SUPPLY CHAIN PERFORMANCE	0.621**	0.468**	0.668**	1

Table 3: Confirmatory factor analysis model fit results

CFA indicator	Acceptance level	Default model value	Decision
Chi-square	< 3.00	2.341	Accepted level
GFI	> 0.900	0.900	Accepted level
CFI	> 0.900	0.962	Accepted level

RFI	> 0.900	0.926	Accepted level
IFI	> 0.900	0.962	Accepted level
TLI	> 0.900	0.955	Accepted level
NFI	> 0.900	0.938	Accepted level
RMSEA	< 0.08	0.067	Accepted level

However, since the acceptable CFA measurement model fit was secured, the study proceeded to the next stages of checking the SEM model fit and testing of hypotheses. Table 4 reports the structural equation model fit results. The results show the acceptable goodness-of-fit of the model. The acceptable models are indicated by the chi-square value (CMIN/DF) of 2.318 less than the recommended threshold level of <0.3, RMSEA value of 0.064, GFI, CFI, RFI, IFI, TLI and NFI with the values of 0.903, 0.765, 0.730, 0.965, 0.959 and 0.940 respectively. These results are within the recommended level of greater than 0.900 (Malhotra, 2010:19).

Table 4: Structural equation model fit results

CFA indicator	Acceptance level	Default model value	Decision
Chi-square	< 3.00	2.318	Accepted level
GFI	> 0.900	0.903	Accepted level
CFI	> 0.900	0.765	Not accepted level
RFI	> 0.900	0.730	Not accepted level
IFI	> 0.900	0.965	Accepted level
TLI	> 0.900	0.959	Accepted level
NFI	> 0.900	0.940	Accepted level
RMSEA	< 0.08	0.064	Accepted level

The statistics for the model fit provided were above the recommended thresholds, indicating that the proposed conceptual framework converged reasonably well with the underlying empirical data structure.

Discussion of Empirical Findings: Table indicates the proposed hypotheses, factor loadings, p values and whether a hypothesis is rejected or supported. The literature asserts that p<0.05, p<0.01 and p<0.001 are indicators of relationship significance and that positive factor loadings indicate strong relationships among latent variables (Chinomona, Lin, Wang & Cheng, 2010:191).

Table 5: Hypotheses results

Construct Measured	Hypothesis	Path Coefficient	P-value	Rejected/ Supported
Dynamic capabilities → Service quality	H1	0.419	***	Supported
Dynamic capabilities → Relationship longevity	H2	0. 813	***	Supported
Service quality → Supply chain performance	H3	0.901	***	Supported
Relationship longevity → Supply chain performance	H4	0.421	***	Supported
Dynamic capabilities → Supply chain performance	H5	0.903	***	Supported

* Significance level p<0.05; ** significance level p<0.01; *** significance level p<0.001

Hypothesis testing 1: Results found following the test of Hypothesis 1, confirmed the relationship between DC and SQ. A coefficient of 0.419 was realised after testing Hypothesis 1. This means that DCs have a positive influence on service quality. Furthermore, the results indicate that the relationship between DC and SQ is significant at P<001. From the results, it can be understood that when new skills are being found, SMEs can be able to provide quality services in order to fulfil customer's demands. However, it can be noticed that the path coefficient between dynamic capability and SQ is quiet low compared to the path coefficient between DC and RL. This suggests that SMEs might be lacking the capability to improve more on their SQ rendered. As such, SMEs overall assessment of service by customers might be poor, thereby hindering the long-term survival of SMEs (Eshghi, Roy &Ganguli, 2008). SMEs, therefore, should improve their resource integration capabilities and learning capabilities in order to improve their SQ.

Hypothesis testing 2: The results obtained after the testing of Hypothesis 2 validated the presence of a relationship between DC and RL. Following the test of Hypothesis 2, a coefficient of 0.813 was exhibited. This means that DCs have a positive and relatively strong influence on RL. Furthermore, the relationship between DC and RL is significant. These results confirm the relationship as hypothesised. From the results, it can be judged that when there are new skills and new opportunities, SMEs are more likely to go into long-term relationships with their suppliers. This is because dynamic capability sustains competitive advantages and enhances superior profitability. With this, the value of both parties towards the relationship is increased thereby resulting in RL (Fink, Edelman &Hatten, 2007). Nurturing long-lasting relationships, which require communication effectiveness, cooperation and transparency constitutes key factors for trust development between buyers and suppliers (Paiva, Phonlor & D'avila, 2008).

Hypothesis testing 3: The relationship between SQ and SCP was confirmed by the results obtained. A coefficient of 0.901 was realised after testing Hypothesis 3. This means that SQ has a positive and strong influence on SCP. More so, the results revealed that the relationship between SQ and SCP is significant at p<001. The results validate the relationship as hypothesised. With this, it can be accepted that SQ can increase the level of SMEs SCP over time. From the observation, SMEs SCP is influenced by services quality with an explanatory power of (0.901) more than as in the case of RL and SCP. This may be because the better the service offered the more the supply chain will perform well, which may further influence SMEs decision to consider RL. In any economy, SMEs tend to be the backbone to general business health (Supyuenyong, Islam & Kulkarni, 2009). This being the case, SMEs that intend to remain relevant and competitive must constantly persevere towards delivering the best and highest quality service to customers (Ladhari, 2008).

Hypothesis testing 4: The results obtained following the test of Hypothesis 4 verified that there is a relationship between RL and SCP. After testing Hypothesis 4, a coefficient of 0.421 was exhibited. This means that RL has a positive and strong relationship with SCP. Results revealed that the relationship between RL and SCP is significant at p<001. The results substantiate the relationship as hypothesised. From the results, it can be accepted that when firms develop relationships that are long-term orientated, they are likely to improve or increase the performance of their supply chain. Therefore, when SMEs establish long-term orientated relationships, it is expected that their SCP will be enhanced as a result. However, the part coefficient revealed that SMEs are not inclined to build a long-term relationship with suppliers. This finding is in support of Weiss and Weitz (1992), stating that SMEs reluctance to build a long-term relationship may be as a result of lack of commitment and trust, which might hinder the overall performance of the supply chain. It is also evident that superior SCP is chiefly reliant on the development of RL by SMEs. SMEs must acknowledge that if they are to accomplish and maintain greater SCP, it is important that they establish RL. In support of Wu (2014), it was detected that RL is positively interrelated with SCP.

Hypothesis testing 5: The results obtained following the test of Hypothesis 5 confirmed the correlation between DC and SCP. A coefficient of 0.903 was realised after testing Hypothesis 5. This means that DCs have a strong and positive influence on SCP. Furthermore, the results indicate that the relationship between DC and SCP is significant at p<001. From the results, it can be observed that when SMEs capabilities are available in firms, this may lead to supply chain improvement. Once SMEs begin to see a drastic change of new opportunities this will automatically push suppliers to deliver their products and service on time. DCs stress the key role of management to appropriately adjust, integrate and reshape organisational skills and resources as well as internal and external functional competences in order for supply chain to perform (Borch & Madsen, 2007). SMEs capabilities are said to be dynamic when they provide organisations with the ability to implement different strategies to adopt SCP (Barreto, 2010). The outcomes of the relationship between DC and SCP support the previous studies findings of Tanskanen and Aminoff (2015) and Ladhari (2009). These studies assert that dynamic capability has a significant positive influence on SCP. The findings of the relationship between dynamic capability and service quality lend substantial support to the past research findings of Tee and Pisano (1994) and Das and Tang (2000). These previous studies confirm that DCs have a positive influence on SQ. The relationship between the newly hypothesised RL and DC was found to be positive. Studies on the relationship between SQ and SCP are vast and mostly found good results (Chang 2012; Lawton & Rajwani 2011). The relationship between DC and RL always has been studied in the literature with contradicting findings. In this study, dynamic capability is found to influence RL positively, which is supported by many scholars such as Chinomona and Pretorius (2011) and Chinomona (2013).

5. Conclusion

Contribution and Implication of the Study: This study contributes to organisational (SMEs) research in general and to research on DC, SQ, RL and SCP in several ways. Given the dearth of knowledge on the influence of DC on organisational performance, this study provides important insights into a largely blind spot of SMEs research. Most important, the present study informs SMEs on how DC, SQ and long-term relationships could benefit SCP. In addition, the conceptual model of this study will make a positive contribution to the growing body of knowledge as well as helping SMEs managers and owners to develop strategies that focuses on improving SQ, developing DC as well as measures of RL in order to improve SCP. The findings indicate that the study's theoretical proposition is valid and acceptable. It is also evident that SMEs and their suppliers should devote their efforts towards DC, providing quality service and developing long-term relationships in order to improve or increase SCP. SMEs and their suppliers should recognise that when the relationship between them is good, new changes will appear and service will improve its quality, which will lead to supply chain's improved performance. The results contribute to the understanding of other scholars on why certain firms' supply chains perform better when developing new capabilities, maintaining quality services, establishing and maintaining long-term relationships. Thus, they are more likely to adapt successfully to ever changing business environments. The study further informs managerial practice about the firms' settings in which supply chains are most likely to prosper, thereby providing important information about the preconditions for the development and maintenance of these determinants of SCP. Although SMEs may differ in their ability to develop and apply these determinants and in turn may differ in their ability to adapt to changing environments partly due to their organisational design characteristics. This study has managerial implications for the SME sector. SMEs owners and managers may be able to enhance the levels of SCP by making improvements on DC, improving the quality of their services and cultivating sound and long-lasting relationships with their suppliers.

This study also contributes to younger generations who are willing to start or own their business in future, as they will be aware of business implementation strategies that can help their business growth. This study will assist SMEs to gain more knowledge on how to build a successful business. The paper both theoretical and practical contribution. This is the first paper to the best knowledge of the researcher that applied the Dynamic Capability View Theory in organisational behaviour literature. Which means the theory added new knowledge to the existing literature on organisational behaviour. The paper has practical contribution to managers or owner of SMEs to practice good management relations to have greater service quality, relationship longevity and good supply chain performance.

Limitations for Future Research: In evaluating the findings of this study, it should be noted that this study is by no means without its limitations. Several limitations of this study are worth discussion. In fact, one of this study's limitations was that the study was confined to only Gauteng province SMEs. Further studies can consider the South African SME sector as a whole. The study employed a quantitative research approach. Future research may consider both a qualitative and quantitative research design using triangulation methodology where a qualitative design could be used in generating rich ideas and explanations. A non-probability sampling method was undertaken. Since it was difficult to locate an accurate sample frame for the study, convenience sampling was employed to generate an initial sample. Future studies could use other sampling techniques. Another limitation is the fact that the method of data collection relied on accurate introspection of each respondent. Therefore, the responses may be subject to a degree of bias. Despite these limitations, the study advances knowledge regarding SMEs DC, RL, SQ and SCP considering that there is a noticeable absence of prior research within the South African context related to this study. Concerning the drivers of SCP, the findings suggest that SMEs may need to employ a combined strategy aimed at increasing the effectiveness of sensing capability, knowledge capability, reconfiguration resources capabilities and resource integration capabilities in order to enhance the SCP. SMEs can devote valuable corporate resources to SQ and RL to enhance SCP within the sector.

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Organisational Factors Influencing E-business Adoption in Zimbabwe's Manufacturing Sector

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Abstract: Creating and sustaining competitive advantage through the adoption and implementation of innovative technologies is a strategic imperative for all learning organizations. Despite this, manufacturing companies in developing countries such as Zimbabwe are confronting challenges in implementing e-business practices. Against this background, the objective of this study was to understand organizational factors influencing e-business adoption in Zimbabwe's manufacturing sector. The study was motivated by the need to appreciate factors that facilitate or inhibit the adoption of e-business in the context of developing countries such as Zimbabwe. A questionnaire was distributed to a random sample of 118 companies registered by the Confederation of Zimbabwe Industries in 2015. Regression analysis was used to test the posited hypotheses. Results revealed that manufacturing companies in Zimbabwe differ significantly in their inclination to adopt and implement e-business strategies. Innovation orientation, financial resources, perceived usefulness and size of the firm were found to be positively associated with e-business adoption. The study also found that technological resources did not have a statistically significant relationship with e-business adoption. The study furthers current debate on e-business adoption by identifying the drivers of e-business adoption in the manufacturing sector in the context of a developing country. The importance of this study lies in its contribution to theory and practice. In terms of theory, this study contributes to the body of knowledge on organizational factors influencing e-business adoption and provides avenues for further studies. In practice, the findings of this study add to the insights of managers in the manufacturing sector in developing countries, which influence the adoption of e-business practices.

Keywords: *e-business practices, e-business adoption, e-business efficiency, manufacturing sector, Zimbabwe*

1. Introduction

Study Background: The dawn of the new millennium ushered a new dispensation characterized by 'e-business hype' in the business fraternity (Hinton& Baines, 2009). During the early 2000s (new millennium), the number of companies adopting Internet anchored electronic business practices proliferated (Huy, Rowe, Truex & Huynh, 2012). Empirical evidence suggests that business efficiency and competitiveness have been significantly enhanced by adoption of electronic business practices, more so in the context of developed economies (Huy et al., 2012; Kim & Nam, 2007; Li & Xie, 2012). For instance, Smith and Spiers (2009) note improvements in supply chain management, planning, communication and collaboration by companies in the manufacturing industry. It is also argued that electronic business, hereafter referred to as e-business, has reshaped customer-supplier relationships and streamlined business processes and in some cases, re-engineered the industry's operating philosophy (Cardwell, Harland, Bwell & Zheng, 2013; Chao & Chandra, 2012).

E-business applications that have revolutionised business practice include electronic data interchange (EDI), Just-In-Time (JIT), Quick Response System (QRS), computer-aided-manufacturing (CAM), computer-numerical control (CNC), manufacturing resource planning (MRP), enterprise resource planning (ERP) and product data management system (Chitourou&Souidan, 2010).For this reason, e-business adoption has generated much interest in research and practice (Dube, Chitura & Runyowa, 2009; Tsokota & Solmes, 2013). While the majority of manufacturing companies in developed companies are managing to tap into the opportunities associated with e-business adoption, limited success has been reported in developing countries (Chao & Chandra, 2012). A typical example is the case of Zimbabwe where little success has been reported in terms of successful adoption and implementation of e-business practices (Dube et al., 2009). In particular, researchers such as Chitourou and Souidan (2010) as well as Cardwell et al. (2013) note that companies in developing economies face a host of organizational challenges when implementing e-business practices. Thus, the importance of this study emanates from the need to understand the pertinent factors that drive successful e-business implementation. Since e-business adoption is now a mega trend and a mainstream business norm, Chao and Chandra (2012) note that manufacturing companies need to effectively implement e-business practices to remain competitive. Moreover, Mupemhi and Mafuka (2006) note that e-business adoption consumes a lot of financial resources, which most manufacturing companies in Zimbabwe struggle to access. Given this background, the importance of this study stems from its contribution in delineating key organizational factors that inhibit or facilitate effective e-business adoption and implementation.

Problem Statement: The adoption of e-business applications in the manufacturing sector in Zimbabwe has been relatively slow and piecemeal (Chitourou & Souidan, 2010). While the adoption of e-business peaked around the late 1990s and early 2000s around the globe, Mupemhi and Mafuka (2006) notes that very few manufacturing companies in Zimbabwe have adopted top-end e-business applications such as interactive websites and integrated infrastructures and networks that provide seamless linkages with value-chain partners. Mupemhi and Mafuka (2006) further note that the majority of manufacturing companies in Zimbabwe only adopted low end e-business tools such as emails and informational websites. According to Chitourou and Souidan (2010), this piecemeal approach to the adoption of e-business practices resulted in decreased levels of competitiveness due to expensive production inputs, inability to manage the production and supply chain and having inadequate market, product and competitor information due to poor or total absence of networks. According to Mupemhi and Mafuka (2006), the few blue-chip manufacturing companies that managed to adopt comprehensive e-business practices are failing to translate this into tangible sustainable gains. Zimbabwe has a high Internet penetration rate with manufacturing sector being at the top, are still reluctant to use the Internet beyond e-mails and basic websites (Mupemhi & Mafuka, 2006).

Although much work has been done in developed countries to identify the factors that drive or retard e-business adoption (e.g. Fillis & Wagner, 2005; Peltier, Schbrowsky & Zhao, 2009), comparatively few studies have been conducted in the context of developing countries. To the best of the researcher's knowledge, there is dearth of these in Zimbabwe. Little is also known about how these factors affect the adoption of e-business and its usage. Since the factors affecting the adoption and application of e-business vary from country to country and industry to industry, there is a need for empirical evidence of these factors in the manufacturing sector in Zimbabwe. Against this backdrop, therefore, this study seeks to determine the factors affecting the adoption of e-business in the manufacturing sector in Zimbabwe and to identify e-business efficiencies that firms in this sector could gain as a result of e-business adoption.

2. Literature Review

This section discusses literature and underpins theories related to organizational factors that influence e-business adoption.

Theoretical Background: The development of e-business practices has evolved over the years. The first phase commonly referred to as the innovation stage involved the development of business user-friendly network technologies (Wang & Sarkis, 2013). The next phase termed the commercialization stage was focused on the adoption of e-business applications by companies (Wang & Sarkis, 2013). This phase was characterized by the catch phrase "Get web or be dead" (Simmons, Armstrong & Dunkin, 2008). The current phase involves the integration of e-business practices into business processes with the objective of creating long-term competitive advantage (Barney, Ketchen & Wright, 2011). As the use of e-business applications grows, there is a realization that there is a marked variation in adoption levels, implementation barriers and success rate among companies (Wang & Sarkis, 2013).

E-business Adoption& Grounding Theories: This technological, organizational and environmental framework was developed by Tornatsky and Fleischer (1990) to explain factors that influence the adoption of an innovation at the organization level. Tornatsky and Fleischer (1990) identify three key features that influence the adoption of an innovation as (1) technological context or the existing technologies relevant to the firm, (2) organizational context or the salient characteristics of the firm such as scope, size and culture, and (3) environmental context or the atmosphere in which business is conducted, including the industry, competition and government regulation.

The Technological Context: Tornatsky and Fleisher (1990) have proposed that the propensity of an organization to adopt an innovation and e-business in particular, depends on the type of information technology (IT) infrastructure and the caliber of IT staff the organization has. The IT infrastructure, on the other hand, is affected by relative advantage, complexity, trialability and observability (Rodgers, 2003). The level and nature of IT resources of the firm must be sound and reliable to inspire confidence and change attitudes (Ramdani, Chevers & Williams, 2013). Therefore, it can be argued that firms with sound IT infrastructure are more likely to adopt e-business. Likewise, firms should have IT staff with the requisite skills if they are to adopt e-business. Relative advantage as a construct in the technological context variable is defined by Rodgers (2003) as the degree to which an innovation is perceived as being better than the one it supersedes. The widespread view in the adoption literature is when e-business is perceived to achieve better results than the traditional tools and strategies to be adopted.

Organizational Context: The organizational context is claimed to have high impact on e-business adoption (Ramdani et al., 2013). This context includes top management support, organizational size, ICT experience and organizational readiness. Top management support is one of the best predictors of e-business adoption (Mnzebele, 2013). Top managers are the initiators of change and can communicate and inculcate values through a well-articulated vision of the firm. Resource allocation to specific projects is dependent on the amount of support provided to that project by top managers. Therefore, the adoption literature links top management support to adoption of an innovation (Wee & Quaz, 2005). Organizational readiness is the extent to which resources (financial, technical, human or material) are made available for the adoption of e-business. Lack of adequate financial resources and limited technical expertise were found to limit adoption of e-business in small businesses (Ramdani, Chevers & Williams, 2013) and are likely to have the same effect even on large firms in developing countries. Previous exposure to ICTs by employees determines how fast the firm can adopt an ICT innovation. Limited experience generates perceived risks. Sunderan, Schwaz, Jones and Chin (2007) observe that the technology already existing in the firm and the knowledge employees have influence the adoption of e-business. The size of the firm has been identified as one of the best predictors of the adoption of an innovation (Hong & Zhu, 2006). The size of the firm can be described in terms of the financial resources available, the market served or number of people employed. All this reflects the resourcefulness of the firm. The adoption literature has found a positive association between size of a firm and adoption of e-business. The argument is that the more resourceful a firm is, the more likely it is to adopt an innovation (Tufail et al., 2016).

Organizational Resources: A widely accepted theory that explains why firms are different in terms of competitive advantages is the resource-based view (RBV) theory. The resource-based view model of a firm was posited by Penrose (1959) and then Winerfelt (1984) as a theory of the firm. It was then popularized through the works of Barney (1991), Peteraf (1993), Barney et al. (1995) and Teece (1997). Since then, there have been numerous publications in support of it (Wade & Hulland, 2004; Stephane, 2007; Kraaijenbrink, Spender and Groen, 2009) or by critiquing it (Weick, 2001; Foss & Knudsen, 2003; Bromiley, 2005). The theory tries to explain the role of the firm's internal resources in generating competitive advantages. It explains why businesses in the same industry and environment might have different competitive advantages and performance levels. This counters the role of external factors in firm performance as posited by Porter (1985) when discussing industry attractiveness and firm performance. The RBV theory argues that firms possess resources and capabilities which enable them to achieve a competitive advantage. These then become the primary source of profit for the firm (Grant, 1991). In this theory, a resource is defined as the asset that is tied semi-permanently to the firm and includes financial, human, marketing, operational, technological or organizational assets (Barney, 1991). The firm's capability, on the other hand, is defined as its capacity to deploy resources. The resources of the firm are deployed as it implements strategies to achieve efficiency and effectiveness. Thus, a competitive advantage is gained if this deployment of resources leads to superior differentiation and/ or lower costs by comparison with a marginal competitor in the product market (Stephane, 2007).

Hypothesis Development: This section posits hypothesised relationships between variables that constitute the research model.

Innovation Orientation: Innovation orientation denotes the predisposition of an organization to adopt and implement novel value creating business ideas (Naranjo-Valencia, Jiménez-Jiménez & Sanz-Valle, 2011). In modern markets characterised by cut-throat completion, companies with a low innovation orientation find it difficult to create and sustain competitive advantage (Simmons &Sower, 2012). An organization's innovation is significantly influenced by its culture (Tyworth, 2014). Previous studies (e.g. Jassawalla & Sashittal, 2002; Becker, 2006; Naranjo-Valencia et al., 2011) found that organisations with a culture of innovation are more likely to adopt e-business practices. Consistent with the foregoing discussion, this study posits that:
H1: *There is a significant positive association between innovation orientation and adoption of e-business.*

Financial Slack: The size of the firm's budget and its liquidity are contextual variables that determine the success of e-business adoption (Wang & Cheung, 2004). The kind of investment a firm can make and the type of strategy it can adopt is largely dependent on its ability to mobilise financial resources (Tyworth, 2014). Financial resources are unique assets that the firm can employ to meet its financial obligations (Wang & Cheung, 2004). According the Resource Based Theory (Barney, 1991), financial resources can give the firm a competitive advantage since they are unique and inimitable (Fillies, 2002). Literature on e-business adoption identifies the financial resources as one of the critical factors (Van Bervely& Thompson, 2007). Limited financial resources to low e-business adoption in the European food sector (E-Business Watch, 2007). Contrastingly, in a qualitative study of five agri-food firms in Greece, Matopoulos, Vlachopoulou and Manthou (2010) observe that lack of financial resources was not a significant constraint to e-business. Based on the foregoing discussion we posit that:
H2: *There is a significant positive association between financial slack orientation and adoption of e-business.*

Firm's Information Technology Resources: The firm's IT resources include the technical and the human component (Wang & Cheung, 2004). The technical component comprises the IT infrastructure installed by the firm while the human component consists of the knowledge and skills related to IT which the employees have acquired. As observed by Morrison and King (2002) and Seabra, Abrantes, and Lages (2007), inadequate IT infrastructure and low levels of IT-related knowledge and skill have a negative impact on ICT adoption. Adequate IT facilities and high levels of IT-related knowledge are likely to be drivers of e-business adoption. Therefore, the study proposes that the firm's information technology (IT) resources have a positive relationship with e-business adoption in the manufacturing sector. Based on the foregoing insights, this study predicts that:
H3: *There is a significant positive association between the firm's information technology resources and the level of adoption of e-business.*

Perceived usefulness: Perceived usefulness is the degree to which the user of a new innovation believes the task and/or the work performed is enhanced by specific technologies or processes. Studies by Davis (1989) and Van der Veen (2004) show a positive relationship between perceived usefulness and the intention to use the innovation. Therefore, based on these studies, the study posits that perceived usefulness is positively related to the adoption of e-business by firms in the manufacturing sector.
H4: *There is a significant positive association between perceived usefulness and the level of adoption of e-business.*

Firm size: The firm's size has often been regarded as one of the main determinants of the adoption of Information Communication Technologies (ICTs) in firms (Bordonaba-Juste, Lucia-Palacios& Polo-Redondo, 2012; Thompson, 2007; Lee & Xia, 2006). Researchers such as Kundi and Shah (2009) argue that microenterprises, small and medium enterprises as well as large enterprises, cannot adopt e-business at the same rate due to differences in financial limits, red tape and inertia levels. For example, Kundi and Shah (2009) note that microenterprises are likely to be more constrained by financial resources although they have the ability to be flexible and more decisive than large enterprises. Firm size influences key organizational factors such as structure, systems, decision making and resources which have a significant effect on e-business adoption (Rogers, 1993). Therefore, it follows that the firm's size exerts an influence on its e-business adoption in the manufacturing sector.
H5: There is a significant positive association between the firm size and the level of adoption of e-business.

3. Methodology

The population consisted of large manufacturing firms in Zimbabwe. The manufacturing sector was selected because it is one of the major contributors of gross domestic product and the main driver of industrialization in Zimbabwe (Mupemhi & Mafuka, 2006). Also, the competitive globalized marketplace to which manufacturing companies in Zimbabwe are exposed to calls for strategies to improve business efficiency. The study employed a quantitative research method and cross-sectional data was collected using a structured, respondent administered questionnaire. A probability sampling method in the form of systematic random sampling was used to select respondents. The Confederation of Zimbabwe Industries membership list of 2015 was used as a sample frame. The Krejecie and Morgan (1970) sample estimation table was used. A population size of N=170 translated into a sample size of 118. The sample size was comparable to previous related studies (e.g. Naranjo-Gil, 2006; Hu, 2014; Hassan, 2017). The sample was drawn from manufacturing companies in automotive, chemical and pharmaceuticals, electrical and electronics, leather and textiles, food and beverages, metal fabrication, rubber and plastics, and wood and wood products. Once the companies to be sampled were identified, a telephone call was made to each company's senior management to explain the purpose of the study and to create rapport. Questionnaires were emailed to respondents accompanied by a cover letter explaining the purpose of the research and follow-ups were done using telephone calls and company visits by fieldworkers.

Measurement Instrument: This section discusses the operationalization of variables that are under investigation as follows:

- **Innovation orientation:** A five-item measurement scale was used to measure innovation orientation. The scale was adapted from a study conducted by Huy et al. (2012). The items measured whether the adoption of e-business by the firm was: 1) due to the problems it was facing; 2) a new way of doing business; 3) due to the need for better results; 4) due to the need to adapt to changes in the environment; 5) the firm was happy with the status quo. Respondents were asked to select the best option to describe their situation from those ranging from strongly disagree (1) to strongly agree (5). Each option was given a score from 1 for strongly disagree to 5 for strongly agree.
- **Perceived usefulness:** A five item scale was used to measure perceived usefulness. The scale was adapted from Smith and Spiers' (2009) study. The measurement scale has five items measuring whether managers perceived e-business to: 1) improve firm performance; 2) increase productivity; 3) increase perceived image; 4) improve product and service quality; and 5) improve coordination with suppliers and customers.
- **Financial resources:** This construct was measured using three items that assessed: 1) whether the firm had enough financial resources to meet the ICT needs; 2) whether the firm went ahead to adopt e-business in spite of the inadequate financial resources; and 3) whether e-business strategy was a priority for the firm. The measurement items were adapted from the work of Theodosiou and Katsikea (2010).
- **IT resources:** IT resources were measured using four items that were developed by Ashurst, Cragg and Herring (2011). The items assess the adequacy of IT infrastructure, the requisite technical skills and the knowledge level of e-business. Respondents were asked if their adoption of e-business was due to adequate IT infrastructure, presence of the requisite technical skills or sufficient knowledge of e-business.
- **Firm size:** To measure the firm size, annual sales figures in United States Dollars were used. The annual sales figure ranges used are 0 to 99 000; 100 000 to 999 000; 1000 000 to 1 999 000; and 2 000 000 and above. This range was not adopted from literature but developed to meet the specific conditions of the manufacturing sector in Zimbabwe where annual sales appear to be low. Respondents were asked to indicate the range that best described their firm's annual sales. Lastly, e-business adoption was measured using a four-item scale developed by Theodosiou and Katsikea (2010). Respondents were given a five-point Likert scale ranging from totally disagree (value 1) to totally agree (value 5).

4. Results & Discussion

This section discusses the results of the study as follows:

Sample profile: Owing to the measures employed to create rapport with respondents, the response rate for this study was 100%. The number and size of manufacturing companies that participated per category are shown in Table 1.

Table 1: Number and size of manufacturing companies

Industrial sector category	Size of sample
Automotive	9
Chemical and pharmaceutical	10
Electrical	18
Food and beverages	27
Leather and textile	14
Metal fabrication	15
Plastic, rubber and non-metals	14
Wood and wood products	11
TOTAL	118

E-business applications adopted: Respondents were asked to indicate the e-business applications which their firm had adopted. Table 2 summaries e-business applications adopted by survey companies. As shown in Table 2, the majority of companies have adopted e-mail and websites applications. This shows that the surveyed firms are still at the early stages of e-business adoption as indicated by few numbers of companies which have adopted advanced applications such as enterprise resource planning and online marketing.

Table 2: E-business applications

Category of e-business applications adopted	Number of firms
e-mail	118
Website	118
Supply chain management	36
Customer relationship management	20
Enterprise resource planning	13
Intra-firm communication and collaboration	22
Online marketing	14

Reliability of constructs: The constructs for this study had very high Cronbach values, suggesting consistency and relationship among the various items used. The lowest mean score was 3.24 while the highest was 4.23 out of the highest possible mean score of 5. The highest standard variation was 0.88. This shows that there was less variation in responses given by respondents. Table 3 shows the descriptive statistics and Cronbach alpha coefficients of research constructs.

Table 3: Reliability of Constructs

Construct	No. of items	Mean	Standard	Cronbach alpha
Innovation orientation	5	3.95	0.73	0.92
Financial slack	3	3.24	0.73	0.70
Firm's IT resources	5	4.23	0.82	0.95
Perceived usefulness	5	3.51	0.88	0.90
E-business adoption	4	3.52	0.72	0.88

Results of Hypotheses Testing: Hypothesis 1posits a significant positive association between innovation orientation and adoption of e-business. The results of the regression between innovation orientation and adoption level of e-business shows the existence of a statistically significant relationship between these two variables at 0.05 significance level as summarized in Table 4.

Table 4: innovation orientation and e-business adoption

Source	SS	df	MS	# of obs=118		R-squared=0.1374
Model	0.662	1	0.662	F (1, 28) =4.48		Adj R-sq=0.1071
Residual	4.137	28	0.1477	Prob>F=0.0433		Root MSE=0.3884
Total	4.8	29	5			
e-business Adoption	Coef.	Std.error	T	P>|t|	[95% confidence]	
Innovation Orientation	0.827	0.39	2.72	0.043	0.266	1.628
Constant	0.172	0.772	0.22	0.825	-1.409	1.254

As shown in Table 4, a coefficient value of 0.827 shows a strong relationship between innovation orientation and e-business adoption. The R-squared value of 0.1374 and RMSEA of 0.3884 show that almost 13.74 percent of e-business adoption is accounted for by the firm's innovation orientation. This finding is consistent with previous studies by Rodgers (2003), Linda et al. (2003) and Simmons and Soner (2012). This means that manufacturing firms need to always find new ways of solving their problems and e-business adoption is one such solution. Furthermore, firms need to inculcate a culture of receptivity to change in adopting and accommodating new technology (Abu Bakar, 2004). Based on this result, it follows then that in order to enhance e-business adoption, a culture of innovation is of paramount importance.

Hypotheses 2 predicted a significant positive association between financial resources and adoption of e-business. A regression between the financial resources and e-business adoption shows existence of a statistically significant relationship at 0.05 significance level. The results are summarized on Table 5.

Table 5: Financial resources and e-business adoption

Source	SS	df	MS	# of obs=118		R-squared=0.151
Model	0.726	1	0.726	F (1, 28) =4.99		Adj R-squared=0.1209
Residual	4.07	28	0.1455	Prob>F=0.0337		RMSE=0.381
Total	4.8	29	0.1655			
e-business adoption	Coef.	Std.error	t	P>|t|	[95% confidence	
Financial resources	0.519	0.232	2.23	0.0344	0.43	0.994
Constant	0.814	0.446	1.82	0.079	-0.998	1.73

As presented in Table 5, the R-squared value of 0.1512 shows that approximately 15.12 percent of e-business adoption observations are accounted for by the presence of robust financial resources to support e-business. Furthermore, the coefficient value of 0.519 shows that there is a moderate strength of the relationship between these two variables. This result gains support from the RBV theory that posit that organizational resources play a central role in e-business adoption (Barney, 2003). This result suggests that a company's survey does not perceive financial resources as an impediment to e-business adoption. Hypotheses 3positsa significant positive association between the firm's information technology resources and e-business adoption. The relationship was tested by regressing the firm's information technological resources mean scores and those on adoption level of e-business. The results are summarized in Table 6.

Table 6: Firm's information technology resources and e-business adoption

Source	SS	df	MS		# of obs=118	R-squared=0.0221
Model	0.493	1	0.493		F (1, 28)=0.63	Adj R-sq=-0.128
Residual	21.8	28	0.778		Prob>F=0.433	Root MSE=0.8824
Total	22.2	29	0.7687			
e-business adoption	Coef.	Std.error	t	P>|t|	[95% confidence	
Firm's IT resources	0.826	0.104	0.8	0.433	-0.13	0.295
Constant	3.11	0.527	5.91	0	2.03	4.19

Table 7: perceived usefulness and e-business adoption

Source	SS	df	MS	# of obs=30		R-sq=0.1374
Model	0.662	1	0.662	F (1, 28)=4.48		Adj R-sq=0.1071
Residual	4.137	28	0.147	Prob>F=0.043		RMSE=0.388
Total	4.8	29	0.165			
e-business adoption	Coef.	Std.error	t	P>|t|	[95% confidence	
Perceived usefulness	0.827	0.39	2.72	0.043	0.266	1.628
Constant	0.172	0.772	0.22	0.825	-	1.254

As shown in Table 6, the hypothesis was not supported by the data as shown by a p-value of 0.433 and a t-statistic of 0.8. Contrary to the e-business adoption literature, results showed that the firm's IT resources are not positively associated with e-business adoption. The R-squared value of 0.0221 and the RMSEA of 0.8824 show that although the firm's information technological resources fit as a construct in the e-business adoption model, its contribution in explaining the variance in e-business adoption is very small, at almost 2.21 percent. This result suggests that manufacturing firms in Zimbabwe perceive lack of IT resources as a barrier to e-business adoption. This is consistent with a related study conducted by Morrison and King (2002) as well as Seabra et al. (2007) that found lack of resources as the main impediment to e-business adoption. According to IIin, Ivetic and Simic (2017), the challenge of lack of resources may be assuaged if national governments in developing countries assist companies to build information technology infrastructure. Hypothesis 4postulates a significant positive association between perceived usefulness and e-business adoption. The results show that there is a significant positive association between perceived usefulness and level of adoption of e-business at 0.05 significance level. Table 7 presents the results of the test.

The hypothesis was supported with a p-value of 0.043 and a t-statistic of 2.72. Furthermore, results also showed an R-squared value of 0.1374, implying that about 13.74 percent of variance in e-business adoption is accounted for by perceived usefulness. The intensity of the association between these variables is also strong as evidenced by a high coefficient value of 0. 827.This result is consistent with that of previous studies (e.g. Park et al., 2012; Kim & Nam, 2007; Thompson, 2007; Shi & Yu, 2012; Grandson &Pearson, 2004). This result further strengthens this notion by showing that perceived usefulness is positively associated with e-business adoption in the manufacturing sector. It suggests that respondents in this study are aware of the benefits of adopting e-business adoption. This knowledge, according to Nguven (2013), plays a central role in the willingness by top management and employees to adopt and embrace e-business practices. The implication of this result is that e-business service providers and other supply chain players need to make the e-business benefits known by top managers or other decision-makers in the manufacturing sector to increase rate of adoption and use. Hypothesis 5 predicted a significant positive association between firm size and e-business adoption. Table 8 presents the results of this hypothesized relationship.

Table 8: Hypothesized Relationship

Source	**SS**	**Df**	**MS**	**# of obs=118**		**R-squared=0.167**
Model	12.077	1	12.078	F (1, 28)=5.64		Adj R-sq=-0.137
Residual	60.089	28	2.1460	Prob>F=0.0248		R MSEA=1.464
Total	72.166	29	2.4848			
e-business adoption	Coef.	Std.error	t	P>|t|	[95% confidence	
Firm size	0.7877	0.3320	2.37	0.025	0.1075	1.467
Constant	0.1027	1.1816	1.78	0.086	0.3171	4.523

The hypothesis was supported by p-value of 0.025 and a t-statistic of 2.37. These values are less than 0.05 and bigger than 2 respectively. The results also show that firm size accounts for 16.74 percent variance in e-business adoption as indicated by the R-squared value of 0.1674. The strength of the association between the two constructs is high as indicated by a coefficient of 0.79. A Root MSE of 1.464 indicates a high fit index value, suggesting that the construct size fits very well in the overall model. The relationship between firm size and e-business adoption was also confirmed in previous studies (e.g. Hsu, Kraemer &Dunkle, 2006; Zhu, Kraemer & Xu, 2003). These studies note that firm size is related to resource advantages that support e-business adoption. It is important to note, though, that some previous studies produced mixed results on the effect of firm size on e-business adoption. For example, Askaranya and Mal (2005), Levenburg (2005) and Thompson (2007), and Bordonaba-Juste et al. (2012) have found size to have a significant relationship with adoption of e-business. On the other hand, Oliviera and Martins (2010), Hsu, Kraemer and Dunkle (2010) and Aguila-Obra and Padilla-Mendez (2006) have found contrasting results. The different results can be explained by the fact that size can be measured differently, using number of employees, sales revenue, sales volumes, and so on. Furthermore, the size of the firm can be perceived differently from one country to the other.

Managerial Implications: The study has made a significant contribution by enhancing an understanding of organizational factors that influence the adoption of e-business practices in the context of developing countries. Top management in manufacturing companies in Zimbabwe and other developing countries may utilize the results for this study to plan and create a conducive environment for successful implementation of e-business practices. In terms of research the organizational factors necessary for e-business adoption and implementation may be tested in other developing countries in order to generalize their importance. The findings of the study show that e-business adoption is largely dependent organizational factors. Results show that organizational factors have the highest total variability index or R-squared value of almost 58 %: innovation orientation R-squared=13.74; financial resources R-squared=15.2; size R-squared=16; perceived usefulness R-squared=13.74. Based on these results, the manufacturing firms in Zimbabwe have the opportunity to decide and influence their own future as far as use and adoption of e-business applications is concerned. However, there is also a need to understand the other underlying determinants of e-business adoption of almost 42 percent which are not captured by the proposed model used in this study.

Limitations of the Study: As with any study, this research is not without limitations. First, the sample size is small compared to the number of constructs and proposed relationships. Furthermore, the response rate in some manufacturing categories is low. As such, the results of the study may need to be used with caution due to limited generalizability. The study used a single respondent from each target firm, that is, there was no cross validation of responses from other informants in the same firm. However, targeting senior executives with vast e-business experience was an attempt to minimize this error. The cross-sectional nature of the study restricts the determination of the causality between variables, particularly e-business adoption and sustainable competitive advantage to statistical considerations. A firm's competitive advantage would need a long period of time to be evaluated, considering that e-business technologies have to be learned and adapted to.

5. Conclusion

The primary objective of this study was to identify organizational factors that influence the adoption and implementation of e-business practices in the context of a developing country such as Zimbabwe. The study identified financial resources, perceived usefulness and size of the firm as the main organizational factor that influences the adoption and implementation of e-business practices in Zimbabwe. Lack of information technology resources was identified as the main impediment of the adoption and implementation of e-business practices in Zimbabwe. Given that IT resources play a critical role in the adoption and implementation of e-business practices, there is a dire need for the Zimbabwean government to provide structural support that allows companies to build their information technology infrastructure. To promote mainstream adoption of e-business practices in Zimbabwe, future research efforts may be directed towards understanding other external environmental factors. Additionally, this study may also be replicated in other developing countries with the objective of testing the generalizability of the findings of this study.

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Causes of Poor Service Delivery and the Feasibility of Outsourcing to Improve Services in Local Authorities

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Abstract: This theoretical paper was undertaken to ascertain the causes of poor service delivery and to establish if outsourcing of public service delivery could be used to improve local Authority services. It interrogated and critiqued documents on what other researchers in their different contexts had established in view of the feasibility of outsourcing as a strategy to improve service delivery. It emerged in this study that political interference, lack of citizen participation. lack of funds and corruption were the main causes of poor service delivery in local authorities. Therefore, outsourcing was seen to bring quality and affordable services for the public while costs savings and emergence of hidden costs were the financial implications unveiled for the local authorities (LAs). Social costs, accountability for public service delivery and quality shading were cited to be the outsourcing challenges. It also emerged in this study that outsourcing can increase service quality and provide affordable services for the public. Taking into account the information that was accumulated and examined, the researchers came to the conclusion that the current services being offered by local authorities are very poor and this is attributed to many causes such as political interference, lack of citizen participation, lack of funds and corruption. The study therefore, concludes that outsourcing could be a feasible option to use to improve service delivery by local authorities.

Keywords: *Outsourcing, feasibility, public services, service delivery, local authority*

1. Introduction

Different authors have researched on outsourcing of public services by local authorities and its effects on the quality of service delivery. Zhang and Sun (2012), Poutvaara (2014) investigated the effects of outsourcing of public services and concluded that this strategy in some states, in particular the USA, improved the quality of services. Accordingly, governments that suffer financial strains due to softening revenue may be feeling pressure to especially cut back non-core functions so they outsource them (Aik, 2012). However, Dolley (2014) and Kinyua (2015) argue that a few duties must rest with the state, including certifications of flexibility, social equity and accountability. It is against this backdrop that this research was conducted in order to ascertain whether outsourcing of public services can be adopted by local authorities in a developing country so as to improve the provision of public services.

The study adopted a desktop research methodology. It interrogated and critiqued documents on what other researchers in their different contexts had established in view of the feasibility of outsourcing as a strategy to improve service delivery.

2. Causes of Poor Service Delivery by Local Authorities

Political interference: Makanyeza (2015), identified political interference as one of the reasons for poor administration conveyance in local governments. Their research showed that the citizens postulated that political interference was the cause of poor service delivery showing a mean of 3.44 and a standard deviation of 1.097 from the other causes. Obert et al. (2014) explained that there are many cases where lawmakers utilize service delivery as support instruments and exploit their positions to pick gain support. There may be differences between the national and local government systems (LGs) and these will be a constraint to service delivery. Grossi and Mussari (2012) argue that interference by lawmakers in the organization circle of local authorities is a huge issue for the functioning of the local authorities. Chosen delegates do not have the vital skill to do capacities in a successful and effective way and in this way, may take after criteria of a political nature than a consistent and administrative thinking plan there by compromising quality of service delivery. Service delivery in local authorities is very poor. Tayaouna (2012) concurs that the degree on undue political obstruction in local government undertakings by either one of the central governments (state or federal) is troubling and needs revaluation. They went on to cite that local governments lack independence and are regularly considered as an extension of states service. Subsequently choices are taken by state governors and forced on the local governments for execution.

Centre-local relations between the parent ministry or government and the LGs are exceptionally concentrated (Kurdi, 2012). The Ministry of LG keeps all the control and power over the local authorities whereas this relationship is supposed to foster freedom and independence of the local authority. It has transformed into an ace subordinate relationship that has adversely influenced the benefits of service delivery. The authors went on to conclude that viable delivery of public services is disturbed by an abnormal state of ministerial obstruction in the choices of the municipalities. Too much politicization of the public sector, obstruction amongst government officials and administrator of LAs into the business of one another and vice versa has negative results on unit positioning which is spoiling the provision of services. However, Abe and Monisola (2014) argue that the absence of political interest obstructs the powerful provision of services and may also give an opportunity for the absence of straightforwardness and responsibility that is fundamental for productive utilization of accessible funds for the advantages of the general population in the community. Bazeley (2015) agreed that political motivations might as well have a bigger power on local authorities' choices regarding the management of urban water services, the influence is rather a positive one. Politicians have initiatives that are aimed at encouraging associations among local authorities so as to help improve their service delivery through the sharing of ideas and resources. After 1994, municipalities in South Africa were given more freedom and independence by the enactment as a third part of central government, this action provided local authorities a bigger developmental part to play in their communities (Majikijela, 2012). The enactment advised different methodologies that guaranteed that advancement adequately occurred in the nation including flexibility from political impact. Practically, these strategies and freedom have not proved to be a success. Implying that even with freedom from political interference local authorities still provide poor services.

Lack of funds: Goldsmith (2014) identified lack of funds as a cause for poor service delivery in local authorities. The authors further argue that the lack of financial resources makes service delivery problematic. LAs continue to depend on the decreasing financial assistance that comes from the central government which worsens their ability to provide the public services as the central government's funding cannot be reliable upon and it does not come during the exact period it is needed. The failure of residents to pay for the services rendered also translates to the lack of funds in local authorities. It also results in local authorities being owed thousands of dollars by the citizens. The ratepayers are evading due payments, denying the towns the much-needed revenue, the local authorities then satisfy the human capital with hefty salaries at the expense of service delivery. The survey done by Makanyeza (2015) also supported that lack of funds or a poor revenue base as a cause for poor service delivery by local authorities showing a mean of 3.94 of the respondents votes with a standard deviation of 1,259 from the average of all the citied causes. Ame et al. (2013) citied that under-financing in local authorities is activated by fraud, delay in reporting and intensely relying upon benefactors. The under financing has caused many undesired results such as the powerlessness to give ideal social and economic services. Ame et al. research went on to conclude that citizens are aware of the misuse of funds in local authorities but they do not open up as they feel that whatever they say cannot change anything in the way the local authorities operate. Also, in study conducted by Tafirei (2012), it emerged that the major cause for poor service delivery is the shortage of financial resources.

Ibok (2014) asserts that for LAs to viably give basic services at the grassroots, empowering conditions must prevail. Particularly financial support must be accessible to complete its allocated duty. Non-provision of enough finances to LAs frustrates compelling execution by the LAs. Monetary requirements restrain the ability of the LAs to give better, productive and successful services. This notion was also supported by Majikijela (2012) who posits that there is an immediate connection between the payment for services and the provision of those services, which implies that if inhabitants pay their rates, local authorities will have financial support and would have the capacity to give services of higher quality. If occupants do not pay, then LAs would barely have the capacity to give services to its communities in light of the absence of funds. However, Adeyemi (2012) in Ejue and Madudueze (2014) advances that the poor service delivery at the rural areas was taking place during a time when large amounts of public monies were being allocated to local authorities. So the notion that the provision of quality public services is hampered by lack of financial resources does not hold water. This is also supported by Salam et al. (2012) who postulate that the lack of funds is no longer a constraint for local authorities in Nigerian service delivery but the misappropriation and mismanagement of the funds is a cause for concern. This is also supported by Hassan et al. (2013) who say that LA's execution by all means does not legitimize the monetary assets it has gotten from the federal account. The reasons behind the underperformance were said to extend from corruption to moderate and wasteful managerial procedures yet most critical is that individuals' input is forgotten in the designing of the policies. In Zimbabwe local authorities, Tafirei (2012) notes that the public service provision challenges hold on in spite of the government diverting expanding financial assistance to the LAs circle. The expanded funds going into the LA's circle have not converted into comparable service delivery enhancements in the larger part of municipalities. In this manner, infusing more funds is a necessary intervention but it may not be sufficient to solve all the challenges facing the sector.

Macanda (2014) in his research revealed that rural local municipalities have not been generating much revenue compared to the cities because of the nature of their business. The municipalities experience this challenge but it does not mean that the pace of rural development should not improve especially if we consider the democratic period and constitutional framework of South Africa that has been positive. The author went on to posit that in terms of section 152(2) in the constitution of the Republic of South Africa Act 108 of 1996 emphasized that municipalities should strive with its administration and financial capacity in order to achieve the objectives mandate in the constitution. This means that in whatever challenges the municipalities encounter, financially they have a responsibility to fulfil. Yeboah (2013) argue that service provision that is of low quality, poor view of administration frameworks, deficient capitalization, extraordinarily influenced the accumulation of income. Poor quality service delivery is some reason why local authorities are collecting low amounts of revenue. Yeboah (2013) then concluded that a positive correlation between the provision of services and ratepayers' ability to provide payments for the services enjoyed exists. When the provision of services improves, rate payers are more eager to make payments for the services. Lack of funds therefore, could not be necessarily the cause of poor service delivery but poor service delivery is the reason for the poor financial resources.

Corruption: Kinyua (2015) highlighted the implications of corruption in the local authorities of Nigeria saying that it robs local authorities of their financial strength to foster development and transformation in rural communities. Ejue and Madudueze (2014) advances that at the local government level, corruption has been given room to expand and even praised and the deteriorating standard of living of majority of the rural dwellers is evidence to the absence of good governance which is the antidote of corruption. Due to the privileged positions of the public servants to public resources and information, they tend to abuse these privileges to the detriment of the principles (Nigerian citizens). In their conclusion, they assert that the high rate of corruption in local authorities has great impact on service delivery. High rates of corruption mean that communities have their treasures that must be theirs to finance infrastructure and services taken away (Rom and Tukel, 2012; Wadesango and Mhaka, 2017). Abe and Monisola (2014) also added on that lack of straightforwardness and responsibility prompts corruption which may likewise be an explanation behind wasteful provision of public services for the general population in the communities. Where a LA is truthfully responsible to a nearby electorate it will have more motivation to enhance the service provision for which it is capable.

Majekodunmi (2012) postulates that LA is the nearest government to the general population so it is relied upon to assume a huge part in the provision of services for the general population with a specific end goal to enhance their way of life. Corruption has taken the central stage in most governments in Nigeria. Most internally generated revenues do not go to the local government account but is rather taken up by patrons of the ruling party and their clients. This leaves the local government worse off financially, depending on federal and state governments for funds to at least pay for monthly salaries for their workers putting developmental projects and programmes on hold. Blondal (2012) concurs by saying that corruption prevents building projects by local authorities from getting electricity, in this way making individuals from the general public battle to get electricity benefits in South Africa. The proceeding with eccentrics of the power supply can possibly cause major local authority provision of services disturbances.

3. Financial Implications of Outsourcing on LAs

Cost saving: Blondal (2012) identified cost saving as a benefit of outsourcing. He explained that it is the bringing down of the general cost of the support of the business. It includes the score characterizing quality levels, negotiations, cost rebuilding and access to bring down cost economies through demonstrating work arbitrage.

Salam et al. (2012) highlighted that the advantage of outsourcing service delivery among others is cost reduction. Jensen and Stonecash (2012) went on to explain that the provision of services that is contracted out to companies in the private sector must lead to large savings in costs than the provision that is done in-house. Their results showed that LAs had put garbage collection up for tenders and got into an agreement with companies in the private sector and thereby saving costs of up to a mean of 22% and the LAs that gave such an opportunity to an in-house group had a cost saving of 17% which indicates that competition that is experienced in the private sector has an impact on the reduction of expenses. Ketch (2013)'s study came to the conclusion that outsourcing facilitates the saving of costs than the provision of the services in house. Hodge 2000 in Ketch (2013) found that outsourcing produced saving of costs from 6% to 12% for LAs. The authors went on to say that there is a lot of research done by the government, scholars and others recommending that contracting out in a competitive manner brings about cost sparing in the scope of 5% to 50% upon the extension and kind of service. Grant and Ohemeng (2014) said that the make of the contract and monitoring results in magnified transaction expenses to be experienced by the LA when they outsource public service delivery. Local governments which do not have enough funds may not monitor the private provider as much as needed, this provides room for the private provider to act in a self-intrigue manner which may prompt increments in costs, bring down quality of services and bargains responsibility and straightforwardness. Grant and Ohemeng (2014) went on to illustrate that increasing monitoring increases overhead costs.

Ame et al. (2013) argue that outsourcing reduces costs by making once fixed cost variable costs and the avoidance of capital expenditure. The author later on mentioned that the challenges of outsourcing such as, the need for public sector organisations to measure performance, administer contracts and determine levels of responsibility or accountability can translate into high costs for the local authorities. Fernandez et al. (2012) highlighted that the argument for outsourcing of public services has clear disadvantages for the magnitude of the public workforce and public employment in that it reduces it. Outsourcing functions to the private sector saves money most of the time and most of the savings tend to disadvantage the employees of the local authorities. They went to cite that in order for the state and the local governments to decrease their expenditure, they have to reduce the workforce, that is the employees of the local governments will lose their jobs so that costs can be reduced. Poulfelt (2014) asserts that the theory of transaction costs expects that there will be low costs of production when an entity uses outside providers. In any case, the utilization of outer providers may bring about unsatisfactory product and service quality, while they may decline to adjust or may increase costs or up in different ways act artfully when they have the ability to do as such. This prompts higher exchange costs for the public sector that has chosen to outsource its public services. Johnson (2014) further highlighted that outsourcing has failed to meet the government's expectation of achieving financial savings due to hidden or unforeseen costs. Dolley (2014) agrees that at first outsourcing may paint a picture that it brings about cost savings but this later ends up being fanciful and as soon as a function is contracted out bringing it back in house can prove to be a troublesome and costly procurement of the skills that had been let go.

Emergence of hidden costs: Boris (2015) postulate that "the major disadvantage of outsourcing is that it surrenders control to the supplier, once a procedure has been given over to a private firm it will be costly to get it back in-house". The underlying contract may likewise be expensive yet the inescapable changes may even cost more. Kurdi (2012) also argue that outsourcing has the probability of having hidden costs and these may be legal costs incurred while signing an agreement between entities. The local authorities may need to dedicate excess amounts of effort and time to have agreements signed. Greenwood (2014) advances that there is mixed success with outsourcing public services and that while approximately half of all governments continue to explore new contracting, many are starting to bring service delivery back to in-house which is costly. Bazeley (2015) concurs that the provision of services by the private firms may cost more than was anticipated because of hidden costs or unforeseen costs. He brings to the fore that transactional costs are most of the time not considered when outsourcing decisions are made. These costs include vendor management costs which are incurred throughout the lifetime of an outsourcing function in order to monitor vendors and periodically re-negotiate their contractual obligations.

Poutfelt et al. (2014) argue that the results of outsourcing have not been the same for all LAs, as some LAs are reacting by bringing the provision of services back in-house. Cox et al. (2012) agree that there is need for the local authorities to compile a water tight contract and establish trust since it can prove to be hard and very expensive to alter the agreement. The provider will provide the services that the local authorities have demanded in the agreement and will bill extra expenses for any function that was not specified henceforth the importance for the local authorities to understand every aspect of the contract and write a water tight contract. Their research found that despite writing detailed and complete contracts, hidden costs always occurred. Rom and Tukel (2012) contend that there is a 'risk' of the local authorities getting unrealised savings rather that hidden costs. Kinyua (2015) concurs that contracting out has inherent risks and that these dangers come in forms of hidden costs of contracting out. In any case, he says that contracting out can give financial flexibility by changing fixed costs into variable costs. Johnson (2014) went on to say that the costs that are budgeted for outsourcing are always accurate and that hidden costs are ignored.

4. Challenges of Outsourcing

Accountability for public service delivery: Abe and Monisola (2014) assert that there is rising expectations of citizens and the increasingly complex environment that public agencies need to operate within the local governments can delegate the provision of services to the private sector through outsourcing but they cannot outsource or delegate their statutory responsibilities to provide public services. Therefore, the local governments remain responsible for functions that were done by the private vendors. There are consequences to this as the citizens can lose trust in the government for the service delivery failures. Grossi and Mussari (2012) argue that one of the most evident consequences of outsourcing service delivery to the private sector is that of the distribution of obligations between the local government and the private firm for the execution to be accomplished. LGs are left with the duty of characterizing and surveying composed approaches and techniques and ensuring that the supplier has clung to the agreement. The supplier must render the services in a productive and compelling way. They went on to infer that there is a requirement that LGs still be in charge of general society needs' satisfaction and to be taken capable and responsible for the private providers' work of outsourcing services. Boris (2015) also advances that even if local authorities outsource service delivery, they will always be accountable for the services. Accountability cannot be passed on to the private firm.

Irish et al. (2012) identified accountability as a challenge that comes with outsourcing public services to the private sector saying that reliance on private firms leads to lose of control on the part of the local authorities because the implementing organisations will, all the time, be in possession of knowledge on what is happening on the ground. LGs depending on the private firms will therefore have to agree to an unusual form of responsibility, one in which there is sharing of responsibilities for achieving the goals of the function and poor service delivery. Goldsmith (2014) argues that considering a local authority responsible for its conduct and execution is a continuing test in vote based frameworks of governments. Expanding utilization of contractual workers and systems of suppliers for the provision of services makes this all the more difficult. Tykkynen et al. (2012) also concluded in their study that failed monitoring may endanger the quality and consumers' safety may suffer if private providers employ staff that is not competent. It implies that the local authority will be answerable for this. Citizens and even elected representatives often lose access to critical information when services are outsourced to private contractors (Greenwood, 2014; Wadesango et al., 2017). Private contractors have rights to privacy that public organisations do not have and that have been upheld in numerous court cases. The secret contract negotiations are often rationalised as necessary to protect these rights to privacy. Therefore, when the private contractor provides low quality services, they cannot be accountable for these services but the local authorities are, as the citizens cannot demand information from the private contractor. Figgis and Griffith (2012) argue that offering tenders that are competitive and outsourced can increase the responsibility of LAs by putting pressure on them so that they indicate plainly all targets of the services and the obligations of the expert private service provider, making it simpler to distinguish who is in charge of various parts of the function. There are worries that outsourcing may decrease the responsibility of the LAs for contracted functions. Rom and Tekel (2012) cited that outsourcing promotes accountability. Deakin and Walsh in Rom and Tukel (2012) found that administrators in LAs by and large understand a positive change in responsibilities in the specific service contracted out.

Social costs: Dollery (2014) explained that if in the event that a vital local entity utilizing various local individuals is outsourced, this can set in motion capable negative multiplier impacts which incorporate uprooted public labourers to leave the region, along these lines bringing down populace, decreasing economic development and threatening the feasibility of other open and private administrations like state funded schools, banks and other offices. Greenwood (2014) established that outsourcing can include generously bringing down the wages and advantages for local government labourers, taking away money from nearby economies. Labourers getting less wages will spend less in their own local communities prompting many immediate and circuitous social effects. This fact was also supported by Tafirei (2012) when he said that private firms have to present the LAs with the lowest prices and this makes the private firms want to decrease their costs and they do this by reducing the pay for their employees. After a while, noticeable differences in the wages and standard of life among the employees may lead to huge social issues that will prompt the central government to intervene and help the low-income earners financially. The wages for some workers will even be lower that the legal minimum.

Ame et al. (2013) also mentioned various social costs which come about because of outsourcing. Labour exploitation was part of it citing under-pay, no salary increases and no career prospects as the factors under it. Additionally, they identified no job security, low staff morale, insufficient penalty to contractor and statutory minimum wage as other social costs. Boris (2015) also posits that maximising value for money in the provision for services makes up the benefit of contracting out. Local government will want to reduce their expenses and boost efficiency by making service delivery open to the competitive market. The reduction of expenditure will be archived by decreasing costs of labour compromising the working environment instead of making better input utilization. Workers will be deprived of industrial relations foundations; the general picture is commanded by a discontinuity of working conditions both as far as wages and employee-related advantages (annuities plan, paternity and maternity leave, sick pay) (Boris, 2015; Wadesango and Wadesango, 2016). Poutvaara (2014) argues that there is a general increase in dread for the loss of occupations in the public sector yet the exact proof for this dread is questionable. He went on to state in his study that most investigations have reasoned that the long-haul impact on employment is either intangible or positive, in spite of the fact that there may be here and now employment losses from contracting out the provision of public services.

Tayauova (2012) is of the view that often after outsourcing, a part of the team that was in the local government moves from the outsourcing party to the private firm. This shows that when there has been outsourcing, employees will simply be transferred to the private firm therefore, no loss in jobs. However, this is not possible for all outsourcing transactions as the private firms may have their own employees. Macanda (2014) suggests that besides wage differences and quality of life portrayal, a third factor likewise, assumes a vital part, which is the distinctive levels of legitimate legal insurance of workers in various nations. The distinction in representatives' lawful insurance in the public segment shows itself in labour market division also, in contrasts concerning workers' compensation, access to advancements and employment stability. These three components convey diverse weight from nation to nation with regards to choices about outsourcing. Therefore, the loss of jobs of public employees may differ in different countries. Rom and Tukel (2012) also argue that the number of the labourers who will be affected is most probably going to determine the choice to contract out a function or service. He presumed that the assurance of whether the quantity of labourers affected has a positive or negative impact on the outsourcing choice is put forth on a defence by case premise, therefore, the displacement of employees and the social impacts that come with it are not guaranteed for every outsourcing contract.

Quality shading: Quality as explained by Dolley (2014) is the “totality or characteristics of services, goods and materials that satisfy the intended need at the lower cost. It is fitness, merit and excellence”. Tayauova (2012) postulates that one of the reason to contract out is the desire of getting improved services from the outside provider over in-house group. The outside provider must be picked in that specific approach to guarantee that there is no negative effect on the nature of the services provided, if not, the contractor (In this case the local authority) may lose its share in the market due to poor quality services. Holmstrom and Milgrom (1991) in Jensen and Stonecash (2012) developed the multi-tasking approach that highlights that in cases where a private provider is required to multi-task, effort will be given to the tasks that can be measured reliably and easily and resultantly given rewards. The private provider might decide to make increments in productivity while compromising output quality. Jensen and Stonecash (2012) then went on to explain that when there is an incomplete contract, an outside provider has more grounded motivating forces both to decrease costs and enhance service quality than the LA since the private sector firms bore all their loses. However, reducing the costs may compromise quality enhancements and if quality is hard to put down in values, the private firm might have the ability to decrease the quality and not be detected.

In the research done by Wachira et al. (2016), respondents indicated that they were concerned with the quality of services that were being provided in their areas following the adoption of outsourcing. This shows that outsourcing can cause a shading in quality as respondents were showing that when the services were being produced in-house they were getting better services. Private firms that were used to provide the services were not maintaining the quality of services. Dolley (2014) cited that private firms go for profit increases paying special attention on minimising production costs while excluding factors such as service quality. Service quality suffers because private firms are after maximising their profits. However, Goldsmith (2014) argue that outsourcing brings about improved service quality. Aik (2016) researched on the quality of service delivery through outsourcing and concluded that among the other benefits of outsourcing, the employing company (the local authority) has a tendency to diminish the levels and volumes of business exercises to a more common-sense quality service level through concentrating on the core functions of the organisation. This is accomplished on the grounds that superfluous scattering of effort and money on noncore capability are reduced. Figs and Griffith (2012) contend that the industry commission had gotten confirmation that aggressive offering of tenders and outsourcing gives a chance to enhance the quality of the services to be delivered through a superior comprehension of value prerequisites through formal determination, more noteworthy flexibility in picking the organisation to provide the service. This enables the LAs to utilise expert suppliers that spend significant time in that specific function and that concentrate more on quality on account of the danger of losing an agreement. Private firms frequently give more prominent attention to customer needs and more motivating force to create inventive strategies for providing services. Poutvaara (2014) argues that the influence of outsourcing by the LG on service quality depends on the type of service to be contracted. Outsourcing for the most part diminishes costs without harming quality for services that are anything but difficult to institutionalize, similar to trash gathering. Rom and Tukel (2012) assert that due to outsourcing, there will be realization of the same quality services compared to when it was being provided by the local authority. However, the services will be realised at lower overall cost, implying that outsourcing has no impact on service quality but the same services will be enjoyed at a lower overall cost.

Determine Whether There Will be a Relationship Between Outsourcing Service Delivery and the Quality of Services to be Delivered: Blondal (2012) postulates that the factors to consider for vendor selection are the quality of services that the vendors provide, price quoted and budgeted cost by the local authorities. The measure for quality of the services used is the level of consumer satisfaction as Waweru (2014) explains that customer satisfaction translates to quality services. Aik (2016) also argues that outsourcing of any form is a contemporary administration approach whose aim is to lessen cost of operating, enable associations to give careful consideration to their most important functions and enhance the provision of services in addition to other things. He went ahead to state that it can be seen in that, the enhancement of quality for the services is one of the basic elements of the outsourcing idea. Tafirei (2012) noted that a relationship exists between outsourcing and service quality. They found that there was a significant improvement in the quality of services as a result of outsourcing. Through their research, respondents agreed that outsourcing is more efficient in providing quality services through more experience, better qualification and more hard work that comes from the private firms providing the services (Wadesango et al., 2016). Yeboah (2013) conducted a research to determine the relationship between outsourcing and product or service delivery and found out that there is a relationship between the two. He cited that the coefficient of the correlation between the two was 0.2181 which showing a weak relation between contracting out and service quality. If there is a change in outsourcing, there will also be a change in service quality, he then concluded that contracting out and service quality have a strong relationship. Increases or decreases in outsourcing will result in the increase and decrease in the quality of services.

Figgis and Griffith (2012) reported that there was evidence that aggressive offering of tenders and outsourcing gives a chance to enhance the quality of the services to be delivered showing that there is a relation between outsourcing and quality of service delivery. They also cited that contracting out allows for an improvement in service quality through a formal determination and more noteworthy adaptability in picking the organisation to provide the service. This enables the LAs to utilise expert suppliers that spend significant time in that specific function and that concentrate more on quality on account of the danger of losing an agreement. Johnson (2014) found that many types of outsourcing include exchanges regarding the quality of the service and proposes that a want for enhanced provision of services isn't the main inspiration for contracting out public services. This came about after the authors saw that the respondents to their research were not satisfied with the services that were being provided through contracting out. Therefore, there was no relationship between outsourcing and the improvement in the service delivery quality as the improvement may not be the aim of the local authorities when they contract out.

Kakabadse and Kakabadse (2012) articulate that in spite of the more elevated amounts of operational abilities in the value-based administration of outsourcing contracts, senior manages in local authorities confirm the notion that the delivery of services had not benefited from contracting out. Comparing the thoughts of the managers of local authorities, there hasn't been a relation between service delivery and outsourcing but rather outsourcing has led to a number of negative impacts such as loss of know-how and expertise in accommodating specific services, loss of innovation, disappointing use of in-house staff among others. Waweru (2014) showed no correlation between outsourcing services and service quality. He first explained that customer satisfaction demonstrates how firms are resolved to give quality services to their clients which, in the long run increases client unwaveringness Therefore, quality services translate to customer satisfaction. Then he showed that correlation between performance and services delivery shows that there is a strong positive correlation, while correlation between productivity and service delivery shows that is a strong negative correlation. A correlation between customer satisfaction and outsourced service delivery show that there is a weak positive correlation that is significant and this implies that the increase or decrease in independent variables would not significantly affect the customer satisfaction (service quality).

Khazei and Keshtegar (2013) researched on the relationship between outsourcing services of health and the satisfaction of the citizens. They found the correlation coefficient of outsourcing services and citizens' satisfaction to be equal to $r=0.90$, that is meaningful in reliability level of 99%. They then went on to research on whether there is a relationship between quality of services and satisfaction of citizens. The results showed a significant and positive relationship between the two. Dahlstrom et al. (2016) assert that contracting out of the provision of services is adversely connected with the nature of the delivery of services, measured as consumer fulfilment with services. It further emerged that the greatness of the negative effect is alleviated by the nature of the municipality workers. Thusly, if outsourcing has antagonistic results for benefit quality yet for instance constructive outcomes on cost diminishment, constructive thinkers might need to figure out how to balance these two critical objectives. Juraj et al. (2012) concluded that contracting may but need not have an influence on decisions by each person, satisfactory provision of services, equity and to an extent controlling expenses as well. Abe and Monisola (2014) also argued that there are difficulties in measuring service quality due to unique natures of services and therefore a relationship between outsourcing and quality of services cannot be determined.

5. Conclusion

The aim of this study was to evaluate whether it would be feasible to use outsourcing as a way to better the delivery of services by local authorities in a developing country. It took special attention on the findings by other researchers concerning objectives that had been set by the researchers in this study. Sources such as scholarly journals, the internet and publications were used to obtain information on what other authors had researched on. The underlying objectives were to determine the causes of the current poor service delivery by local authorities and to determine whether outsourcing would be able to overcome these causes and provide for benefits concerning service delivery. This study concludes that corruption, lack of funds, lack of citizen participation and political interference are causes of poor services delivery by local authorities. The desk top study has shown that quality services and affordable services can be benefits of outsourcing services.

Recommendations

- Local authorities should strive to be independent of politicians and their influence on the affairs and policies that concern local authorities by employing elected delegates that are skilled to work in the local authorities as they will be able to act in a manner that is best for the local authority and not for political agendas.
- Local authorities should start engaging in revenue generating activities and projects so as not to depend on the financial assistance from the central government.

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Talent Management Predictors that Adversely Affect Job Satisfaction at a South African Parastatal

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Abstract: The purpose of the study was to quantify talent management predictors that adversely affect job satisfaction (JS). The literature review revealed that talent management predictors (i.e. neglecting experience during recruitment and appointment of managers, and supervisors' lack of confidence in the achievement of goals) adversely affected JS. The research design was cross-sectional, pre-experimental, and a survey. Data were collected at a parastatal business unit with a population size of 800.Using calculating statistics, the appropriate sample size was n=204. The sample was stratified by gender and occupation. Data were collected by means of a validated questionnaire and analyzed by means of frequencies, and logit analysis. Bayesian analyses were used to test the hypotheses. The three hypotheses were supported; showing that employees are more likely to be dissatisfied if their experience was not considered during recruitment, if their experience was neglected when managers were appointed irrespective of their gender, and if supervisors lacked confidence that the organizational strategic goals would be achieved. Recommendations for future research are made. This study has implications for managers in the sense that if they do not factor in experience, i.e. during recruitment and appointment, they might have supervisors who do not have confidence in expressing the strategic goals of the parastatal. This study adds value to the existing body of knowledge by quantifying talent management factors using odds ratios to determine talent management predictors that adversely affect JS.

Keywords: *Appointment, confidence, experience, recruitment, parastatal*

1. Introduction

The study was driven by the need to identify and quantify existing and unexplored possible predictors of JS to enhance the overall productivity of parastatals (or state-owned companies). Productive parastatals in China that operate professionally contribute immensely to the gross domestic product (GDP) of the country (Scharmer & Kauder, 2013). A parastatal, or state-owned enterprise (SOE), is an entity partially owned by the state and private entities (Mutanda, 2014). The reason why JS is widely researched is that it has a positive relationship with life satisfaction, organizational commitment, and job performance, which all contribute to organizational success (Buitenbach & De Witte, 2005). Research conducted at a parastatal in Kenya reported that increased JS is valuable to the organization since it contributes positively to employee performance and productivity (Otieno, 2016). It is important to draw attention to other instances or dimensions that may either increase or decrease JS in various organizations, especially parastatal organizations. For instance, the staff at a South African parastatal ranked job security and pay as predictors of JS (Carolissen & Smith, 2014). A different and worrying concern in the latter regard is organizations that are no longer financially viable. A case in point is a parastatal in Zimbabwe where employees who were not paid for lengthy periods were tempted to engage in corrupt activities to augment their delayed salaries (Maunganidze, Mashavira & Mapira, 2017).

The purpose of this study is to assess the strength of the association between the proposed factors of recruitment and selection, gender, organizational culture, interactive justice, transformational leadership and organizational citizenship behavior, and JS. It is also important to guard against employees' unhappiness, which can result in their intention to quit, by deriving means to entice them to stay. The latter is substantiated by Gopane and Magang (2016), who found that employee turnover at a parastatal in Botswana, as a result of dissatisfied employees, was rampant due to a lack of retention strategies, which included pay, challenging and meaningful work, and training opportunities. Similarly, a study conducted by Amakiri and Luke (2015) at a parastatal in Nigeria revealed that a lack of effective job design, job enlargement, and job rotation hindered an employee's potential to acquire new skills and to grow, and lowered their commitment and JS, as also indicated by Saari and Judge (2004). Job dissatisfaction can also emanate from the absence of promotional opportunities and good leadership (Ongunlana, Oshinaike & Ibrahim, 2016; Munyengabe et al., 2017). Perceptions of stress differ among employees and these were conceptualized as antecedents of job dissatisfaction (Rossler, 2012; Bussing et al., 2017). Similarly, the perceptions of downsizing organizations proved to cause dissatisfaction in younger employees and also among those who survived downsizing in general (Lahner et al., 2014). From this literature, it can be deduced that JS is a complex construct that is predicted by many factors.

This study is important because at the time it was conducted, there were many talent management issues experienced at the parastatal. The annual report, which cannot be discussed at length in this paper due to the confidentially clause signed by the researchers, revealed that managers had to be trained. The organization was also taken to a dispute resolution institution, and was ruled against for unfair labor practices in terms of recruitment and selection practices and training. It is envisaged that through this study, the management of the parastatal will be empowered with information that will assist them to keep employees motivated and performing optimally. Other JS studies conducted in the parastatals managed to identify lack of trained managers, gender inequality treatment, and lack of commitment or organizational citizenship behavior as factors that affect JS, but these studies were qualitative in nature (Maleka, 2012; Maleka & Rankhumise, 2014). A study conducted at Eskom, a parastatal, did not show a difference in employees of different categories and did not use statistics like logit analysis to determine predictors of JS (Khoza & Kanjere, 2014). The literature review indicated that was little research that quantified talent management predictors using robust statistical tests like logit and Bayesian analyses. The research question of the study is: What are talent management predictors that adversely affect the predictors of JS at a parastatal? In order to answer the research question, the following objectives were developed:

- to determine how the respondents, rate the talent management predictors of JS; and
- to quantify how talent management predictors adversely affect JS.

2. Literature Review

Talent management predictors of JS: According to Labuschagne, Bosman and Buitendach (2005), JS is a complex variable that is influenced by talent management factors like recruitment and confidence in strategy implementation. The researchers focused on talent management factors that adversely affect JS (Buitenbach & De Witte, 2005; Kianto, Vanhala & Heilmann, 2016; Mensah & Bawole, 2017). In this study, the focus was on neglecting experience during the recruitment and appointment of managers, and supervisors' lack of confidence in the achievement of goals.

Recruitment and JS: One of the talent management predictors of JS is recruitment, which refers to the attraction and invitation of qualified candidates to apply for vacant positions in an organization (Nel et al., 2016:445). New recruits often experience the hangover effect, which refers to declining job attitudes. It is important to consider various factors that influence the effective recruitment and selection of employees. For instance, the Public Service Commission (PSC, 2015) reported that seeking relevant experience for recruitment purposes provides clarity about the applicant's candidacy and assists in making appropriate selection decisions. Similarly, Jha and Bhattachryya (2012) asserted that competency and experience are vital tools for human resource planning. The recruitment and selection of candidates based on who they know are claimed to be rife in Nigeria, to the extent that it compromises organizational performance (Adisa et al., 2007). Using nepotism as a criterion for recruitment had a negative effect on JS (Bute, 2011; Maleka, 2012; Maleka & Rankhumise, 2014). It was also alleged that candidates with no experience at South African public organizations were "parachuted" to senior positions because of their proximity to influential top managers (PSC, 2015). Based on the literature, the following hypothesis is made:
Hypothesis (H)1: Employees are more likely to be dissatisfied if their experience was not considered when recruiting them.

Gender of management appointment and JS: Managers should avoid discrimination in dispatching opportunities to employees. This is evident in a study conducted by Jooste (2014), where 73% of the respondents disagreed that they had equal opportunities for advancement in their organization based on gender. Women, in particular, experienced low JS due to being denied promotions to advance to top management positions (Kithinji, 2016). However, the post grading of men was found to be statistically insignificant to those of women, rendering the practical value of the difference small (Steyn, 2014). The following hypothesis can thus be made:

(H)2: Employees are more likely to be dissatisfied that their experience did not assist them to be appointed to a management position because of their gender.

Confidence in the achievement of strategic goals and JS: Supervisors who do not have experience and do not know how to implement organizational objectives cause employee dissatisfaction (Ben-Hur &Kinley, 2016). The PwC (2015) Technical Report recommended that supervisors should adopt ownership and management principles by being flexible in making decisions, setting the tone, and acting as a standard bearer and a setter of boundaries and/or goals. In addition, the report recommended that leaders should establish a climate of positive teamwork, be receptive to daily activities, avoid micromanaging, and clarify goals to encourage a sense of achievement, as well as through continuous professional development (Dacri, 2015; Tufail et al., 2016). The following hypothesis can thus be made:
(H)3: Employees are more likely to be dissatisfied if their supervisors expressed a lack of confidence that strategic organizational goals will be achieved.

3. Methodology

This section discusses the research design, measures, data collection and analysis, and procedure.

Research design: The design of study was cross-sectional and descriptive. In order to address the research question, a survey and pre-experimental design were deemed appropriate (Bless, Higson-Smith & Sithole, 2013). The target population was all employees of the state owned enterprise. The sample was stratified by gender and population group. The total number of employees (population size) was equal to 800. A sample of size 204 was determined for the study by using the following equation:

$$n = \frac{Z^2_{1-\frac{\alpha}{2}} \times P(1-P)}{d^2}$$

In the expression shown above, n denotes the adjusted sample size of study. The letter Z denotes the standard normal random variable. The symbol alpha denotes the level of significance (5%). The letter P denotes the percentage of employees who are not satisfied with their jobs (50%), and d denotes the margin of error (0.048). The sample distribution of the respondents' gender and occupation is displayed in Table 1. As can be observed, the majority (61.27%) of the respondents were male. The age category with the largest amount of respondents was 18 to 35 years (62.25%). Most (87.25%) of the respondents were not in management positions.

Table 1: Sample distribution

Biographical variables	Frequency
Gender	Male: 125 (61.27%)
	Female: 79 (38.73%)
Age category in years	18 to 35 years: 127 (62.25%)
	36 to 50 years: 63 (30.88%)
	51 years or more: 14 (6.86%)
Occupational level	Non-management: 178 (87.25%)
	Management: 21 (10.29%)
	Senior management: 5 (2.45%)
Duration of service in years	Two or less: 19 (9.31%)
	Three to four: 12 (5.88%)
	Five or more: 173 (84.80%)

Source: Study data

Measures: The questionnaire comprised two sections. Section A comprised biographical information. Section B comprised scales that were measured on a four-point Likert scale, where 1 = strongly agree, 2 = agree, 3 = disagree, and 4 = strongly disagree.
Recruitment and selection: Five items were adapted from Maleka's (2012) open-ended interview protocol, of which one of the items was "Failure to use relevant experience for recruitment".

Gender: Five items were adapted from Maleka's (2012) open-ended interview protocol, of which one was "Managerial qualification assists employees to be appointed in management positions regardless of their gender".

Labor relations: Five items were adapted from Maleka's (2012) open-ended interview protocol, of which one was "There are many disciplinary hearings in the department".

Transformational leadership: Five items were taken from Maleka's (2012) open-ended interview protocol, of which one was "My immediate supervisor articulates a compelling vision of the future".

Interactive justice: Five items were taken from Farh, Earley and Lin's (1997) interactive justice scale, which had a Cronbach's alpha of 0.88. One of the items was "My supervisor provides justification for my performance appraisal score".

Job satisfaction: Five items were taken from Spector's (1985) scale, of which one was "The pay I receive is fair".

Data collection and analysis: Data were collected at one business unit of a parastatal in 2017, and the questionnaire was pretested on 10 respondents at the parastatal. From the pretesting, it was clear that the respondents understood the questionnaire items. In order to analyze the data, frequencies were used to describe the sample distribution (refer to Table 1). In this study, JS was a dependent variable. In order to make it a binary, where: 1 = if employee has no JS, and 0 = otherwise or employee has JS. The independent variables were recruitment and selection, gender, labor relations, transformational leadership, interactive justice, and JS. The data were coded in Microsoft Excel and exported into STATA version 14 for analysis. As suggested by Hair et al. (2010), logit analysis (Hosmer, Lemeshow & Sturdivant, 2013) and Bayesian analysis (Browne &Goldstein, 2010) were used to identify predictors or factors that adversely affect JS. These statistics (logit and Bayesian analyses) can be conducted when the sample size is around 200 (Legoabe, 2017). To achieve content validity, as suggested by Spector (2012), the researchers requested human resource management (HRM) experts to validate the questionnaire. The Hosmer-Lemeshow goodness-of-fit test was equal to 0.2670, which was > 0.05. The overall classification was 89.61%, the sensitivity to the fitted logistic regression model was equal to 62.39%, and the percentage specificity for the fitted logistic regression model was equal to 89.47%. Based on the Hosmer-Lemeshow, overall classification, logistic, and specificity tests, the researchers concluded that the model was reliable. Differences tests that were conducted in this study were the T-test and Kruskal-Wallis test (Bless et al., 2013).

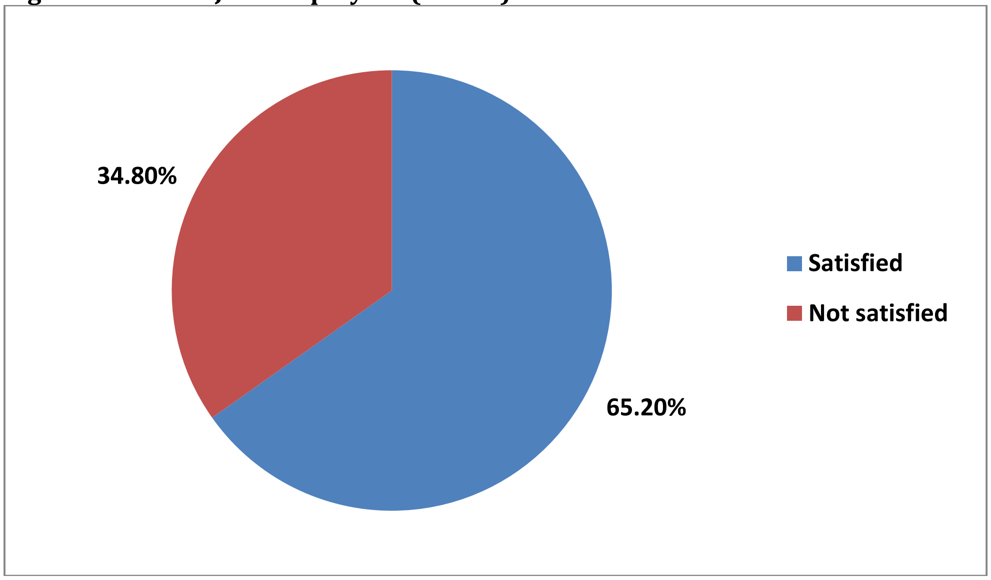
Procedure: Prior to data collection at the parastatal, the researchers were given ethical clearance by the university. Before data collection, the respondents were given an informed consent form to complete and they were not coerced or forced to complete the questionnaire. The respondents were also informed that they could stop participating in the study at any time. The respondents were informed of the importance of the study, that the results of the study were for academic purposes, and that the intention of the study was to identify factors that predict or adversely affect JS. The results of the study would be shared with management in order for them to improve the working conditions of the employees so that they would be satisfied and ultimately perform optimally.

4. Results

This section is divided into two subsections, namely descriptive statistics (frequencies) and inferential statistics.

Descriptive statistics: From Figure 1 it can be observed that 65.20% of the respondents were satisfied and 34.80% were not satisfied. This trend is in line with Korschun, Bhattacharya and Swain's (2014) study, which showed that 65.19% of the respondents were satisfied and 34.81% were dissatisfied.

Figure 1: Overall JS of employees (n=204)



Source: Study data

After conducting logit and Bayesian analyses, three predictors were left in the model. The frequencies of those variables are shown in Table 2. The majority of the respondents (59.80%) disagreed, compared to 40.20% who agreed, that experience was considered when recruiting employees. The majority of the respondents (55.88%) disagreed, compared to 44.12% who agreed, that experience was a catalyst to be appointed to management regardless of gender. The majority of the respondents (50.98%) disagreed, compared to 49.02% who agreed, that supervisors were confident that organizational goals will be achieved.

Table 2: Frequencies of variables that adversely affect JS

Variables	Frequency and percentages
Experience is considered when recruiting employees.	Strongly agree: 39 (19.12%) Agree: 43 (21.08%) Disagree: 53 (25.98%) Strongly disagree: 69 (33.82%)
Experience assists employees to be appointed to management positions regardless of their gender.	Strongly agree: 33 (16.17%) Agree: 57 (27.94%) Disagree: 65 (31.86%) Strongly disagree: 49 (24.02%)
My immediate supervisor expresses confidence that goals will be achieved.	Strongly agree: 17 (8.33%) Agree: 83 (40.69%) Disagree: 72 (35.29%) Strongly disagree: 32 (15.69%)

Source: Study data

Inferential statistics: Discussed in this section are the difference tests and logit and Bayesian analyses.

Differences test: Before selecting a difference test, the researchers calculated a normality test. The histograms were bell shaped and the Q-Q Plot, not shown in the study, did not deviate from the zero line, suggesting that the data were normally distributed (Pallant, 2016). The researchers therefore conducted a T-test. An independent samples t-test was conducted to compare respondents' perceptions of how experience was considered when recruiting employees' scores for males and females. There were no significant differences in scores for males and females. An independent samples T-test was conducted to compare respondents 'perceptions of experience in appointing managers irrespective of gender for males and females. There was a statistical significant difference in scores for males (M=2.53, SD=1.02) and females (M=2.82, SD=1.01; t =-2.01, p = 0.05, two-tailed). The magnitude of the differences in means (mean difference = -0.29, CI: -0.53 to -0.01) was very large (eta squared = 0.51). An independent samples T-test was conducted to compare how the respondents perceived how that their immediate supervisor expressed confidence that goals will be achieved. There was no significant difference in the scores of males and females.

A Kruskal-Wallis test revealed that there was no statistical difference in how respondents perceived whether experience was considered when recruiting employees, whether experience assisted employees to be appointed to management positions regardless of their gender, and that their immediate supervisor expressed confidence that goals would be achieved in three groups (i.e. age categories in years). A Kruskal-Wallis test revealed a statistical significant difference in how the respondents perceived whether experience was considered when recruiting employees across three groups (Group 1, n = 178, non-management: Group 2, n=21, management, Group 3, n= 5 senior management), χ^2 (2) = 10.47, p = 0.01. Group 1 (non-management) recorded the highest median (Md=3), with the other two groups recording the median value of 2.A Kruskal-Wallis test revealed a statistically significant difference in how respondents perceived whether experience assisted employees to be appointed to management positions regardless of their gender across three groups (Group 1, n = 178, non-management: Group 2, n=21, management, Group 3, n= 5 senior management, χ^2 (2) = 8.1, p = 0.01. Group 1 (non-management) recorded the highest median (Md=3) than the other two groups which recorded the median values of 2.There was no statistical significant difference in how respondents perceived whether their immediate supervisor expressed confidence that goals would be achieved in three groups (i.e. occupational levels).A Kruskal- Wallis test revealed a statistical significant difference in terms of respondents' perceptions on whether experience was considered when recruiting employees across three groups (Group 1, n = 19, 2 years or less, Group 2, n=12, 3 to 4 years, Group 3, n=173, 5 or more years), χ^2 (2) = 8.45 , p = 0.02. Group 3 (5 or more years) recorded the highest median score (Md=3), while the other two groups recorded the median value of 2.A Kruskal-Wallis test revealed that there was no statistical difference in how respondents perceived whether experience was considered when recruiting employees, whether experience assisted employees to be appointed to management positions regardless of their gender, and whether their immediate supervisor expressed confidence that goals would will be achieved in three groups (i.e. years of service).

Logit analysis: Odds ratios were used to quantify or measure the likelihood of the predictors that adversely affect JS (Graham, 2013; Sheldrick, Chung &Jacobson, 2017). As can be observed in Table 3, respondents were 3.36 times more likely to be dissatisfied if their experience was not considered when recruiting employees; therefore, H1 is supported. The data revealed that respondents were 2.63 times more likely to be dissatisfied if their experience did not assist them to be appointed to management positions regardless of their gender. Based on the study results, H2 is supported. It was also found that respondents were 2.16 times more likely to be dissatisfied if their supervisors did not express confidence that organizational strategic goals will be achieved. Hence, H3 is supported.

Table 3: Predictors of lack of JS using logit analysis

Factors that adversely affect JS at the workplace	Odds ratio	P-value	95% confidence interval
Experience is considered when recruiting employees.	3.36	0.001	(2.19, 5.68)
Experience assists employees to be appointed in management positions regardless of their gender.	2.63	0.003	(1.85, 4.93)
My immediate supervisor expresses confidence that goals will be achieved.	2.16	0.004	(1.13, 4.14)

Source: Study data

Bayesian analysis: In order to confirm the reliability of the logit analysis, the researchers conducted a Bayesian analysis, as suggested by Revuelta and Ximenez (2017). As can be observed from Table 4, three predictors that affected JS also emerged from the data. It must be noted that Bayesian analysis does not have odds ratios, but shows the regression coefficient. In order to convert the regression coefficient, the following equation was used:

$$e^{regression\ coefficient} = \text{OR}.$$

For example, $e^{1.21}$ (i.e. "Experience is considered when recruiting employees") = 3.36. The same statistical procedure could be conducted to convert the regression coefficients of the other two factors.

Table 4: Regression coefficients estimated from Bayesian analysis

Factors that adversely affect JS at the workplace	Regression coefficient	P-value	95% confidence interval
Experience is considered when recruiting employees.	1.21	0.000	(0.78, 1.94)
Experience assists employees to be appointed to management positions regardless of their gender.	0.97	0.000	(0.42, 1.56)
My immediate supervisor expresses confidence that goals will be achieved.	0.77	0.001	(0.36, 1.27)

Source: Study data

5. Discussion and Conclusion

The purpose of the study was to quantify talent management predictors that adversely affect JS. The data revealed that respondents at the parastatal were dissatisfied that their experience was neglected during the recruitment and selection processes. This implied that the parastatal appointed inexperienced people and focused more on achieving targeted transformation, as reported in the parastatal's 2014 integrated report. The unintended consequence of neglecting experienced employees during the selection process is a decline in productivity or performance. This finding contradicts the PSC's (2015) findings, which asserted that the relevant experience of a candidate assists in making appropriate decisions, and HRM planning (Jha & Bhattachryya, 2012; Witt, 2017). It was found that respondents in non-management positions, and those with five and more years agreed that experience was neglected during the recruitment and selection process. It was found that experience was also neglected when people were appointed to management positions, irrespective of gender. This also implied that appointments were made in management without considering experience. A study conducted in South Africa showed that this trend of a lack of a talented pool of managers will continue (Van Eeden, 2014). The PwC (2015) Technical Report showed that managers who were inexperienced were not able to make decisions, set the tone, and act as a standard bearer and a setter of boundaries and/or goals. A previous study at an SOE revealed that nepotism, or knowing people in top positions, was the criterion used to appoint managers (Maleka, 2012; Maleka & Rankhumise, 2014). The mean score of females were slightly higher than males in terms of how they disagreed that experience was used to appoint managers irrespective of their gender. The data also showed that non-management respondents disagreed that experience was used to appoint managers irrespective of their gender.

The study showed that inexperienced managers lacked confidence. Such managers would not be able to operationalize the strategic objectives and goals of the SOE (Amundsen & Martinsen, 2014). Hence the SOE does not contribute as much to the GDP as its counterparts in China (Scharmer & Kaufer, 2013). Firstly, even though the study used an appropriate sample size and probability sampling technique, it was conducted at a business unit and not the entire parastatal or at other parastatals. In future, it is recommended that this study is conducted at other parastatals as they are the strategic assets that are used in China to contribute to GDP. Secondly, using cross-sectional research will paint a clearer picture of predictors or factors that adversely affect JS. It is recommended that a follow-up study be conducted and extended to other business units at the parastatal. In future, researchers can investigate how age mediates the relationship between the predictors and JS, as it is predicted that more employees entering the job market in years to come will be Millennials (Linden, 2015:92). The following recommendations are made for the managers at the parastatal:

- Hire employees based on experience during the recruitment and selection process;
- Make the recruitment and selection process transparent so that non-management negative perceptions are addressed;
- Management appointments should not be discriminatory based on gender, but it must be based on merit, qualifications, and experience;
- Train supervisors on how to communicate and implement the parastatal's strategy; and
- Train supervisors on interpersonal skills, so that they can motivate employees to implement the parastatal's strategy.

The results or data of the study can be utilized by managers and recruiters in the parastatal to use correct selection criteria when acquiring talent. It is also essential for training managers to develop interventions (i.e. strategy implementation, coaching, and mentoring) to capacitate supervisors who were appointed without the necessary experience. In terms of policymakers, the results show that they must review the recruitment and selection policy to also include experience. Previous research at the parastatal revealed that even though they must implement transformation policies or agendas, they must also factor in experience or the potential to be developed (Maleka & Rankhumise, 2014). This study measured predictors that adversely affected JS. Using robust statistics like logit and Bayesian analyses, the researchers were able to select three predictors out of 25. Theoretically, the predictors are related to talent management (i.e. recruitment and selection, appointment, and confidence in goal achievement). In the literature, it was argued that acquiring talent is expensive and must be done correctly, and supervisors who are confident and competent will have positive views and encourage and motivate staff to achieve strategic goals. By achieving organizational goals, and performing optimally like their counterparts in China, employees with sufficient skills will be appointed.

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Assessing the Impact of Skilled Labor on Output Growth in South Africa: An ARDL Bound Testing Approach

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Abstract: Economic theory emphasized the necessity of skill acquisition and conservation as a precondition for growth. This paper investigates the extent to which skilled labor can contribute to output growth in South Africa in the long run. The theoretical framework employed was based on Hicks neutral augmented Cobb-Douglas production function to account for the impact of technological progress on labor and capital. Skilled labor was measured with three parameters of experience (learning-by-doing), special training and educational attainments. The methodology employed the ARDL bound testing approach and found that whereas there is no short run causality running from the independent variables to the dependent variable, there was a long run causality running from the measures of skilled labor to growth. The coefficient of the ECT was both significant and negative; therefore, the system gets adjusted towards their long run equilibrium steady state at the speed of 23 percent annually. This means that the measures of skilled labor contribute to growth in the long run to the tune of 23 percent annually. The study therefore recommends investments in human capital through education and special trainings as well as to encourage knowledge transfer through globalization and from one generation to another to conserve skills.

Keywords: *Autoregressive distributed lag, Bound testing, Growth, Skilled-labor, South Africa*

1. Introduction

In the recent past, quality attention has been shifted from the use of physical addition of factors of productions in generating growth to the quality of these factors. Evidence abounds both from empirical studies and experience that affirms this assertion. With the global society moving towards a technologically driven economy and policy makers seeking a growth sustainable measure, this research work want to ascertain how the quality of factors of production with emphasis on labor can promote output growth both in quantity and quality. The growth pattern of most emerging economies like South Africa has gone beyond physical input driven to the role of knowledge-based economy with emphasis on the role of human capital especially as a number of studies and surveys have confirmed that the skills shortage is a real problem in South Africa, and a constraint to economic growth. A study done by the Bureau for Economic research (BER) at the University of Stellenbosch found that 47% of SA manufactures said that the skills shortage was their most serious difficulty. South Africa which is one of the global community that is struggling for resources, especially human resources have not only sourced for human resources abroad but also have being considered not matching the trend of changes in human capital/skilled labor development and as such can be left out in the nearest future in terms of growth if nothing is done about it. Higher education has an important role to play in bridging the skill shortage gap in South Africa by developing qualified graduates and postgraduates through generation of research and innovation (Fisher and Scott, 2011). Again, the primary focus of higher education has been directed towards the development of human capital which can in turn contribute to the economic and socio-political growth of the country (Tewari, 2016). This implies that developing human capital is capable of pivoting the economy to greatness as well as being a means for sustainable growth. The extent to which this can be achieved could be said to depend greatly on the rate and quality of graduates and postgraduates' turnout in different disciplines such as in law, education, sciences and management sciences whereas much has not been recorded in engineering and some basic sciences, hence, the gap in human capital still remains. Moreover, in South Africa, there has been an increasing mismatch between the courses offered and the available jobs. There is therefore the need for higher education institutions not just turning out huge numbers of graduates but graduates whose skills are needed for the furtherance of innovative and profitable economic activities to firms and businesses and other functions of the society (Tewari, 2016).

With the large budgetary allocation by South African government to higher education, it should be expected that South Africa, unlike other less economically developed countries in Africa should fast catch up with the western counterparts. However, the story seems to be worse as there still remained a large skill requirement gap in the country, thereby creating a form of vicious circle of poverty. This study will therefore proffer the way out of this poverty trap in South Africa by formulating a policy measure through which people can access higher education so as to improve their earning ability as well as suggest ways of maximizing the huge government expenditure on education to permeate the economy and bring about the required development. This study adopts three measures to capture skilled labor which are total number of employment in the tertiary sector of the economy, labor experience and government expenditure on education. The theoretical framework on which the analysis is based is on Cobb-Douglas production function using time series data spanning from 1980 to 2016. This paper is organized in five sections. The first is the introduction path which presents the general overview of the topic followed by the theoretical and empirical reviews so as to drive home the growth determining factors with peculiar reference to South Africa. The third section is the methodology used to estimate the casual relationship between output and its explanatory variables. The empirical results are presented in section four and finally, the conclusions, recommendation and policy implication.

2. Literature Review

A number of studies have looked at the relationships between human capital and economic growth. But no study to the best of my knowledge have considered the skill side of human capital; however, most work believed that effective labor is a better concept to measure the quality of human capital, however this concept could not capture the experiences gathered over time. In the work of Idris and Rahmah (2010) where they used effective labor and the level of education as indicators to measure quality of labor and found that capital stock and capital-labor ratio played a major role in contributing to the Malaysian economic growth and labor productivity respectively. Again, the work of Wilson & Briscoe (2004) which used education and training as proxy for human capital concludes that the overall impact of investment in education and training on national economic growth is positive and significant; Khalafalla & Suliman (2013) used a simultaneous equation model that links human capital to economic growth, total productivity, foreign direct investment, and human development index in Sudan for the period 1982-2009 and found that the quality of the education has a determinant role in the economic growth; health quality factor has a positive impact on economic growth but total factor productivity has adverse effect on economic growth and human development.

Although a review of literature on the relationship between economic growth and education reveals an ambiguous conclusion. According to the World Bank report, many studies have found that additional years of education per person in the labor force will increase real output or economic growth (World Bank, 1991; 1993), others asserts that human capital accumulation has had a significant negative or an insignificant impact on the growth rate of output. Bloom et al. (2005) believed that education has become a key instrument for the promotion and sustenance of economic growth in many countries. (Gyimah-Brempong et al., 2006) asserts that this is of peculiar importance to South African economy as a middle income economy owing to the excess attention given to growth and growth potentials as a mechanism for poverty and inequality reduction, hence they proposed improvement in the education sector as a policy measure for development and convergence with already developed nations of the world. The World Development Report (1997) examines how knowledge influences development. It observes that the acquisition of knowledge and information is becoming increasingly critical to economic growth and emphasizes that the value of knowledge gained through trade and foreign investment can significantly impact on growth. The report further looks at the role of knowledge in development, examining difference in knowledge across and within the countries, the impact of knowledge gaps and information failures on development, and the way in which governments in developing countries and international institutions can foster development by addressing these issues. This further buttressed the importance of skills acquired through knowledge to output growth. By implication, knowledge across globe can have an impacting influence on another country through technological transfer.

Theoretical Framework: The theoretical framework was based on the neoclassical technological progress labor-augmenting growth model of Harrod thus:

$Q_t = A_t f(K_t, L_t)$ ……………………………………………………………………(3.1)

Where Q is output level, A is technological progress, K is the physical capital, L is number of people in employment (Labor), f is a functional notation while t is time. Barro and Sala-i-Martin (1995), show that technological progress can always be expressed as labor-augmenting and proved it mathematically that only labor-augmenting technological change is consistent with the existence of a steady state thus:

$Q_t = K_t^{\alpha}(A_t L_t)^{\beta}$ ……………………………………………………………………(3.2)

From equation (3.2) above $\alpha+\beta = 1$ constant returns to scale; α is the output elasticity of capital and β is the output elasticity of labor. Barro and Sala-i-Martain (1995) believed that output elasticity of each capital is inversely related to the level of its marginal product. This implies that MP of each factor will be very large as long as the elasticity value becomes very small. However, in this context, South Africa have sufficient amount of technological progress both in capital and labor. Therefore, the Hicks-neutral capital and labor technology augmenting Cobb-Douglas production function in equation (3.1) will be adopted with some modifications.

All the parameters are as defined above. The function only looked at the physical quantity of labor and not the quality or skills acquired by labor; hence it assumes that labor is homogenous, but in actual seen, labor is heterogeneous. This will be accounted for with different measures. By introducing Lucas (1988) and (Idris and Rahmah, 2010) production functions, I can take into account the skills of labor thus:

$Q_t = A_t K_t^{\alpha} (L_t^{*\beta})$……………………………………………………………………… *(3.3)*

Where:

$L_t^* = L_{et}L_{ut}L_{tt}L_{st}$ is defined as skilled labor……………………………………… (3.4)

Substituting equation 3.4 into equation 3.3, we derive:

$Y_t = A_t K_t^{\alpha} (L_{et}L_{ut}L_{tt}L_{st})^{\beta}$ ……………………………………………………………………(3.5)

Where:

Y_t is the real output in time t; A_t is the technological progress in time t which is measured by the net flow of Foreign Direct Investment (FDI); K_t is physical capital stock in time t; L_{et} is the level of education attained by a particular labor in time t; L_{ut} is the output level gained through the experience of workers. There has not being a consensus by economists on this but (Idris and Rahmah, 2010) suggested that it is commonly substituted by previous year output level, Y_{t-1}; L_{tt} is the training a worker has received which is measured by the amount of government expenditure on education; and L_{st} is the total stock of human capital (Labor Force). Furthermore, neoclassical economists believe that output growth rate is directly related to the level of growth of capital and human capital. This means that the growth rate of income is a direct function of the growth rate of capital and labor.

Lucas, (1988) and Romer, (1989) observed that the growth rate of output exceeds the relevant input measures. This implies that there could be other endogenous factors that affect growth which cannot be directly captured by the physical addition of labor and capital. The extended neoclassical growth model adopts an endogenous growth concept by introducing effective labor as factor of production, where human capital is embodied in this measure. This model suggests that endogenously accumulated human capital has a direct impact on the productivity of labor, while the exogenous growth model regards human capital as given and it is not determined within the system (Idris and Rahmah, 2010). Skilled labor as used in this contest is somewhat different from the physical quantity of labor (total employment) as well as effective labor which looks at the values added per worker i.e. the marginal product of labor. It looks at the training, educational attainment and experiences acquired by labor over time which helps to improve his level and quality of output. However, by adopting the concept of skilled labor in this work, my interest goes beyond the effective use of labor to the quality of output produced per worker. My argument being that a worker can be effective in a non-important aspect of production, thereby not being able to produce the desired result since effectiveness is mostly attained through education, however, skill is an experience phenomenon accumulated overtime. Therefore, there is more that experience can add to output than only training can.

3. Methodology

Based on the growth model specified under the theoretical framework above, this study employs the Autoregressive Distributed Lag (ARDL) Model bounds testing approach developed by Pesaran et al. (2001) to test whether there is a long run and short run relationship between the measures skilled labor and output growth in South Africa. Given that experience has shown that labor and capital are technologically augmenting, moreover Barro and Sala-i-Martain (1995) believed that output elasticity of each capital is inversely related to the level of its marginal product hence; with South Africa have sufficient amount of technological progress both in capital and labor, we therefore specify a Hicks-neutral capital and labor technology augmenting output function thus:

Model Specification

The econometric form of equation (3.5)

$Y_t = \beta_0 + \beta_1 A_t + \beta_2 K_t + \beta_3 Le_t + \beta_4 Log(Lt)_t + \beta_5 Lu_{t-1} + \beta_6 Ls_t + \mu_t$ ....(3.6)

Where:

Y_t = $RGDP_t$ = *Real Gross Domestic Product in the current period*

A_t = Fdi_t = *Foreign Direct Investment, proxy for technological progress in the current period*

K_t = INV_t = *Gross Capital Formation as a ratio of GDP, measure for capital/investment in the current period*

Le_t = $Empts_t$ = *Employment in tertiary sector, a proxy for skilled labor (labour's level of educational attainment) in the current period.*

Lt_t = $Log(Gxe)_t$ = *Log of Government Expenditure in Education, a proxy for training received*

Lu_{t-1} = $Gdpgr_{t-1}$ = *Gdp growth rate, a proxy for experience in production*

Ls_t = $Lforce_t$ = *Total labor force in the current period*

The unrestricted error correction term (the residuals) obtained from equation (3.6) constitutes all other unexplained factors that impacts on output growth in South Africa, such as socio-cultural and economic factors that promotes or inhibits growth is used to form the ARDL representation of the skill labor and economic growth relationship, but before that, the long run co-integration test will be conducted with the use of equation (3.7):

$$\Delta GDPGR_t = \delta_o + \delta_1 GDPGR_{t-1} + \delta_2 FDI_{t-1} + \delta_3 INV_{t-1} + \delta_4 EMPTS_{t-1} + \delta_5 LOG(GXE)_{t-1}$$
$$+ \delta_6 GDPPC_{t-1} + \delta_7 LFORCE + \sum_{i-1}^{k} \beta_i \Delta GDPGR_{t-i} + \sum_{i-1}^{k} \beta_i \Delta FDI_{t-i} + \sum_{i-1}^{k} \beta_i \Delta INV_{t-i} + \sum_{i-1}^{k} \beta_i \Delta EMPTS_{t-i}$$
$$+ \sum_{i-1}^{k} \beta_i \Delta LOG(GXE)_{t-i} + \sum_{i-1}^{k} \beta_i \Delta GDPPC_{t-i} + \sum_{i-1}^{k} \beta_i \Delta LFORCE_{t-i} + \mu_t \text{......................................}(3.7)$$

In the above model, Δ is the first-difference operator; k is the ARDL model maximum lag order and chosen by the researcher; while all β_i's represent the short-run dynamics of the model, whereas the long run dynamics will be tested with the use of the ECT as will be specified in equation (3.10) below. The long run coefficient must be negative and at the same time significant before we can conclude that the variables converges in the long run, that is, their short run errors will be corrected in the long run. The non-existence of the long-run relationship is defined by;

$H_o: \delta_1 = \delta_2 = \delta_3 = \delta_4 = \delta_5 = \delta_6 = 0$ (null, i.e. the long run relationship does not exist)............... (3.8)

$H_1: \delta_1 \neq \delta_2 \neq \delta_3 \neq \delta_4 \neq \delta_5 \neq \delta_6 \neq 0$ (Alternative, i.e. the long run relationship exists)............ (3.9)

The hypothesis is tested by means of the F-statistic (Wald test) in equation (3.8) and (3.9), respectively. The F-calculated is tested against the critical values of the F- statistics which has two sets of values.

Granger (1988) is of the view that causal relationship among variables can be examined within the framework of ECT, with co-integrated variables. That is, to establish a long-run relationship among the variables, the coefficient of the ECT (λ) from the specified ARDL model in equation (3.10) should exhibit a negative and significant sign for causality to exist in the long run. If that is the case, it implies that in the long run, output growth will revert to its mean hence; the effect of those unexplained variables will diminish overtime. While the short run dynamics are captured by the individual coefficients of the lagged differenced terms, λ the error correction term (ECT) contains the information of long run causality.

$$\Delta RGDP_t = \delta_o + \sum_{i-1}^{k} \beta_i \Delta RGDP_{t-i} + \sum_{i-1}^{k} \beta_i \Delta FDI_{t-i} + \sum_{i-1}^{k} \beta_i \Delta INV_{t-i} + \sum_{i-1}^{k} \beta_i \Delta EMPTS_{t-i} + \sum_{i-1}^{k} \beta_i \Delta LOG(GXE)_{t-i} + \sum_{i-1}^{k} \beta_i \Delta GDPGR_{t-i} + \sum_{i-1}^{k} \beta_i \Delta LFORCE_{t-i} + \lambda ECT_{t-1} + \mu_t \ldots\ldots(3.10)$$

In order to test for the parameter stability, we employed Pesaran and Pesaran (1997) parameter stability test. Pesaran and Pesaran (1997) suggested that once the error correction models have been estimated, the parameter stability test will be estimated by applying the cumulative sum of recursive residuals (CUSUM) and the CUSUM of square (CUSUMSQ) tests to assess the parameter constancy.

Data Source and Justification: The study used a time series secondary data spanning from 1980 to 2016, a data set of thirty-seven years. This is considered long enough to accommodate both the colonial/apartheid and post-colonial effects on skilled labor acquisition and how it has impacted on output growth. Moreover, the data set is also necessary as to generate sufficient changes overtime in the education sector that is capable of improving output. The data was gathered both from the World Bank database and the South African Reserve Bank statistical bulletins.

4. Results and Discussion

The empirical results from this study starts with the unit root test which we conducted using the Augmented Dicky-Fuller and Philip-Perron stationarity tests. As one of the preliminary tests that should be conducted to certify whether an ARDL model is preferable or not in that the series must be a combination of I(1) and I(0), as well as that the unit root test for the error term from equation (3.6) must be of order zero (ie I(0)) suggestive of the adoption of the ARDL bound testing model. Next is the lag length selection criterion and then to the co-integration test to see whether the variables move together in the long run. This will lead us to the bound testing error correction estimation; followed by the Wald-coefficient diagnostic test and finally the stability tests.

Unit Root Test: This we can do with the use of the Augmented Dickey and Fuller (1979) and Phillips and Perron (1988) Unit root tests as it remains the better tests for stationarity.

Table 1: Unit Root Test: ADF and PP Tests

			ADF TEST			PP TEST		
DATAS	**INTERCEPT**	**TREND**	**ORDER**	**VALUE OF ADF TEST**	**P-VALUE**	**ORDER**	**VALUE OF PP TEST**	**P-VALUE**
Empts	YES	NO	I(1)	-5.175676	0.0002	I(1)	-5.280954	0.0001
Inv	Yes	Yes	I(1)	-7.761701	0.0000	I(1)	-7.707069	0.0000
GDPPC	Yes	Yes	I(1)	-4.202787	0.0110	I(1)	-4.280030	0.0091
GDPgr	Yes	Yes	I(0)	-4.395575	0.0067	I(0)	-4.393654	0.0067
Log(GXE)	No	No	I(1)	-4.814231	0.0025	I(1)	-2.787761	0.0067
LForce	Yes	Yes	I(1)	-4.198364	0.0112	I(1)	-4.198364	0.0112
FDI	Yes	Yes	I(0)	-4.790096	0.0024	I(0)	-4.619719	0.0038
ECT	Yes	Yes	I(0)	-3.011826	0.0438	I(0)	-2.963313	0.0487

Source: Estimation

From the result of the Augmented Dickey Fuller and Philips Perron Unit Root Tests in the table above, we could deduce that the variables revealed different levels of integration, that is I(0) and I(1), moreover, it is important to note here that another necessary condition to estimate the ARDL bound testing approach is that the Error Correction Term (ECT) derived from the OLS estimate of equation (3.6) must be stationary at level. This condition is also fulfilled. As the ECT Unit Root test was stationary with both the ADF and PP Stationarity tests. Therefore, the Autoregressive Distributed Lag Model (ARDL (1,1)) to bound testing approach of equation (3.10) will be used to ascertain their long run as well their short run dynamics. The results as presented in the Table 1 above revealed that both tests results are consistent to each other and that all our data are I(1) and I(0), so we can proceed to test for the lag. Lag length test is conducted by estimating single equation VAR and using the lag length criteria to obtain the optimal number of lags for the variable. The result is presented in Table 2 below thus:

Table 2: Lag Length Selection VAR Lag Order Selection Criteria

Included observations: 31

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-727.6693	NA	2.27e+19	47.39802	47.72182	47.50357
1	-703.0548	36.52471*	4.96e+18*	45.87450*	46.24456*	45.99513*
2	-702.9714	0.118289	5.29e+18	45.93364	46.34996	46.06935
3	-702.9713	0.000160	5.68e+18	45.99815	46.46073	46.14894

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
Source: Estimation

The different lag order selection information criterions used are Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Information Criterion (SIC) and Hannan-Quinn Information Criterion (HQ). All the variables were grouped in a VAR equation and tested to ascertain the number of lags required to run the ARDL model. The result as presented in table 2 suggests that all the lag order selection criteria choose lag one for the model. The researchers then proceed to the ARDL bounds testing approach to co-integration and the result is presented as shown in Table 3 below.

Our variables are co-integrated at 5% level of significance. The F-statistics value is more than the Upper bound of the critical values at 5% level of significance. Moreover, the probability value revealed that we should reject the null hypothesis because it is less than 5%. Having ascertained that the variables go together in the long run, we then check their long run causality with the use of the coefficient of the ECT in equation (3.10). The short run dynamics will be tested using the individual β_i whereas to know if the variables will converge to their long run steady state, will be ascertain with λ. If the one period lag of ECT is both significant and negative, then the variables will converge to their long run steady state otherwise it will not.

Table 3: Result of ARDL Bounds Test for Co-integration

F(All variables)	P-1 = 7-1 = 6	5.578364	0.0013
Critical Values	Lower BoundI(0)	Upper BoundI(1)	
5%	2.476	3.646	
H_0 : H_o: δ_1= δ_2= … δ_6=0 (no long run relationship)			Reject
H_1: $\delta_1 \neq \delta_2 \neq \ldots \neq \delta_6 \neq 0$ (long run relationship exists)			Accept

Source: Estimation

From the result in Table 4 below, we can deduce that the two conditions for a long run state are fulfilled. This is because the coefficient of one period lag of the Error Correction Term (ECT) derived from equation (3.10) is significant at five percent level of significance and at the same time negative, hence, we can say that the speed of adjustment to their long run steady state is at the rate of about 23% annually. This means that in the long run, labor productivity or value added to the overall Real Gross Domestic Product (RGDP) will improve by 23 percent annually. This means that in the long run, skilled labor as well as other explanatory variables will improve total productivity in South Africa to the tune of 23 percent annually through training, adequate and optimal government spending in education and experience of the works over time.

Table 4: The Parsimonious Result of the ECM Bound Testing Result

Included observations: 33 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.32E+09	2.23E+09	1.041982	0.3078
D(RGDP(-1))	0.526225	0.212614	2.475024	0.0208
D(TECH_FDI_(-1))	-0.348174	0.352131	-0.988763	0.3326
D(INV(-1))	15456978	5.53E+08	0.027940	0.9779
D(EMPTS(-1))	947.2446	6584.226	0.143866	0.8868
D(LOG(GXE(-1)))	1.48E+10	9.71E+09	1.521218	0.1413
D(GDPGR(-1))	4.28E+08	4.29E+08	0.997166	0.3286
D(LFORCE(-1))	-2740.879	3148.770	-0.870460	0.3927
ECT(-1)	-0.234566	0.111382	-2.105967	0.0459

Source: Estimation

However, in order to check whether labor can impact on output in the short run, the wald-coefficient test will be conducted on the short run variables as presented on the table below:

Table 5: Wald Coefficient Diagnostic Test for Short Run Dynamics

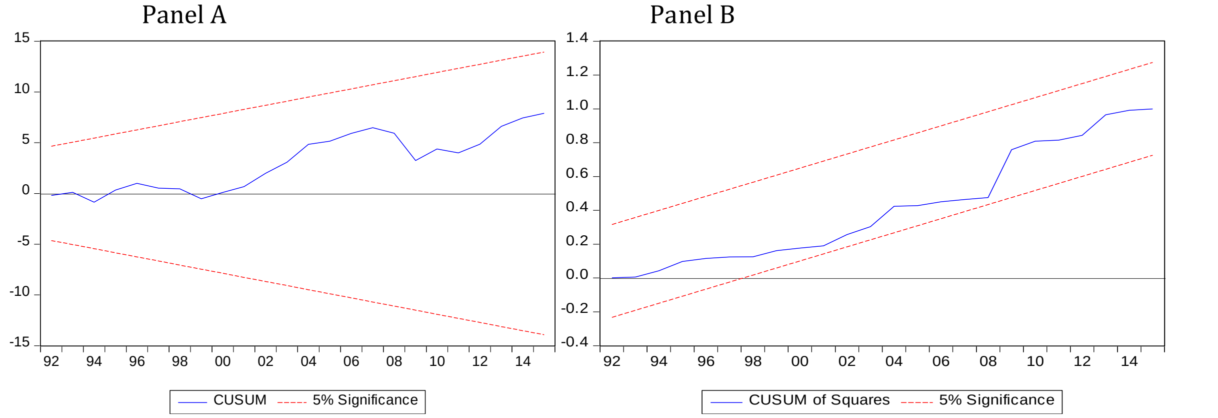
Selected Coefficient	Short run Variables	Test Statistics	P-Value	Decision	Interpretation/ Conclusion
H_0:C(5)=C(6)= C(7)=C(8)=0 H_1:C(5)≠C(6)≠ C(7)≠C(8)≠0	Combined effect of lags of all Labor Components	Chi-square 0.818091	0.5263	Accept null Hypothesis	All the lagged labor variables cannot impact Growth in the short run
H_0:C(2)=C(3)=C(4)=0 H_1:C(2)=C(3)≠C(4)≠0	Combined effect of other determinants of growth (FDI, INV, etc)	Chi-square 7.485566	0.0841	Accept null Hypothesis	All the lags of investment, FDI output variables cannot impact Growth in the short run

Source: Estimation

The short run result table above shows that all the explanatory variables do not impact on the dependent variable in the short run; this means that the different aspects of labor skills that an individual can acquire will not have an outstanding effect on the growth rate of output in South Africa in the short run because the lagged coefficients tests on them which was conducted reveals that we have to accept the null hypothesis that their combined effect is zero. This seems to be consistent with reality and economic theories in the sense that the value labor adds to output due to his/her technical knowhow, educational attainments, trainings received and experiences cannot be measured immediately but has a long run permeating effect on virtually all the sectors of the economy. Also, technological progress which is measured by Foreign Direct Investment (FDI) flows does not have a short run effect because the F-statistics of the wald-coefficient test for it was not significant. It also means that technological progress will be a long run policy issue in South Africa.

Stability Test: Finally, we will examine the stability of the long-run and short run parameters used in our model to test whether the residuals are stable or not, that is, to check if the residuals persistently stray outside the error bounds -2 and +2 or not. This test will be conducted using two different test procedures as proposed by Borensztein et al (1998). They are the cumulative sum (CUSUM) and cumulative sum squares (CUSUMSQ) tests. Many researchers prefer these tests in testing for the long-run coefficients' stability. They include Santos (2014), Pesaran and Pesaran (1997), Mohsen et al. (2002). The tests are applied to the residuals of the ECM model stated above.

Figure 1



Source: Estimation

The result of the stability test shown in Figure 1 above indicates that the model passes the stability test therefore we cannot reject the null hypothesis; both tests in panel A and B reveal that the estimate and the variance were stable since the residuals and the squared residuals fell within the 5 percent critical boundaries. Since the plots of CUSUM and the CUSUM SQUARES stay within the critical 5% bounds that confirms the long-run relationships among variables and thus shows the stability of coefficient in equation (3.4).

Result of Diagnostic Test for the Aggregate Growth Model: The diagnostic tests of Serial Correlation, Heteroscedasticity and Normality test was conducted for the ARDL Bound testing model to examine its reliability for policy measures as shown in table7 below. From the table we fail to reject the null hypothesis of residuals being normally distributed since the p-value (0.269504) of the Jarque Bera test statistics is greater than 5 percent. The probability value of the LM Version (0.0577) and F Version (0.2628) of the Breusch-Godfrey Serial Correlation LM test shows that there is no presence of serial correlation in the model; therefore, we fail to reject the null hypothesis of there is no serial correlation in the model. The study also found no presence of heteroscedasticity, this is because the p-value of both the LM test (0.7683) and the F-Version (0.7771) is statistically significant at the 5 percent level (See Table 7).

Table 6: Result of Diagnostic Tests for the Aggregate Growth Model

Test Statistics	Hypotheses	LM Version	P-Value	F Version	P-Value
Normality	H_0: Residuals are normally distributed	JB=2.69504	0.269504	Not Applicable	Not Applicable
Serial Correlation	H_0: There is no Serial Correlation	Chi-Square(1) = 1.464049	0.2263	F(1, 23) = 1.067770	0.3122
Heteroscedasticity	H_0: There no is Heteroscedasticity	Chi-Square(1) = 0.086810	0.7683	F(1, 30) = 0.081606	0.7771

Normality – Jarque-Bera Test Statistics
Breusch-Godfrey Serial Correlation LM Test
Heteroscedasticity Test: ARCH Effect

Source: Computation

5. Conclusion and Policy Recommendations

This study investigates the impact of skilled labor on the output growth of South Africa for the period 1980-2016. The choice of the period was basically due to the non-availability of data for the periods before that. The theoretical framework employed adopted the Hicks neutral augmented Cobb-Douglas production function and measured labor skills with three parameters of experience (learning-by-doing), special training and educational attainments. The methodology applied was the ARDL bound testing approach for the long run and short run dynamics of our model given that the series are I(1) and I(0). Augmented Dickey-Fuller (ADF) and Philips Perron tests for stationarity were used to ascertain whether the variables have Unit root. Furthermore, ARDL test for co-integrations using the Wald- coefficient test revealed that all the variables move together in the long run. Also the result of the ARDL model revealed that whereas there is no short run causality running from the independent variables to the dependent variable, the system gets adjusted towards their long run equilibrium steady state at the speed of 23 percent annually. This means that it takes the system about five years into the long run to start experiencing the positive impact of skilled labor in economic growth rate of South Africa. To be more specific, assuming that there where hundred law graduates, economists, chartered accountants, etc. their contributions to growth will have a significant effect after five years. Skilled labor which is measured with three proxies of government expenditure on education, workers' experience with the lag of output in the previous period and employment in tertiary sector does not impact significantly on output growth in the short run, however, all of them jointly impacts on output growth in the long run. This is consistent with the findings Khalafalla & Suliman (2013) who affirms that the quality labor impacts significantly with economic growth in Sudan.

On the other hand, the findings of this work affirms that among emerging nations like South Africa, output growth is still heavily dependent on the level of physical quantity of labor rather than on the quality of labor as well as other inputs. This is because the proxies for the quality of labor could not account for growth in South Africa in the short run, however, output in the previous period does. This is consistent with the findings of Idris and Rahmah (2010) in Malaysia who observed that although effective labor did play a positive role in determining economic growth but its contribution is less than the physical labor, thereby confirming the assertion that physical quantity of labor impacts more on output than its quality. Also from the result of the findings, it can be established that one of the ways out of the poverty trap or vicious circle of poverty is by the improvement of human skill through training, increased government expenditure on education especially on the vocational and technical aspects. This is because better skill acquisition will attract higher and better earnings and at the same time promote self-dependency, job satisfaction, on the job training as well as make for skill sustainability in the long run. Therefore, policy makers should concentrate efforts in ensuring that budgetary allocation towards education trickles down. Moreover, for the fact that in the short run, skilled labor could not significantly impact on education could be as a result of excess bureaucracy and misappropriation of fund within the system. This also should be checked.

The long run causality was tested with the ECT in equation (3.10) which was error term derived from regressing the independent variables on the growth of output in equation (3.6). It showed that there is a long run convergence of the whole system to their long run steady state growth path because the coefficient of ECT was both negative and significant at 5 percent level of significance. This implies that all the explanatory variables such as labor experience, labor training and education as well as capital formation and technological progress in the economy is a long run phenomenon and as such, policies to improve labor productivity should be geared towards the long run and not short run. Also, all the unexplained factors that impacts on output growth in South Africa such as the socio-cultural and economic variables/factors has been accounted for under the error term and as such their effects on output growth will diminish in the long run. Moreover, there was no short run causality running among the variables, hence, we can deduce that contributions or impact of skilled labor to growth should be expected in the long run only. Finally, the stability of the model was conducted using the CUSUM and CUSUMSQ and it revealed that the residuals are stable; hence there is no possibility of skilled labor not having the expected impact due to possible outliers that disturbs the system. This was checked using the diagnostic tests and evidence shows that there was absence of heteroscedasticity, the error was normally distributed and there was serial correlation in the model. Therefore, South Africa should pursue labor efficiency policies more diligently in the long run and at the same manner encourage the transfer of skills from the skilled foreigners to the citizens as this will have a long run implication for the economy.

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The Moderating Role of Job Satisfaction on Workplace Absenteeism and Substance use amongst the Employees at a Power Utility in Mpumalanga

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Abstract: This article concentrates on the extent to which job satisfaction predicts absenteeism and substance use levels, and also investigates the moderating effect of job satisfaction on absenteeism and substance use levels amongst employees at a power utility in Mpumalanga. This study is based on data gathered from a survey regarding job satisfaction, absenteeism and the substance consumption levels of employees, its antecedents and outcomes. A total of 239 permanent employees based at a power utility in Mpumalanga participated in the research study. These employees were employed in a permanent position at the power utility, gave consent to participate in the research study willingly and were employed for more than three months. The core findings of this study revealed that the frequency of substance consumption influences employee absenteeism and that job satisfaction indeed plays a moderating role on the relationship between substance consumption levels and employee absenteeism. The findings of this study can assist management to understand the relationship between substance consumption and absenteeism and how job satisfaction influences this relationship in order torestrict unnecessary absenteeism properly. The study added value to the field of study by providing complementary scientific research to the lacking literature. In addition, it confirms international findings and its applicability in the energy sector.

Keywords: *Job satisfaction; absenteeism; alcohol; smoking; substance use; individual variables*

1. Introduction

The substance use habits of employees can have a harmful effect on the employees' colleagues, the organisation and even the community because it decreases the competitiveness and efficiency of the organisation (Roche, Pidd, & Kostadinov, 2016). Substance abuse is a global concern and is on the increase among employees in South Africa. There is currently incomplete national data regarding workplace substance abuse(Smook, Ubbink, Ryke, & Strydom, 2014). In the study of Wilkinson (2015) he explains that 75 percent of alcohol users and 70 percent of drug users are employed in the workforce. Previous international research mainly focused on employee alcohol use(Lee & Ross, 2011; McCabe, Boyd, & Teter, 2009), illicit drug use, prescription drug abuse or misuse (Fenton, Keyes, Martins, & Hasin, 2010; Kroutil, van Brunt, & Herman-Stahl, 2006) but inadequate attention has been focused on alcohol use and illicit substance use by employees in South Africa (Belhassen & Shani, 2012). Previous research in South Africa focused more on student-athletes' drinking patterns (Surujlal, Nolan, & Ubane, 2012)and student-athletes' demographical variables and alcohol consumption(Surujlal & Keyser, 2014). In the study byBelhassen and Shani (2012), future research on the relationship between substance consumption and aspects such as job satisfaction was recommended to understand substance consumption and its effect on the working environment. According to the National Drug Master Plan of South Africa (Department of Social Development, 2010), the majority of individuals that received treatment from 2008 until 2010 reported using cannabis, cocaine, heroin and amphetamines. This plan also stipulates that for the same period a total number of 4288 individuals in the Mpumalanga region were treated for substance abuse.

An employee's substance use has negative implications at the workplace such as unsafe work conditions, the additional workload to co-workers, lower morale and a possible decrease in job satisfaction levels(Frone & Brown, 2010). Smook, Ubbink, Ryke and Strydom (2014) report that organisations are hesitant to deal with substance use issues in the workplace due to the stigmatisation and decline in job satisfaction. Bellhassen and Shani (2013) determine in their research that employees who use illicit substances reported lower levels of job satisfaction than those who smoked and used alcohol. In contrast to this finding, Frone and Windle (1997) establish in their study that employees who smoke and use alcohol are prone to lower job satisfaction levels. Job satisfaction also has an influence on employees' private lives; this means that employees that are unhappy in the workplace tend to also be unhappy at home. Such unhappiness isoften dealt with by using or abusing alcohol and other substances, which in turn affects work-related attitudes and absenteeism (Josias, 2005). Thirulogasundaram and Sahu (2014) determine that job satisfaction is one of the main causes of absenteeism and that employees who experience poor job satisfaction are more frequently absent from work than those with higher levels of job satisfaction. Their study confirmed an inverse relationship between absenteeism and job satisfaction, meaning that high job satisfaction predicts low absenteeism and poor job satisfaction predicts high absenteeism.

Saari and Judge (2004) found that low levels of job satisfaction predict poor job performance, reduced life satisfaction and withdrawal behaviours such as tardiness, absenteeism and drug use. Employees who encounter job dissatisfaction are often tempted to use alcohol and other substances (Mogorosi, 2009). Martin and Roman's (1996)study that focuses on job satisfaction, reward characteristics and substance use behaviours, concluded that a work environment or working conditions and low levels of job satisfaction might lead to increased levels of alcohol and substance use. Edvardsen, Moan, Christophersen and Gjerde (2015) reveal that employees do not have a true perception of the extent of their absenteeism. They also found that little is known about the degree to which substance consumption use influences workplace safety, absenteeism and employee performance. However, Bacharach, Bamberger and Biron (2010), as well as Roche, Pidd, Berry and Harrison (2008) confirm in their studies that there is a definite relationship between substance consumption and workplace absenteeism. Bacharach, Bamberger, and Biron (2010) mention that the effect of an employee's drinking is "more complex than individuals and workplace factors on absenteeism" (p. 334-335). They further mention that there are two issues of concern. First, "the degree to which the mechanism underlying this relationship is governed by the amount of alcohol consumed as opposed to the way it is consumed" and secondly, "the elasticity of the alcohol-absence relationship and in particular, the degree to which it may be conditional upon the relational context at work" (Bacharach, Bamberger, & Biron, 2010, p. 335). From a theory-grounded perspective, it is crucial to investigate alcohol-absence for a number of reasons. With previous research, there was a discrepancy regarding the findings of the positive alcohol-absence relationship as some researchers found U-shaped, null and even inverse relationships. Previous research focussed only on the alcohol-absenteeism relationship. There is limited scientific evidence that employees using alcohol have a higher frequency and incidence of sickness absence than employees that use other substances (Bacharach, Bamberger, & Biron, 2010).

When exploring absenteeism from a social exchange perspective the literature suggests that employees tend to withdraw from a negative work environment in order to avoid feelings of dissatisfaction, but when they experience higher job satisfaction, less absenteeism is noted (Boon , Belschak, Den Hartog, & Pijnenburg, 2014). Dissatisfied individuals will engage in behaviour that harms the organisation, other employees or both and vice versa (Mazni, Roziah, Maimunah, & Bahaman, 2013).Therefore, the current study focuses on the revised model of Goldberg and Waldman (2000) and Lee and Ross (2011), which indicates a substance-absenteeism relationship including variables capturing both the frequency substances is consumed, and the amount of substance consumption and not only focus on the use of alcohol but also other substance use.

2. Literature Review

Employee substance use and absenteeism: Bacharach, Bamberger and Biron (2010) emphasise that the impairment dynamic of how alcohol is consumed can be captured more effectively if researchers focus on the frequency of individuals' heavy drinking episodes. Ames, Grube and Moore (2000) found that employees have a higher rate of absenteeism when they have at least one episode in the past year in which they consume more than ten servings of alcohol. In western societies, absenteeism is a major problem (Luz & Green, 1997) and measuring absenteeism is important to control payroll and benefits systems, enhance workplace production, control personnel costs and address possible issues that lead to high levels of sick leave use(Josias, 2005). In most of the studies, researchers focus on the linkage between alcohol consumption and absenteeism and this research is grounded on an illness and injury reason and not on substance use and absenteeism. These drinking patterns were conceptualised regarding the modal level of alcohol consumption (amount/serving of alcohol consumption) in a period and the number of times used during a week or a month.An employee's absence from work is undesirable behaviour that influences their colleagues and the employer regarding company profitability, productivity, service delivery, work ethic, labour relations, worker cooperation and trust among fellow employees and supervisors. Employees who often are absent cause their co-workers to do their work while they are absent and these co-workers become dissatisfied. As a result, absenteeism has a major effect on the co-workers' morale and overall job satisfaction levels (Chauke, 2007). Employees who use alcohol and other substances to cope with their work pressure reported higher levels of substance use and even alcohol-related problems compared to those employees who do not use substances as an escape mechanism. Therefore, employees that use substances to escape or experience low levels of job satisfaction are at a higher risk for increased substance use (Grunenberg, Moore, Anderson-Connolly, & Greenberg, 1999).Factors such as an uncomfortable work environment, lack of safety, inadequate resources, poor supervision, problems with peers, low salary, little training opportunities, job insecurity and lack of opportunities for career advancement can lead to a decrease in employee job satisfaction, which Setati (2014) confirms would lead to depression. Such an adverse work environment can contribute to employee problems like substance misuse (Mogorosi, 2009; Setati, 2014).

Frone and Brown (2010) state that the importance of understanding the variables that predict employee substance consumption often is underestimated. These predictors are important for numerous reasons. Some of these reasons were that certain groups of employees reported a higher level of availability of substances at the workplace and the inability to perform at work due to substance consumption. The study of MacDonald (1997) confirmed that workplace substance use reduces the employee's ability to perform work. He also found that there is a compelling relationship between substance use and injuries and accidents in the workplace.

In recent research, it was found that employees with high levels of job satisfaction are less likely to be absent from work, leave the organisation, have accidents at work or experience employee stress, and as a result show an increase in productivity rates (Rast & Tourani, 2012; Theron, 2014). Nguyen, Groth and Johnson (Nguyen, Groth, & Johnson, 2013) found that there is a direct correlation between employee confidence and negative work behaviours such as absenteeism and lower job satisfaction. The process absenteeism model of Steers and Rhodes (Steers & Rhodes, 1978) is affected by both the employees' motivation to attend work, as well as their ability to attend work. In this model, Steers and Rhodes (1978) refer to this as voluntary and involuntary absenteeism, which is affected directly by job satisfaction. In line with this model, Langenhoff (2011) found that employees who experience high levels of job satisfaction want to be at work and as a result, job satisfaction can predict lower levels of absenteeism.

The absenteeism model of Nicholson (1977) was developed to predict absenteeism, but he notes that motivation influences employee absenteeism and that there are different types of absenteeism. Overall, this model investigates factors such as job satisfaction that motivate employees to be at work (Bermingham, 2013). Studies throughout history established that employee absenteeism is a significant problem in organisations worldwide. Some of these studies also indicated inconsistent findings in the strength of the relationship between employee absenteeism and job satisfaction, which gives the notion that this may be a moderated relationship rather than a direct one (Scott & Mabes, 1984). Sui (2002) determines that the relationship between employee absenteeism and job satisfaction is stronger under certain conditions. Such conditions may include substance use, supportive co-workers and demographic variables (Bacharach, Bamberger, & Biron, 2010).

Job satisfaction, employee absenteeism and substance use: In the social sciences field, the topic of employee job satisfaction has always involved extensive empirical research, which leads to several definitions (Mafini & Pooe, 2013). In simple terms, job satisfaction can be defined by saying that it is "the degree to which employees like their jobs and the different aspects thereof"(Josias, 2005, p. 13). It means that an employee may like certain parts of his or her job and be dissatisfied with other parts, but still have an overall high level of job satisfaction. Therefore, it would be safe to say that job satisfaction is the employee's general attitude towards his or her job (Josias, 2005).

The relationship between absenteeism and job satisfaction has been examined on numerous occasions because absenteeism is believed to be one of the ways to deal with a stressful work environment. Luthans (2011) states that higher job satisfaction is very likely to result in decreased levels of employee absenteeism. Although there is not a very strong relationship between job satisfaction and employee absenteeism, it is acknowledged that job satisfaction does indeed predict employee absenteeism levels (Anderson, 2004;

Hardy, Woods, & Wall, 2003). From their literature review, Saari and Judge (2004, p. 396) define job satisfaction as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences". This means an element of personal feelings influences how an employee experiences his or her job (Setati, 2014).

In his study, Schlemmer (2009) came to an understanding that job satisfaction is the extent to which employees like their jobs, but also found that job satisfaction is made up of intrinsic and extrinsic satisfaction. Intrinsic job satisfaction refers to aspects in relation to the job tasks, such as the job itself, skills utilisation, achievement, responsibility, recognition and variety of tasks. Extrinsic job satisfaction has to do with aspects that do not directly relate to the tasks that employees are employed to perform, such as remuneration, working conditions, supervision and interpersonal relationships (Schlemmer, 2009; Setati, 2014). The above paragraphs confirm that job satisfaction occurs when a person is content or satisfied in his or her work environment, but what causes a person to experience job satisfaction?

According to the international research of Ogunleye, Odebiyi and Olaoye (2013), four factors determine job satisfaction, namely equitable rewards, supportive working conditions, mentally challenging work and supportive colleagues.Over the past 30 years, several studies were conducted on the relevance of norms in the workplace. These studies found that employee norms have an influence on job satisfaction, absenteeism and substance use (Clarke, Probst, Guldenmund, & Passmore, 2015; Tufail et al., 2016). As mentioned by Eaton, Ohan and Dear (2015), stigmatisation of substance use by employees is a problem,and it is associated with low job satisfaction and high turnover of employees.Theron (2014) verifies that the matter of job satisfaction is vital for both the employers and the employees in an organisation. His study also explored the positive and negative effects of job satisfaction in an organisation. The negative consequences of poor job satisfaction include higher absenteeism rates, the rise in grievances, increased substance use and more early retirements (Theron, 2014).

The moderating effect of the role of job satisfaction and substance use levels: In their study, Goldberg and Waldman (2000) confirm that job satisfaction could moderate employee absenteeism. Aspects such as demographic variables, job characteristics and substance use already have a relationship with absenteeism, but when job satisfaction is introduced, this relationship will be influenced (Goldberg & Waldman , 2000; Lee & Ross, 2011).Thirulogasundaram and Sahu (2014) establish a moderate, but consistent, inverse relationship between job satisfaction and employee absenteeism. They support that job satisfaction has a moderating influence on employee absenteeism and confirm that it plays a part in predicting employee absenteeism. Hausknecht, Hiller and Vance (2008)specifically state that job satisfaction plays a significant role in predicting employee absenteeism.In her study, Josias (2005) determines that there is indeed a constant moderating inverse relationship between job satisfaction and an employee's absenteeism rate. She found that a higher level of job satisfaction resulted in a lower trend of absenteeism and the opposite also applies. She suggests that the frequencies in which absences occur will be more informative than the number of absent days.According to Chauke (2007), one of the main causes of absenteeism is the employee's level of motivation. This level of motivation is subjective to age, years of service, job satisfaction, work environment, family responsibilities, policies, attitudes, distance from home, values and expectations. These issues indirectly influence the employees' productivity and happiness at work (Chauke, 2007; Yende, 2005).

This article is based on an adapted model combining the work of Goldberg and Waldman (2000) and Lee and Ross (2011), which includes the moderating role of job satisfaction on absenteeism and substance use. The model indicates that not only do the employee's individual variables influence their absenteeism and substance use levels, but also that job satisfaction plays a role on these variables.Studies indicate substantial connotations between employee job satisfaction and the use of alcohol and other substances.

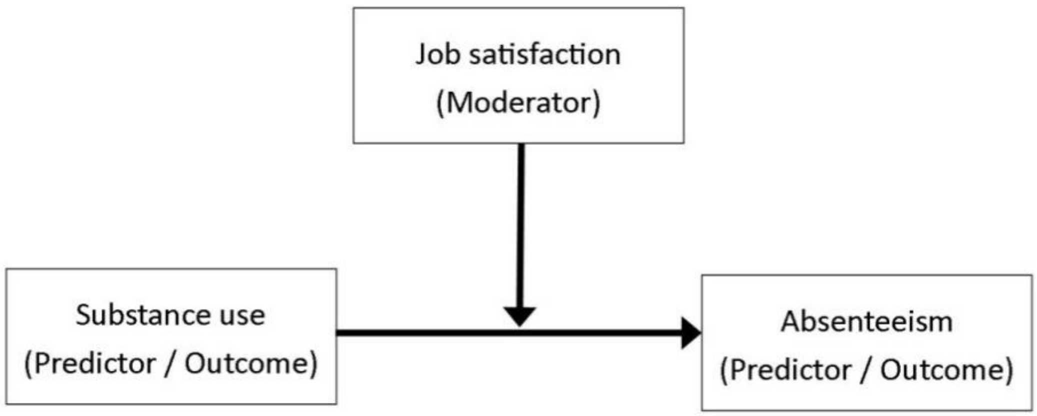
Job satisfaction is an important factor in predicting employee substance use (Normand, Lempert, & O'Brien, 1994; Rooks, 2010). Saari and Judge (2004) also determine that job satisfaction influences aspects such as substance use and employee absenteeism.From the theory above the following figure is conceptualised. The following hypotheses are set:

H_1: High levels of substance consumption are positively related to high levels of absenteeism.

H_2: Job satisfaction predicts low levels of absenteeism.

H_3: Job satisfaction predicts low levels of substance consumption.
H_4: Substance use levels determine employee absenteeism.
H_5: Job satisfaction has a moderating effect on the absenteeism and substance consumption levels of employees.

Figure 1: Conceptual model of the role of job satisfaction on the relationship between substance use and absenteeism



3. Methodology

Research approach: A quantitative, cross-sectional research approach was followed to compare a large number of cases and to determine the cause-and-effect relationship between variables. In this study, primary data were collected from questionnaires that were completed by permanent employees at the power utility.

Research participants: Participants were sampled using the convenience sampling method with certain inclusion and exclusion criteria. The inclusion criteria for selecting participants were that the participant should be employed in a permanent position at power utility in question and that the participant should be willing to participating in the research study. Employees that were employed in the past three months were excluded from the study because they have not yet built up a sufficient leave record.A total of 548 permanent employees based on a power utility in Mpumalanga where approached to partake in the study. Employees who were employed in a permanent position at the power utility and gave consent to participate in the research study willingly were included, whereas employees that were employed in the past three months were excluded, due to an insufficient leave record. A total of 239 permanent employees completed the questionnaire, provided consent and participated in the research study. The biographical representation of the research participants is outlined in Table 1. The population outline illustrates that more male employees than female employees participated in the study and that the majority of participants were married. The workforce at the power utility in Mpumalanga is relatively young. Therefore, the majority of participants were between the ages of 26 – 35 years and only have five to ten years of work experience at the power utility. Due to the minimum requirements of positions at the power utility, all the participants have at least Grade 12,and 70 percent of the participants have post-matric qualifications.

Measuring instrument: The research questionnaire consists of standardised measures and a section to gather biographical information.The absenteeism and job satisfaction measure byGoldberg and Waldman (2000) includes subscales, namely the three-item job satisfaction predictor and two-item absenteeism scale. The job satisfaction predictors are scored on a Likert-type scale varying from one (strongly disagree) to five (strongly agree). The internal reliabilities for the questionnaire are between 0.74 – 0.76 and 0.86 for job satisfaction.Lee and Ross(2011)was used to determining absenteeism. In his study, Reid (2008) determines the alpha coefficients to be low (α=0.63), due to the limited number of variables available to analyse.The substance consumption measure of Surujlal, Nolen and Ubane (2012) that was validated and adapted by Surujlal and Keyser (2014) to align with the industrial sector was also adopted. This questionnaire consists of four sections, namely substance consumption patterns; drinking consequences; smoking; and general knowledge. Each item is rated on a Likert-type scale of one to five, except for the general knowledge section that is based on true or false statements. In their study, Surujlal and Keyser (2014) determine an overall internal consistency for sections B and C of α= 0.74, which meets the benchmark of 0.70.

Table 1: Compilation of study population (N=239)

Item	Category	Frequency	Percentage
Gender	Male (1)	145	60.7
	Female (2)	93	38.9
	Missing responses	1	0.4
	Total	239	100.0
Age	18 – 25 years (1)	16	6.7
	26 – 35 years (2)	116	48.5
	36 – 45 years (3)	59	24.7
	46 – 55 years (4)	28	11.7
	56 years and older (5)	19	7.9
	Missing responses	1	0.4
	Total	239	100.0
Family Status	Single (1)	57	23.8
	Engaged / dating (2)	43	18
	Married (3)	119	49.8
	Divorced (4)	18	7.5
	Missing responses	2	0.8
	Total	239	100.0
Tenure	Less than 4 years (1)	57	23.9
	5 – 10 years (2)	121	50.6
	11 – 15 years (3)	19	7.9
	16 – 20 years (4)	15	6.3
	21 – 25 years (5)	5	2.1
	26 – 30 years (6)	8	3.4
	31 years and more (7)	13	5.4
	Missing responses	1	0.4
	Total	239	100.0
Qualification	Matric / Grade 12 (1)	70	29.3
	Diploma (2)	54	22.6
	Higher diploma (3)	18	7.5
	Degree (4)	42	17.6
	Post-graduate degree (5)	28	11.7
	Other (6)	24	10
	Missing responses	3	1.3
	Total	239	100.0

Research procedure and ethical approval: The Basic and Social Sciences Research Ethics Committee (BaSSREC) of North-West University approved the study. The researcher explained the purpose, objectives and importance of the study to the participants and highlighted that participation in the research study was entirely voluntary. Written consent was obtained from the power utility in Mpumalanga before the commencement of the study. Furthermore, all participants were given the opportunity to ask questions or raise concerns before considering participating in the study. Participants were required to sign a consent form where it was clearly stated that the information obtained from the results of the questionnaires would be treated with a high level of confidentiality and that the feedback from the results obtained would only be used for research purposes. The questionnaire was compiled and administered in English to the employees at the power utility in Mpumalanga who agreed to take part in this study, with a translator available upon request. Feedback will be available to the participants when the study is concluded.

Statistical analysis: The IBM SPSS 24 (SPSS, 2017) statistical program was used to analyse the data obtained from the questionnaires. Linear modelling and latent variable modelling were implemented to investigate model fit and indirect and interaction effects. The model sum of squares was used to establish the model fit to the data obtained. Cross-validating determined and tested the generalisation of the model. Regression coefficients will be calculated to quantify the relationship between the predictor (job satisfaction) and the outcome (level of absenteeism or level of substance consumption) (Field, 2013). Multiple linear regression analysis and simple slopes were used to predict the relationship between the variables. A collection of multiple regressions and the three stages to test for mediation were completed. As determined by the study of Baron and Kenny (1986), it is essential to compare the beta coefficients of different regression equations. The independent variable should predict the mediator,and a combination of the independent variable and mediator should predict the dependent variable. In this study, the dependent variable will also be regressed on the independent variable. The independent variable will not predict the dependent variable when all these steps prove significant. Table 2 indicates the results of multiple linear regression analysis, with job satisfaction as a dependent variable and absenteeism and substance consumption levels as independent variables.

4. Results

Table 2: Multiple linear regression analysis with job satisfaction as the dependent variable, absenteeism and consumption levels as independent variables

Model		Unstandardised Coefficients		Standardised Coefficients	t	p	F	R	R^2	ΔR^2
		B	SE	Beta						
1	(Constant)	10.25	0.27		38.24	0.00	15.77	0.32	0.10	0.10
	Absenteeism	-0.53	0.13	-0.32	-3.97	0.00				
2	(Constant)	7.46	1.12		6.69	0.00	11.52	0.38	0.14	0.13
	Absenteeism	-0.44	0.13	-0.27	-3.29	0.00				
	Frequency of substance use	0.17	0.07	0.21	2.58	0.01				
3	(Constant)	7.34	1.25		5.87	0.00	7.64	0.38	0.14	0.13
	Absenteeism	-0.44	0.14	-0.27	-3.28	0.00				
	Frequency of substance use	0.16	0.09	0.19	1.70	0.09				
	Quantity of substance use	0.02	0.10	0.02	0.22	0.83				

*Statistically significant at p< 0,05

As seen from Table 2, in Model 1, job satisfaction predicts employee absenteeism (p< 0.05). Table 2 specifies that Model 1 accounts for 10 percent of the total variance in job satisfaction, which is a statistically significant fit to the data (p = 0.00). The adjusted R^2 (0.10) indicates very little shrinkage from the unadjusted value (0.10), which means that the model may still be generalised. This finding is supported by the study of Ones, Viswesvaran and Schmidt (2003), which found that job satisfaction predicts absenteeism and determines that there is indeed a relationship between absenteeism and substance abuse. Saravi et al. (2013) also verified that job satisfaction has a significant influence on employee absenteeism.In Model 2, job satisfaction predicts both employee absenteeism and frequency of substance use. When adding the frequency of substance use, Model 2 reports for 14 percent of the total variance in job satisfaction. The adjusted R^2 (0.13) indicates some shrinkage from the unadjusted value (0.14). This means that the model may generalise well. Nonetheless, it seems that job satisfaction is a significant predictor of absenteeism (p = 0.00), as well as the frequency of substance use by employees (p = 0.01). In support of these findings, the study of Saari and Judge (2004) found that job satisfaction has an influence on absenteeism, substance use and withdrawal behaviours. They also establish that job satisfaction could predict absenteeism of employees.In Model 3, job satisfaction predicts absenteeism, but not frequency or quantity of substance use. Therefore, Model 2 is the best fit model for this study.

From the statistical analysis, the chart in Figure 1 was constructed to understand the relationship between job satisfaction and absenteeism better. This figure illustrates that higher levels of job satisfaction are associated with lower levels of absenteeism. In other words, employee absenteeism levels decrease as job satisfaction levels increase.Considering the research that was conducted in this study, the following conceptual model was constructed. This model illustrates that substance use predicts absenteeism and that job satisfaction plays a moderating role on this relationship. It also indicates that both substance use levels and absenteeism are influenced by individual variables such as age, gender, race, tenure and qualifications.

Figure 2: The relationship between job satisfaction and absenteeism

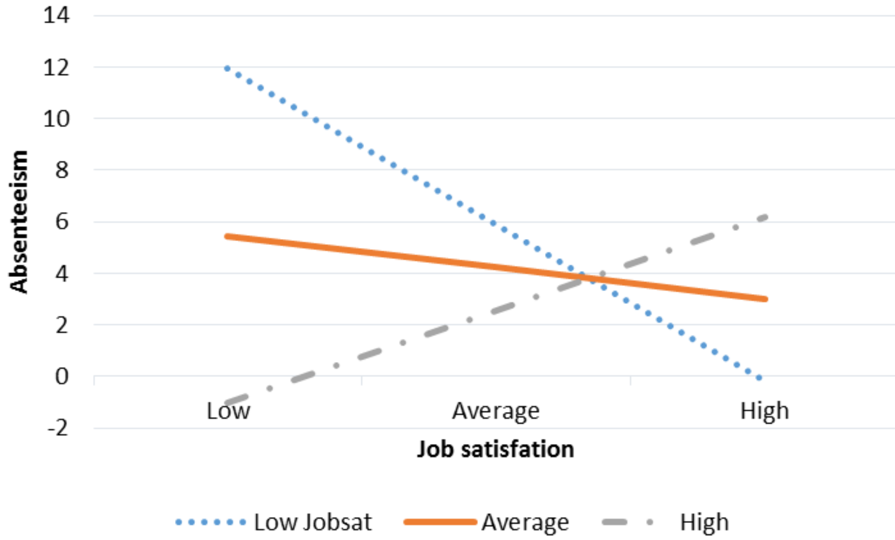


Table 3: Results of hypotheses testing

Hypothesis	Accepted or rejected
H_1:High levels of substance consumption are positively related to high levels of absenteeism.	Accepted. The frequency of substance use is positively related to employee absenteeism. There is a significant relationship between substance use and employee absenteeism. This means that employees who use substance are more absent from work.
H_2: Job satisfaction predicts low levels of absenteeism.	Accepted. Job satisfaction predicts absenteeism (cf Table 2). Overall regression indicates that job satisfaction is a significant predictor of absenteeism.
H_3: Job satisfaction predicts low levels of substance consumption.	Accepted. Job satisfaction predicts the frequency of substance use. Overall regression indicates that job satisfaction is a significant predictor of frequency of substance use.
H_4: Substance use levels determine employee absenteeism.	Accepted. The quantity of substance use predicts and has an influence on employee absenteeism. This means that those employees who use higher quantities of substances also indicated significantly higher levels of absenteeism.
H_5: Job satisfaction has a moderating effect on the absenteeism and substance consumption levels of employees.	Accepted. Job satisfaction has a moderating effect on the absenteeism and substance consumption levels of employees. This means that job satisfaction has an influence on the relationship between levels substance use and employee absenteeism (H_1).

5. Conclusion

Organisations and the field of labour/employment relations will benefit from this research study because it will describe how job satisfaction plays a moderating role on workplace absenteeism and substance use and to what extent job satisfaction may predict absenteeism and substance use levels. A determination can be made about whether job satisfaction predicts low levels of absenteeism and substance consumption and if substance use levels determine employee absenteeism. Knowing this will allow organisations to put corrective measures in place to improve not only employee absenteeism and workplace substance use, but also productivity and employee morale.It is evident that issues such as low job satisfaction levels, absenteeism and substance use are associated with high costs (Josias, 2005). Most studies investigate the cost of substance use by employees, but very few of them explore the costs incurred by non-substance using employees. In Australia, the cost of non-substance using employees amounted to approximately $14.2 billion due to wasted time and overtime because of a colleague's absence (Anderson, Moller, & Galea, 2012). Over time, these factors can have an undesirable effect on the profit margin of the organisation. From the literature review, it is shown that satisfied employees are more committed to the success of the organisation and are less likely to be absent or use alcohol or other substances (Josias, 2005). Forbes (2013) believes that a healthier and happier workforce will be more competent and motivated to go to work each day, resulting in an increase in productivity and higher morale for the individual employees and the entire team. Although such employee wellness strategies are costly to put into practise and uphold, they can have a beneficial influence on the organisation's net profit. This will result in an assured return on investment for the organisation (Forbes, 2013).

Botes (2013) notes that when employees frequently are involved in the performance of the company it will help them to recognise the role they play in the success of the business and will make them feel valued and appreciated; employees who work in a better working environment are more likely not to be absent (Mudaly & Nkosi, 2015). It is important to note that from 2014 the power utility started to provide voluntary retrenchment packages and as mentioned in the literature, produced mixed results regarding how substance use responds to change in economic conditions such as retrenchment (Maclean., Webber, & French, 2015). It, therefore, is important that future research focus on retrenchment, job satisfaction, substance use and absenteeism of employees. Nel (2002) and Boon et al. (2014) agree that when an organisation is perceived as caring and supporting its employees the more likely, it is to achieve a cooperative relationship. This, in turn, will result in a more satisfied workforce. The combination of job satisfaction and other forms of satisfaction leads to life satisfaction (Schlemmer, 2009). The research in this chapter establishes that job satisfaction has a moderating effect on absenteeism and employees' level of substance use. It is now certain that low levels of employee job satisfaction will result in an increase in sick leave use, tardiness, as well as increased likelihood of using various substances.

Limitations and Recommendations: Although this research adds value to the literature, it has some limitations. First, the study is cross-sectional; therefore, a causal relationship could not be tested. Another limitation of the study is that it does not include the association between prescription drug misuse, job satisfaction and absenteeism. In addition, the study did not consider long-term absenteeism and long-term substance use. Future research may include absence frequency and loss of employees' working day/hours, and shift workers. Future research could also include presenteeism information of permanent employees in a study involving substance consumption.

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Analysis of the Impact of Fiscal Policy on Economic Growth in South Africa: VECM Approach

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Abstract: Fiscal policy ensures macroeconomic stability as a precondition for growth at the macro level. This study investigates the impact of fiscal policy on economic growth of South Africa from 1960 to 2014 through a Cointegrated Vector Autoregression approach. It seeks to contribute to the existing literature as well as in designing effective fiscal policy programmes which can propel economic performance. Theresults of the long run estimates revealed that government tax revenue has a positive and significant long run influence on economic growth, whereas the government gross fixed capital formation and budget deficit have a negative impact on real GDP. For that reason, the study recommends that some expansionary fiscal policy measures should be strengthened since they play a very important role in the economy so as to meet the government target of the National Development Plan Vision for 2030.

Keywords: *Budget deficit, capital formation, government, tax revenue, South Africa*

1. Introduction

Fiscal policy ensures macroeconomic stability as a precondition for growth at the macro level. The question of whether or not it encourages growth has been a bone of contention for both theoretical and empirical debates for a long time. Other schools of thought argued that government involvement is vital for its macroeconomic objectives. A contrary view to this holds that government operations are inherently bureaucratic and inefficient in their nature therefore they are likely to stifle rather than to promote any economic growth. In the empirical literature, results are equally mixed about this issue. Those who are in support of fiscal intervention are of the opinion that it enhances growth by modifying work and investment incentives. They also argue that it stimulatesthe human capital accumulation and also improves the total factor productivity at the micro level. In support of this view, Masca et al. (2015) argued that fiscal policies have been used to control the Great economic crisis of the 1930s, as well as the crude oil crisis in the 1970s; but for the 1980s, the monetary policy was preferred for re-establishing growth. Similarly, Djelloul et al. (2014) found a long run connection between fiscal policy and growth. They also established a link of a positive causality between economic growth and fiscal revenues. On the other hand, Adefeso (2010) maintained that fiscal incentives on tax cuts are likely to escalate the economic growth than those centred on the increase of government spending. As for fiscal adjustments, those based on spending cuts and tax are more likely to reduce deficits and debt over gross domestic product (GDP)ratios than those on tax increases.

Despite all these contributions, the rationale is that in most cases the aim of the government intervention by means of tax policy has been to controlboth the receipt and expenditure sides of its budget in order to achieve national aims. That been the case, the reality is that, more often than not, there has beensome cases of wastagessince some spending can be manipulated by politicians. There are alsopossibilities of high levels of mismanagement and corruption among other things. Ajisafe and Folorunso (2002)maintained that incorrect government expenditure, tax policies and large shortfalls have been some of the major reasons for the macroeconomic disequilibrium over the years in the Nigerian economy.These findings seem to compare well with the current growing deficit in South Africa which can be attributed to poor governance in most of the state owned entities.Some of the developing nations such as Turkey and Romania used fiscal policies to react to their economic challenges in several ways. In reaction to a 2009 GDP gap, Mihaela and Özay(2014)pointed out that Romania employed the fiscal restraints. This reaction involved the spending cuts done mainly by cutting down the public sector salaries, a substantialdecrease of government expenditure and also the introduction of lump tax rate known as the minimum tax. On the other hand Turkey employed the tight fiscal policy which was aiming at reducing the public debt stock as one of the strategies to get out of the crises which stemmed out of the financial markets (Kadir & Rıdvan, 2016).

Similarly, in reacting to a situation of lower growth, the South African administrationintend to apply the same tool. The aim was to use fiscal policy to allow for sustainedspending-led growth and a broader budget deficit.

Even though this resulted in an augmentedamount of debt on the government, the aim of the whole exercise was to protect the economy from collapsing. According to the South African National Planning Commission (2011),the National Development Plan (NDP) Vision for 2030 elucidate that fiscal policy would be expected to have an important role in directing the speed of growth. The NDP explicitly outlines as how to deal with the key challenges which are likely to arise over the next several decades.

Mihaela and Ozay (2014) indicated that in comparison with the large amount of research work on fiscal stimulus in developed countries, there has been a limited amount of literature on this aspect in developing countries. In addition, Adefeso (2010) argued that little is known about the consequences of fiscal policy on growth and in particular about what is generally known as the fiscal multipliers. This generally refers to how much one dollar of tax cuts or spending increases translate to GDP. Furthermore, based on the literature survey, in the context of the Sub-Saharan region, majority of the literature on this issue seem to be concentrated in Nigeria, see (Omitogun and Ayinla, 2007; Appah, 2010; Adefeso, 2010; Audu, 2012; Akanni and Osinowo, 2013; Osuala and Jones, 2014). As far as South Africa is concerned, we came across with very few studies includingOcran (2009) who included both fiscal and monetary policy variables in the vector autoregression (VAR) analysis.Therefore, we seek to contribute to this research gap by employing a similar approach used by Ocran (2009) but focuses only on the fiscal policy variables.The decision to focus on fiscal policy rather than monetary policy is based on Masca et al. (2015)who argued that around the 1990s, monetary policy approach has showed its weak points, which brought the fiscal policy into the spotlight. They argued that currently, the fiscal policy approach is presenting the essential influence in order to avoid a massive recession because of its ability to lend support on investments and structural transformations.

Furthermore, the focus on the fiscal policy variables is influenced by the fact that during the financial year 2013/14 the South African government debt as a percent of GDP increased to 46%from 27%in the financial year 2008/09 which has led to a raised level of fiscal risks(IMF, 2014). Based on that, thisstudy seeks to contribute to the existing body of literature and to the academia on fiscal policy and economic progress in the South African setting. It is also envisaged to contribute tothe design of fiscal policy programmes which can propel economic performance to achieve the desired levels of development.Therefore, the aim is to examine the impact of fiscal policy on economic growth in South Africa.The preceding section gave the background of the study and its objectives. Section two is devoted to the review of the relevant literature both theoretical and empirical studies. Section three highlights the methodology, the empirical results are presented in section four and finally, conclusions and policy implications are presented in section five.

2. Literature Review

The origin of the arguments of the association between fiscal policy and economic growth is an important debate in both the theoretical and empirical literature. Several theories such as the Solow growth theory, the Classical, Keynesian and the Neo-classical theories where used by several authors to attempt to establish the link between these variables. In order to demonstrate controversies about some of these theories Omitogun and Ayinla (2007) enumerated that Classical school believes that debt dispensed by the government do not normally affect the private sector savings. This argument is based on the believe that fiscal deficit financed by debt crowds-out private sector investment. On the other hand, the Keynesians are of the opinion that a positive connection exists between deficit financing and investment. The implication is that fiscal policy is seen as a tool used to overcome fluctuations in the economy. Similarly, the Neoclassical school challenged the position of the Keynesian model on the ground that the way in which the fiscal deficits are financed has the ability to have an influence on the level of consumption, investment and economic growth. Given the controversy in the theoretical framework around this issue, Mankiw (2000) developed a new theory called the Savers-Spenders theory. It is based on several propositions to explain this relationship. The first proposition is on temporary tax changes. It proposes that it has a huge impact on the demand for goods and services, hence it proposes that the higher income of spenders received will be affected by higher tax payments or by lower refunds. That been the case, citizens should therefore appreciate the fact that their lifetime resources were unchanged and they need to protect the income to meet the upward tax liability. Secondly, Mankiw (2000) suggests that additional consumption has a negative effect on investment. This will lead to an upsurge on the marginal product of capital and ultimately reduces the level of growth in the country. The idea is that higher interest rate margin, encourages savers to save more and in that sense the additional spending and higher interest rate margin seem to have a positive influence on levels of growth of the manufacturing part of the economy. The sector will then reduce economic growth especially in cases of developing economies such as South Africa. The last proposition proposes that government debt escalates the steady-state inequality. This proposition is premised on the notion that a higher level of debt is an indication of increased taxation in order to pay interest on debt. As a result, the tax burden will ultimately be carried by the savers and the spenders but the interest will only be carried by savers. It can therefore be deduced that a higher level of debt raises the income and consumption of the savers and lowers the income and consumption of the spenders.

Evidence from the empirical literature suggests that theapplication of fiscal policy in an individual country helps to measure sustainable economic activities. Omitogun and Ayinla (2007) attempted to establish association between fiscal policy and growth in Nigeria by means of the Solow model estimated by the ordinary least square method. Their result proved to be negative in the sense that fiscal policy has not been effective in promoting sustainable growth in Nigeria. These findings were not in line with the Keynesian theory which is based on the need for an active policy to sustain growth. In a similar case, Appah (2010) utiliseda multiple regression analysis as well as the Granger causality test. GDP was used as a proxy for economic growth and the few related fiscal policy variables as the regressors. Contrary to Omitogun and Ayinla (2007), he found a significant association between the two sets of variables but the specific variables contributing to the GDP were mainly government recurrent and capital expenditures. In order to take the investigation further, unlike Appah (2010), Ocran (2009) added monetary variables and inspected the influence of both fiscal and monetary policyon growth in the South Africancontext. He employed thevector autoregression (VAR)approach and his outcome supported the argument that government consumption expenditure, gross fixed capital formation and tax revenue do have a positive and significant influence on the economic performance. However, it appears that the magnitude of the deficit does not have a major effect on growth, which might suggestthat budget deficit does not cause growth rate. Furthermore, Ocran (2009) concluded that the pair-wise combination of the fiscal policy indicators better explains the main influence of fiscal policy on the economic progress of a country. Similarly, Dar and AmirKhalkhali (2002) established that in the endogenous growth model of fiscal policy, government expenditure and income are normally important in forecasting future growth. Finally, Abdullah (2000) established that the scope of government expenditure is crucial in managing the performance of its economy. Based on these findings, he recommended that, each and every administration should not only support and inspire the private sector to fast-track economic growth, but it should also look at the ways of expanding the budget for some of the vital aspects of the economy such as the infrastructure, social and other economic activities.

3. Methodology

This study follows a Cointegrated Vector Autoregression (CVAR) method which comprisesof the stationarity testing, the Johansen cointegration and the Vector Error Correction Model (VECM) analyses. In addition, the Pair-Wise correlation matrix and Vector Error Correction (VEC) stability condition check are used for further analysis. The study employed the annual time series data from 1960 to 2014to investigate the impact of fiscal policy on economic growth in South Africa. The choice of this period was influenced by the fact that 2014 was seen as a second decade since the dawn of democracy which was accompanied by a raised level of fiscal risks. This was based on the fact that there was an increase in government debt to 46% of GDP in the financial year 2013/14 from 27% of GDP in 2008/09 which has led to a raised level of fiscal risks (IMF, 2014). In order to establish a sensible amount of observations, the period of study was backdated to 1960 to end up with at least 54 number of observations for the sake of proper econometric analysis. Data on all the variables were obtained from South African Reserve Bank website in billions of Rands. The model is founded on the amendment of Appah (2010)'s model which specifies endogenous real GDP as a function of government fixed capital formation, budget deficit and government tax revenue as follows:

$$RGDP = f\,(GFCF, BDFT, GTR) \qquad (1)$$

and equation 1 can be expressed as a linearequation as follows:

$$RGDP_t = \beta_0 + \beta_1 GFCF_t + \beta_2 BDFT_t + \beta_3 GTR_t + \mu_t \qquad (2)$$

where:

$RGDP$ = Real Gross Domestic Product
$GFCF$ = Government gross fixed capital formation
BDFT = Budget deficit;
GTR = Government tax revenue

$\beta_0$is the intercept term which is the mean value of RGDP when the value of all the explanatory variables is zero.$\beta_1, \beta_2$and $\beta_3$are the partial regression coefficient as indicated by Gujarati and Porter (2009) and according to Sweeney, et al., (2006),$\mu_t$represents the unexplained variationsof the dependent variable which cannot be accounted for by the linear effect of all the independent variables in the system.

In estimating equation 2, prior to the normal tests, the study employed correlation matrix to check the relationship amongst the variables. In this case, correlation refers to a simple statistic which explains whether there's a relationship between any two variables which might eitherbe positive or negative. A positive connection implies thatthey are moving in the same direction, whilst a negative correlation implies a contradictory movement. A correlation is computed into what is known as the correlation coefficient, which ranges between -1 and +1 and the correlation matrix of R is denotedas follows:

Figure 1: Correlation matrix of *R*

$$R = \begin{bmatrix} 1 & \cdots & r1k \\ \vdots & \ddots & \vdots \\ rk1 & \cdots & 1 \end{bmatrix}$$

Based on Tiwari (2011)'s claim that before performing a static and dynamic investigation, certain pre-estimations are required. They include tests such as stationarity testing, cointegration and the error correction estimations because without them, conclusions drawn from such analyses are regarded as meaningless. He argued that these tests are conducted with the aim to eradicate the condition of spurious resultsbecause the results from such unauthenticanalysis are pointless in that all errors are permanent. At the end the model will be taken through the vector error correct (VEC) stability condition check to determine the robustness of the results.

4. Results and Discussion

This section presents the results, interpretations and the discussions of all the empirical tests conducted in this study.

Correlation matrix: Table 1 presents the results of the Pair-Wise correlation matrix used to determine the nature of the relationship amongst our variables. The results indicate that only GTR is positively correlated with RGDP and the indication is that its high valueis likely to be associated with high value of RGDP in South Africa.

Table 1: Pair-Wise correlation matrix results

	RGDP	GTR	GFCF	BDFT
RGDP	1.000000	0.898212	-0.368224	0.021230
GTR	0.898212	1.000000	-0.377380	0.082689
GFCF	-0.368224	-0.377380	1.000000	-0.143838
BDFT	0.021230	0.082689	-0.143838	1.000000

Unit root tests: The study employed both the Augmented Dickey-Fuller (ADF) and Phillip-Perron (PP) unit root tests to determine the presence of a unit root amongst the variables. The two tests examine the null hypothesis against the alternative hypothesis of a unit root. Therefore, the decision rule is that if the test statistic is more negative than the critical values this will be an indication that the series do not have a unit root problem. Table 2presents the results of both the ADF and PP tests respectively. The results indicate that all variables were nonstationary at levels and they became stationary at first difference. This was based on the fact that the t-statistics of all the variables became more negative than the critical values at first difference of both tests.

The analysis of the results show that our variables do have the same order of integration, of order one and they are therefore regarded as I(1) variables. Given these results, the next step is to establish the chance of a long run economic relationship amongst them by means of Johansen cointegration analysis.

Johansen cointegration test: In order to establish the number of cointegrating vectors, we used the trace and the maximum eigenvalue tests. The hypothesis of no deterministic trend and restricted constant was employedin line with the Pantula Principle. The results from Tables 3 and 4reflect that at least one cointegrating equation occurs at 5% significance level. This was achieved by comparing the trace statics with the critical values of the hypothesised number of cointegration equation at "None"in Table 3 and the null hypothesis of no cointegrating vectors is rejected. The rejection is based on the fact that the trace test statistic of 50.98856 is bigger than the critical value of approximately 47.85613 at 5% significance level and it is also confirmed by the probability of 0.02 which is less than 5%. Therefore, the null hypothesis of at least one cointegrating vector cannot be overruledsince the test statistic of 23.19715 is smaller than the critical value of 29.79707.

Table 2: Unit root tests results

Variables	RGDP	GTR	GFCF	BDFT
ADF test				
Level	-0.696657	-2.684549	-2.316805	-3.411416
	(-3.496960)	(-3.495295)	(-3.498692)	(-3.495295)
First Difference	-4.717455*	-7.341967*	-6.101977*	-7.098917*
	(-3.496960)	(-3.496960)	(-3.498692)	(-3.498692)
PP test				
Level	-0.308139	-2.791832	-1.874476	-3.353787
	(-3.495295)	(-3.495295)	(-3.495295)	(-3.495295)
First Difference	-4.717455*	-7.341967*	-5.025521*	-7.078962*
	(-3.496960)	(-3.496960)	(-3.496960)	(-3.496960)

Note: Critical values are in parenthesis at 5% the appropriate lag length was selected by adopting the Schwarz info criterion (SIC) for ADF test and Andrews Bandwidth for PP test. Absolute values are not adopted

Table 3: Cointegration Rank Test (Trace) Results

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05Critical Value	Prob.**
None *	0.408070	50.98856	47.85613	0.0247
At most 1	0.182935	23.19715	29.79707	0.2365
At most 2	0.146322	12.48923	15.49471	0.1349
At most 3 *	0.074521	4.104547	3.841466	0.0428

Note: Trace test indicates 1 cointegrating eqn(s) at the 0.05 level; *denotes rejection of the hypothesis at the 0.05 level; **MacKinnon-Haung-Michelis (1999) p-values

In Table 4 the maximum eigenvalue examined the null hypothesis of *r* cointegrating vectors against the alternative hypothesis of *r+1* cointegrating relations. Therefore, the null hypothesis of no cointegration was rejected onlyat the hypothesised number of cointegration equation of "None" since the Max-Eigen (test) statistic value 27.79142 is greater than 27.58434 with the probability value of 0.04.

Table 4: Cointegration Rank Test (Maximum-Eigenvalue) Results

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05Critical value	Prob.**
None *	0.408070	27.79142	27.58434	0.0471
At most 1	0.182935	10.70792	21.13162	0.6764
At most 2	0.146322	8.384681	14.26460	0.3409
At most 3 *	0.074521	4.104547	3.841466	0.0428

Note: Trace test indicates 1 cointegrating eqn(s) at the 0.05 level; *denotes rejection of the hypothesis at the 0.05 level; **MacKinnon-Haung-Michelis (1999) p-values

In conclusion, we found that the two tests indicate the presence of one cointegrating equation amongst the variables which signifies the presence of a long run relationship amongst them. Since cointegration has been established, the Vector Error Correction Model(VECM)was used to eliminate anyinstability that may shock the system and also to study the interaction among the variables. This model also takes into account an extra channel of causation through the error correction mechanism which helps to determine the dynamic behaviour in the model, that is, the dynamics of both the short and the long run (Hurley, 2010).

Vector error correction model: The VECMs are the elementary Vector Auto Regression (VAR) model, with an error correction term (ECT) fused into the system. The purpose for the infused ECT is to determine the amount of movement away from the long run equilibrium. The results of the long run analysis are presented in Table 5 as follows;

Table 5: Long run relationship of the VECM

Variables	Coefficient	Standard-error	t-statistics
GTR(-1)	-16.61671	0.18685	-88.9318
GFCF(-2)	0.906194	0.07988	11.3444
BDFT(-2)	13.55028	1.02328	13.2425
ECT	-0.797428	0.36371	-2.19247
C	197.5547		

In order to determine the proper impact of the regressors on the dependent variable, the coefficients from Table 5 are incorporated in the model (equation 2) to form the long run cointegrating equation as follows:

$$RGDP_t = 197.5547 + 16.61671 GFCF_t - 13.55028 BDFT_t - 0.906194 GTR_t + \mu_t \quad 3$$

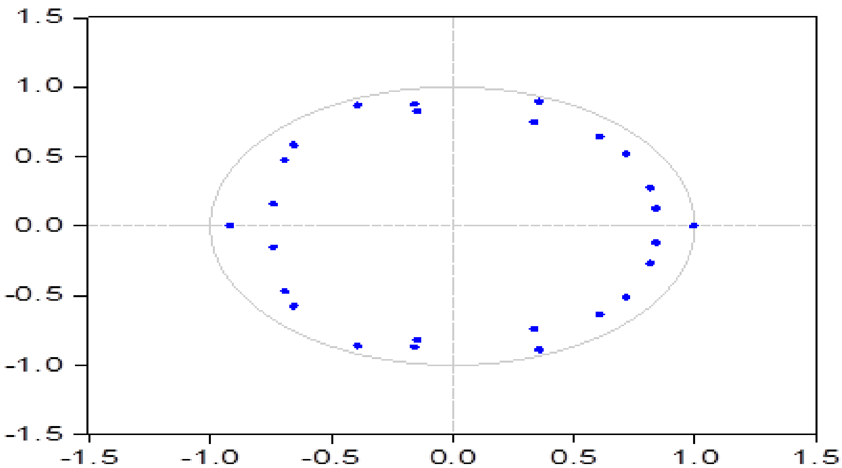
In order to be able to establish whether signs of the coefficients of the independent variables from Table 5 are as anticipated or not, they were reversed when they were transposed to the right hand side of the equal sign of equation 3. Therefore, the results show thatGTR has a positive and significant long run influence on economic growth whereas the GFCF and BDFT have a negative impact on RGDP.

Table 6: Short run relationship of the VECM

Variables	Coefficient	Standard-error	t-statistics
GTR(-1)	-8.991899	4.90360	-1.83374
GFCF(-2)	2.138597	0.80602	2.65327
BDFT(-2)	9.684297	3.51238	2.75719
ECT(CointEq1)	-0.797428	0.36371	-2.19247
R^2 0.876816	S.E equation	3.348881	
Adj R-squared 0.470309	F-statistic	2.156951	

Furthermore, the results of the short run relationship in Table 6 showthat as expected, the ECT (-0.797428) has a negative sign in line with the theory. The implication is that the system will be able to come back to equilibrium at a much higher rate of 0.797428 which translates into about 80% speed of adjustment back to equilibrium. Finally, the results of the VEC stability condition check with the inverse roots of the AR characteristic polynomialare illustrated in Figure 2.Since there is no root outside the unit circle, it implies that the VECM model fulfils the stability condition and it is therefore deemed acceptable in a statistical sense(Agung, 2011).

Figure 2: Inverse Roots of AR Characteristic Polynomial



5. Conclusion and Recommendations

The purpose of this analysis was to investigate the impact of fiscal policy on economic growth by employing annual time series data from 1960 to 2014. The Pair-Wise correlation matrix results indicate that only GTR is positively correlated with RGDP and its higher value is likely to be associated with high value of RGDP. The unit root tests results revealed that our variables are all integrated of order one. Furthermore, the presence of the long run economic relationship amongst fiscal policy and economic growth was established by means of Johansen cointegration analysis. This is in line with Djelloul, et al., (2014) who discovered the presence of a long run relationship between fiscal variables and growth in the MENA countries (Algeria, Egypt, Jordan, Iran, Tunisia, Morocco, Bahrain, Oman, Kuwait). The long run estimates indicate that government tax revenue has a positive and significant long run effect on economic growth and the government gross fixed capital formation and budget deficit have a negative impact on RGDP. Finally, the results are inconsistent with Osuala and Jones (2014) who found out that budget deficit has no major impact on RGDP growth in Nigeria and at the same time in line Ocran (2009) who also established a positive association between government tax revenue and economic growth in the South African economy. The negative coefficient of ECT indicates that in the short run the system will be able to come back to equilibrium at about 80% speed of adjustment. The robustness of the results was determined by the model which satisfies the stability condition. Henceforth, the study recommends that some expansionary fiscal policy measures should be strengthened as they play a very important role in the economy so as to meet the government target of the NDP of 2030.

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A Comparison of Rural and Urban Tourism Experiences: A South African Example

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Abstract: Tourism is a rewarding sector for several countries as it presents opportunities for growth and development. While tourism attractions are predominantly located in either a rural or an urban destination, literature lacks comparative research about experiences in these two contexts. The purpose of this study was to compare tourists' experiences of visiting a rural or an urban destination in South Africa. Data were conveniently obtained from 401 tourists who visited either one of two rural, or one of two selected urban tourist destinations. This study found significant differences in tourist perceptions for escape and peace of mind. Tourists felt more strongly/positive that they were escaping when visiting a rural tourism destination than when visiting an urban tourism destination. However, the study also revealed that tourists felt more secure and safe and that their privacy was prioritised (peace of mind) at an urban tourism destination than at a rural tourism destination. Tourism destination managers and governments may use the findings of the study to improve the tourist experience and promote a competitive platform for the tourism destination to attract more tourists.

Keywords: *Escape, Peace of mind, Rural, Tourist experience, Urban*

1. Introduction

Tourism has become a lucrative and fast-growing economic sector in several countries. Globally, the tourism industry has experienced a steady growth on a yearly basis (UNWTO, 2017). Current developments show that the number of international tourist arrivals globally increased by 4.6% (from 2014 to 2015), which generated export earnings of US$1.5 trillion (United Nations World Tourism Organisation [UNWTO], 2017). Sectors such as accommodation, transportation, entertainment and attractions obtained approximately 2.3 trillion dollars in proceeds in 2016 (Statista, 2017). In Africa, the role and impact of tourism cannot be underestimated. Between the years 1994 and 2014, international tourist arrivals to Africa grew by an average of 6% annually, creating an export revenue of 9% per year (United Nations Conference on Trade and Development [UNCTD], 2017). The average total contribution to the gross domestic product (GDP) increased from US$69 billion between 1995 and 1998 to US$166 billion between 2011 and 2014 (a growth from 6.8% to 8.5 % of the GDP in Africa) (UNCTD, 2017). In the employment sector, tourism generated more than 21 million jobs on average between 2011 and2014, which translates into 7.1% of all jobs in Africa (UNCTD, 2017). The above indicators demonstrate the contributions of the tourism sector to the African continent. In South Africa, tourism also plays a major role in the economy. In 2013, 14.3 million international travellers visited the country, an increase from 13.1 million in 2012 and 12.1 million in 2011 (Statistics South Africa [Stats SA], 2017). This injected a GDP value of R103.6 billion into the economy, an increase from R93.5 billion in 2012 (Stats SA, 2017). Domestic visitors contributed 57% (R124.7 billion) of the total tourism revenue in 2013, while international visitors contributed 43% (R94.2 billion) (Stats SA, 2017). The total spent by tourists in 2013 was R218.9 billion, an increase of 9.7 % from R199.4 billion in 2012 (Stats SA, 2017).

South Africa's tourism sector boasts of vast and attractive tourism destinations predominantly located in rural (e.g. Hole in the Wall, Sugarloaf Rock, and Isinuka Springs) and urban (e.g. Table Mountain, Cape Point, Robben Island, and Addo Elephant National Park) areas of the country. A rural tourism destination which is sometimes referred to as a nature-based destination (Loureiro, 2014) capitalises on natural and cultural attractions such as community-based tourism, eco-tourism, cultural tourism, adventure tourism, guest farms, backpacking, horse-riding and agri-tourism (Viljeon & Tlabela, 2007). Rural tourism destinations also promote empowerment opportunities for local people through capacity building and the acquisition of positions (e.g. managerial responsibility) (Butler, 2017). Challenges associated with rural tourism destinations include poor accessibility and lack of infrastructure (e.g. good roads and access to the Internet), non-availability of skills, lack of interest of investors, and low-quality products (Viljoen & Tlabela, 2007). These challenges may be a disadvantage when compared to urban tourism destinations.

Holland, Burian and Dixey (2003) argue that it is important to develop tourism in rural areas to increase the participation of the poor in the development of tourism and bring wider benefits to rural areas such as contributing to poverty reduction through employment creation. Tourism managers in rural areas, therefore, have to find ways of effectively competing with urban areas. One such way could be to examine tourists' perceptions of their experiences in rural and urban destinations. While several aspects of the tourism sector in South Africa have been examined (Ferreira & Hunter, 2017; George, 2017; Rogerson, 2015), a comparison between tourists' experiences of visiting a rural or an urban tourism destination has received limited attention despite Kirillova, Fu, Lehto and Cai's (2014) recommendation that a systematic comparison of nature-based (rural) and urban destinations would be fertile ground for future research. Thus, the purpose of the current study is to help fill this void. The study is of importance in two different folds. Firstly, the findings will assist destination managers to identify areas for improving tourists' experiences such as the physical environment, entertainment, education activities, safety, security and privacy issues. Secondly, the findings will assist the tourism sector in the Eastern Cape of South Africa to remain competitive and attract more tourists. The remaining sections of this paper are categorised in the following manner. Firstly, in the literature review, a distinction is made between rural and urban tourism destinations, followed by a review on the tourism experience, its dimensions, and the application thereof within both a rural and urban context. Next, the research methodology employed is discussed, whereafter, the results are presented. The next section concludes, discusses, and highlights the implications of the findings. The final section mentions the limitations and makes recommendations for future research.

2. Literature Review

Rural and urban tourism destinations: From a tourism perspective, a destination can be described as "…places that facilitate the conditions of a tourism experience which includes services and activities (e.g. lodging and attractions) that can contribute to the overall experience of the visited area. It offers a combination of tangible and intangible clues and creates the spatial experience context for the tourist" (Cetin & Bilgihan, 2016:140). Loureiro (2014:6) describes rural tourism as a "…market niche in the countryside, which involves lodgings with a small number of beds and a set of possible activities such as appreciating landscapes, eating and drinking regional food and wine, visiting regional fairs, or learning how to make handicrafts". A city, on the other hand, is an existing urban area which offers various social and cultural experiences to customers (Carlisle et al., 2016). Urban tourism destinations provide avenues for major regional tourism activities and for attracting day trip visitors (Carlisle et al., 2016). Rural tourism destinations in South Africa, such as Port Saint Johns are characterised by unsung treasure troves which comprised of the beautiful natural landscape, art galleries, nature reserves, beaches and other forms of attractions. However, as in the case of other rural tourism destinations, access to telecommunication facilities such as telephone and internet is a challenge, roads remain in poor condition, and the closest airport offers limited and expensive flights. On the contrary, urban tourism destinations in South Africa have good infrastructure (e.g. roads, water, electricity, telephone) and other exciting places (e.g. sports stadia/events, cinemas, nightclubs, casinos, beaches, shopping malls).

Tourism experience: There is no precise definition of the term 'experience' as experiences are holistic, personal and situational (Kalbach, 2016) and could be positive or negative. Authors define the concept of experiences from different perspectives. For example, Sundbo and Darmer (2008) define an experience as a mental journey that leaves the customer with memories of having performed something special, having learned something, or having just had fun. Kalbach (2016) maintains that experiences include actions, thoughts and feelings over time, which are not objective as they result from the subjective perception of the individual, and move across the lenses of situations and circumstances. Adhikari and Bhattacharya (2016) view experience as a customer's engagement in an activity that creates expectations and results in something that can be remembered. Experiences function as a personal source of information for the stories people tell about their lives and are important for their self-perception (Mehmetoglu & Engen, 2011). The foundation of the current paper is built on the work of Pine and Gilmore (1998), pioneers of the experience economy. According to Pine and Gilmore (1999), experiences are staged through engaging individuals and connecting with them in a personal and memorable way. These authors' ambition was to assist organisations to stage experience for customers using their market offering (goods and services) which would, in turn, allow organisations to fully engage with their customers and charge higher prices for those experiences (Pine & Gilmore, 1999).

As experiences are produced in different industries such as art, tourism, information technology, entertainment, as well as manufacturing and services, the creation of experiences differs from discipline to discipline (Sundbo & Darmer, 2008). Therefore, an organisation from a certain discipline cannot copy the experience creation from a different field. For example, a theatre company cannot replicate the experience created bya travel agency or a film company. In the context of tourism, experiences are created through a process of visiting, learning, and enjoying activities in an environment away from home (Jurowski, 2009). The advent of technological transformations and consumers becoming more sophisticated and demanding, have exerted pressure on the tourism industry to shift their focus from facilities and services to offering experiences. To meet the demand of the market, tourism destinations must now offer customised experiences and engage consumers in activities and experiences (Jurowski, 2009). Since most tourism destinations are clustered in either urban and rural areas, it is important to identify how visitors perceive a rural and urban tourism experience. When tourists visit an urban or a rural destination, their aim is not just to consume certain products or services on offer, but rather enjoy the experience they will receive from the visit. Thus, customer experience entails the personal interpretation of the service process that the visitor received (Ferreira & Teixeira, 2013). Tourism experiences are not limited to what happens during the actual encounter at a rural or an urban destination; they start before the actual meeting through the building up of expectations and memorable experiences which also contribute to the visitor's after-the-event experience of the encounter. The engagement *in* a tourism experience means that visitors seldom have the same experience, even though they are experiencing the same encounter (Sundbo & Darmer, 2008). The expectation of a pleasurable and memorable experience is what motivates visitors to decide on either a rural or an urban tourism destination. Tourism providers need to consider the provision of elements that meet the interests and expectations of the visitors. The current study set out to determine whether perceptions of such experiences differ in the case of rural and urban tourism destinations.

Dimensions of the tourism experience: Customers' growing desire for experiences have contributed to the multidimensionality of the construct (Amoah, Radder &Van Eyk, 2016). For the current study, the four experience dimensions proposed by Pine and Gilmore (1999) (education, aesthetics, entertainment and escapism) and peace of mind (Amoah, Radder &Van Eyk 2016) served as the basis for comparing tourists' experiences of visiting rural or urban tourism destinations. For example, when examining bed-and-breakfast guests' experiences, Oh et al. (2007) discovered that the experience dimensions (education, aesthetics, entertainment, and escape) differed regarding their relevance to all tourists. The study by Quadri-Felitti and Fiore (2012) on rural wine experiences supported the findings of Oh et al. (2007). Similar to differences in experiences found by Oh et al. (2007) and Quadri-Felitti and Fiore (2012) respectively in the accommodation and rural wine sectors, one would expect that there will be variances between rural and urban tourism experiences. These dimensions are discussed below.

Education: To truly enlighten tourists and further their knowledge or skills, educational experiences provided by organizations must engage the mind and body (Pine & Gilmore, 1999). Educational experience includes knowledge acquired, enhanced skills, learning, and stimulating curiosity. Enhanced skills involve a series of events that happen in the presence of the tourists, or that will engage the tourists' minds and bodies (Ali, Hussain & Ragavan, 2014; Oh, Fiore & Jeoung, 2007). Activities such as visiting an art gallery or an exhibition may constitute an educational experience at a destination. An educational experience would increase visitors' skills and help enhance their knowledge in becoming expressive thinkers. For example, a visit to a rural or an urban destination should enhance their general knowledge about the city or a location, stimulate their curiosity to learn new things as well as improve their knowledge about different cultures. A visit to a museum would serve as a source of information and knowledge to visitors, enhance their imagination and allow them to create a mental construction based on observation and exciting information (Achiam, 2016). Opportunities afforded to tourists to acquire knowledge about the history and origin of a destination, the culture of the people, and their way of living would contribute to an educational experience. Many of these activities are available in the rural and urban destinations forming the empirical focus of the current study. Education is frequently found to be an important element of the tourism experience. For example, Loureiro (2014) found education to be the second most relevant element of the overall rural

experience. MacDonald and Jolliffe (2003) identify that education experience enriches the tourist's satisfaction at a rural destination. This will help attract more tourist to the destination. Huang, Beeco, Hallo and Norman (2016) establish that tourists who are learning oriented are prepared to visit a rural tourism destination that has a variety of educational activities. Knowledge of such experience will assist destination managers to better the education experience offered to tourists. Therefore, it is hypothesized that:
H1: There is a significant difference between tourists' experience of the *education dimension* in rural and urban tourism destinations.

Aesthetics: The second experience dimension proposed in this study is aesthetics. Aesthetics is an important value-adding dimension and a critical satisfier at a destination (Kirilova et al., 2014). Quadri-Felitti and Fiore (2012) describe aesthetics as a passive appreciation of how a destination appeals to the senses. The aesthetics dimension is associated with the attractiveness or pleasantness of a destination, its unique architectural design, the scenery, a sense of harmony, attractive hotels, and the interior decoration of venues (Oh et al., 2007). In the context of rural and urban tourism destinations, tourists' experiential needs would be fulfilled provided the destination offers a sense of harmony to visitors, is suitably attractive, and provides pleasure to the senses. Factors such as the neatness of the physical surroundings, good facilities at various lodgings, a clean beach, and appealing landscapes may be necessities to achieve tourists' satisfaction. Tourism literature highlights the importance of aesthetics. According to Loureiro (2014) and Oh et al. (2007), the aesthetics dimension emerged as the most important dimension in shaping the tourists' overall experience. Although the focus of Kirillova et al. (2014) was not to compare tourists' perceptions of the aesthetics associated with nature-based (rural) and urban destinations, it emerged from their study that nature-based destinations with a clean and fresh environment with no human interference is considered beautiful. On the other hand, in urban destinations with great experiences, complex offerings of human activity, fashion, and innovative designs are viewed as beautiful because they add to the image of the urban destination (Kirillova et al., 2014). These findings provided a divergent view of how tourists perceive aesthetics at both rural and urban destinations. Therefore, it is hypothesised that:
H2: There is a significant difference between tourists' experience of the a*esthetic dimension* in rural and urban tourism destinations.

Entertainment: The third experience dimension relevant to this study is entertainment. Entertainment results when a customer passively absorbs the activities or performances of others (Pine & Gilmore, 1998,1999). According to MacDonald and Jolliffe (2003), entertainment activities enhances tourists experience at a rural destination and could result in visitor satisfaction. An example of an entertainment experience would be attending special events and watching theatre performances (Ali et al., 2014) such as a show at the Opera House (in the case of an urban tourism destination) or a cultural dance or performances and songs of the local ethnic group (in the case of a rural tourism destination). A further example of entertainment might also be to include live performances of contemporary music to attract tourists to a destination. Irrespective of where the experience takes place, entertainment experiences should be captivating, enhance visitor involvement, and encourage the tourist to stay, enjoy and have fun (Pine & Gilmore, 1999). Therefore, it is hypothesised that:
H3: There is a significant difference between tourists' experience of the *entertainment dimension* in rural and urban tourism destinations.

Escape: The fourth experience dimension selected for this study is that of escape. Escapism involves a satisfying experience that visitors create for themselves, and it makes them feel as if they have swapped environment or location. Escapism is also associated with visitors' feelings that they are living in a different world, time or place (Oh et al., 2007). It involves intense immersion during the observation of a performance or an occurrence (Oh et al., 2007). Tourism provides a way for people to escape from their normal lifestyle to experience something extraordinary (Oh et al., 2007). For example, both rural and urban tourists can immerse themselves in different activities such as seeing beautiful landscapes, relaxing at the beach, and enjoying different menus. Several authors (Beames, 2003; Cohen & Ben-Nun, 2009; Quadri-Felitti & Fiore, 2012) found that rural wine tourists want more to do than just visit the guesthouse. This implies that engaging the tourist fully in different activities will immerse the individual in the experience. A variety of activities will help the tourists realize the escapist dimension (Quadri-Felitti & Fiore, 2012). However, it is postulated that tourist's perception of escapist activities will be unequal in rural and urban tourism

destinations. Discovering tourists' perceptions if any, would assist destination managers to improve the experience offered and enhance their destination attractiveness.
Therefore, it is hypothesised that:
H4: There is a significant difference between tourists' experience of the *escape dimension* in rural and urban tourism destinations.

Peace of mind: The final experience dimension explored for the current study is that of peace of mind. This dimension includes the tourists' need for safety, security and privacy at a destination (Amoah et al., 2016). According to Barbini and Presutti (2014), peace of mind includes the physical comfort and safety, together with privacy and relaxation. Tourists' main objective for visiting a destination would not only include the physical consumption of the product or service but would also priorities personal safety, such as less crime at a destination. High crime rates in both rural and urban destinations may serve as a hindrance to the tourism industry (George, 2017). Peace of mind would involve the visitors' assessment of all the interactions with the service provider before, during and after the purchase of a product or service (Klaus & Maklan, 2013). Prior research has emphasized the importance of peace of mind to the tourist experience. For example, Klaus and Maklan (2013) found that peace of mind has a positive impact on customer satisfaction, loyalty and positive spreading of word-of-mouth information. In fact, peace of mind exerts the highest effect on customer satisfaction, loyalty and word-of-mouth recommendation (Klaus & Maklan, 2013). This implies that a destination that can provide tourists with safety, security and comfort may attract more tourists. Tourist's perceptions of safety, security and privacy-related issues within the context of the current study will assist tourism destination managers and government to intensify the need to ensure that tourists are safe and secured. Therefore, it is hypothesised that:
H5: There is a significant difference between tourists' experience of the *peace of mind dimension* in rural and urban tourism destinations.

3. Methodology

Primary data for the study was obtained through self-administered structured questionnaires administered to respondents using convenience sampling. Two rural (Port St. Johns and Coffee Bay Hole in the Wall) and two urban (Port Elizabeth and East London) coastal destinations in the Eastern Cape of South Africa were selected for the study. These destinations were selected because they have similar attractions (sea/beach, lodging facilities and other exciting sites that attract tourists) and are most visited by tourists in the Eastern Cape. A total of 25 measurement items were adapted from research by Amoah et al. (2016), Loureiro (2014) and Oh et al. (2007). Academic experts in the fields of tourism and marketing at a public university in South Africa reviewed the items for face and content validity. Their extensive review resulted in 20 items being retained. A five-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5) was used. A total of 401 respondents (200 from the urban destinations and 201 from the rural destinations) completed the final questionnaire. All the 401 completed questionnaires were used for the analyses. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartletts's test of sphericity were utilised to verify the data suitability for factor analysis. A KMO of 0.909 and a significant Bartlett's test (p=.000) suggest that the data set was appropriate for factor analysis (Pallant, 2013). Cronbach's alpha coefficient was employed to test the internal consistency reliability of the measurement items (Nunnally, 1978). All the Cronbaches alpha were within the minimum threshold of 0.70 (Nunnally, 1978). Finally, the t-test was used to compare tourists' experiences of rural or urban tourism destinations.

4. Results

Profile of respondents for both rural and urban tourism destinations: More males (56.9%) than females (43.1%) participated in the research. The majority of the respondents were between 18 and 30 years of age (35.2%) and between 31 and 40 years of age (25.2%). Many of the respondents reside in South Africa (89.8%). Dominant among the respondents were those who had obtained a diploma or a degree (51.6%). Regarding their income, the largest proportion of the respondents (40.4%) earn more than R15000 per month. Table 1 contains detailed profile information of the respondents.

Descriptive statistics associated with the measurement items: Table 2 reports on the descriptive statistics of the measured experience items. The mean scores for all the items were above 3.0, which indicates that the respondents were positive about their experience at both the rural and urban tourism destinations visited. The highest rating of M=3.87 occurred in item 9 (I had lots of fun) which measured the entertainment dimension. The lowest rating, M=3.26, occurred in item 19 (I felt this destination provided a sense of personal security) measuring the peace of mind dimension.

Exploratory factor analysis (EFA) for combined rural and urban tourism experience: Principal component analysis (PCA) and principal axis factoring (PAF) extraction methods were used to determine the number of factors. Five factors (see Table 3) were extracted and these accounted for 63.996% of the total variance in the dataset.

Table 1: Profile of respondents

	Frequency	%
Gender		
Male	228	56.9
Female	173	43.1
Age		
18-30	141	35.2
31-40	101	25.2
41-50	70	17.5
51+	89	22.1
Country of residence		
South Africa	360	89.8
Other	41	10.2
Education		
Lower than high school	4	1.0
High school/certificate	116	28.9
Diploma/degree	207	51.6
Postgraduate	74	18.5
Income		
<R3000	83	20.7
R3000-R8000	67	16.7
R8001-R15000	89	22.2
>R15000	162	40.4

Table 2: Descriptive statistics of the experience items for both rural and urban tourism experience

	Proposed dimensions and items	Skewness	Mean	SD
	Education			
A1	The experience made me more knowledgeable	-0.33	3.53	0.98
A2	I learnt a lot at the various tourist destinations	-0.40	3.55	0.90
A3	The experience stimulated my curiosity to learn new things	-0.32	3.54	1.00
A4	The experience at this destination really enhanced my skills	-0.25	3.45	0.99
	Aesthetics			
A5	The destination offered a sense of harmony	-0.37	3.72	0.97
A6	The experience received was very pleasant	-0.40	3.75	0.95
A7	The environment was very attractive	-0.40	3.72	1.00
A8	The environment provided pleasure to my senses	-0.38	3.77	0.95
	Entertainment			
A9	I had lots of fun	-0.54	3.87	0.97
A10	I enjoyed watching what others do at this tourist destination	-0.26	3.56	0.94

A11	Watching others perform made me feel happy	-0.45	3.63	0.97
A12	Activities of others were amusing to watch	-0.46	3.52	1.03
	Escape			
A13	I felt like I played a different character being at this destination	-0.45	3.46	1.09
A14	I felt like living in a different time or place when in the tourist destination	-0.37	3.47	1.10
A15	The experience made me feel like someone else	-0.42	3.30	1.13
A16	The experience provided a complete escape from reality	-0.24	3.43	1.06
	Peace of mind			
A17	I felt physically comfortable visiting this tourist destination	-0.43	3.59	1.03
A18	I felt that my property was safe when visiting various tourist attractions in the area	-0.20	3.28	1.11
A19	I felt this destination provided a sense of personal security	-0.26	3.26	1.08
A20	I felt that my privacy was respected everywhere at the various tourist destinations in the area	-0.22	3.32	1.09

Table 3: Exploratory factor analysis (EFA)

Pattern Matrix	Factor				
	Aesthetics	**Peace of mind**	**Escape**	**Education**	**Entertainment**
A1	0.113	-0.113	-0.094	0.732	0.100
A2	0.030	-0.004	-0.058	0.789	0.033
A3	0.040	0.105	0.120	0.623	-0.085
A4	-0.106	0.182	0.218	0.431	0.036
A5	0.444	0.116	0.150	0.125	-0.009
A6	0.678	0.086	0.077	0.040	-0.073
A7	0.661	0.053	-0.052	0.005	0.082
A8	0.647	0.033	0.044	0.027	0.069
A9	0.551	-0.028	-0.010	0.105	0.178
A10	0.047	0.027	0.035	0.122	0.530
A11	0.054	0.068	0.052	-0.080	0.718
A12	0.036	0.070	0.121	0.068	0.480
A13	-0.087	-0.058	0.729	0.034	0.112
A14	0.148	-0.090	0.628	0.022	0.054
A15	-0.037	0.082	0.675	-0.009	0.090
A16	0.213	0.142	0.418	0.007	-0.070
A17	0.217	0.594	-0.021	-0.005	-0.025
A18	-0.043	0.788	-0.058	0.055	0.099
A19	-0.059	0.885	0.022	0.001	0.059
A20	0.143	0.668	0.031	-0.008	0.011

The Cronbach's alphas were examined after the EFA. All the Cronbach's alphas (Education=0.78; Aesthetics=0.82; Entertainment=0.71; Escape=0.77; Peace of mind=0.86) were within the recommended threshold of 0.70 (Andrew, Pedersen & McEvoy, 2011; Hair, Black, Babin & Anderson, 2010; Nunnally, 1978).

Comparison of rural and urban coastal experiences: The respondents' experiences of a rural tourism destination were compared with the experiences of visiting an urban tourism destination. The findings are displayed in Table 5.

Table 5: Comparison of rural and urban coastal experiences

	Mean Urban	Mean Rural	t-value	Df	p	Valid N Urban	Valid N Rural	Std. Dev. Urban	Std. Dev. Rural	Cohen's d	Practical signif.
Education	3.46	3.57	-1.54	399	0.124	200	201	0.83	0.66		
Aesthetics	3.81	3.72	1.22	399	0.222	200	201	0.83	0.64		
Entertainment	3.56	3.59	-0.32	399	0.745	200	201	0.85	0.71		
Escape	3.28	3.55	-3.28	399	0.001	200	201	0.92	0.73	0.33	Small**
Peace of Mind	3.51	3.22	3.26	399	0.001	200	201	0.85	0.94	0.33	Small**

Statistically significant (**p<0.05)

The findings summarised in Table 5 demonstrate that there is a significant difference between only two of the dimensions, namely escape (p=0.001) and peace of mind (p=0.001). However, Cohen's d indicates a small effect size or practical significance in both cases.

5. Conclusion, Discussion, Implications

Tourism has been an emerging lucrative business across the globe in recent years. Several countries, especially in Africa, have focused their attention on attracting tourists to their countries. Proceeds from tourism in the years 2011 to 2014 contributed immensely to Africa's GDP and accelerated employment in various sectors (UNCTD, 2017). These developments generated a platform for business to compete. The rural and urban tourism destinations are a popular battlefield where businesses strive to attract the attention of tourists. Some studies have investigated the perceptions of tourists on either the rural or the urban tourism destination. However, comparisons of these two destination types are scant. The current study attempts to empirically compare tourists' experiences of rural and urban tourism destinations in the Eastern Cape of South Africa. To achieve this purpose, five experience dimensions, namely education, aesthetics, entertainment, escape, and peace of mind (Pine & Gilmore, 1998; Amoah et al., 2016) served as the basis of the study.

The results of the study confirm the generally positive experience of tourists for all five dimensions at both the rural and the urban destinations. The results also show significant differences for the escape (p=0.001) and peace of mind (0.001) dimensions. Hence, H4 and H5 were supported, while hypotheses H1, H2 and H3 were rejected. These findings are consistent with those by Oh et al. (2007) and Quadri-Felitti and Fiore (2012) that tourists' experiences of a destination will differ across destinations. The respondents indicated slightly higher levels of escape (M=3.55) in the rural tourism destinations than in the urban ones(M=3.28). This seems to suggest that rural tourism destinations provide more opportunities that allow tourists to been grossed and immersed in the experience to the extent of forgetting themselves or their daily routine activities. Rural tourists might also have experienced playing a different role or character at the destination which may not be the case with the urban tourism destinations. To attract more tourists to an urban tourism destination, it would be important to provide opportunities that would allow tourists to escape from their daily routine and view themselves as different human beings, for example, by incorporating cultural dances, cultural music displays, interaction with local people, informal dining with the locals and assorted meals into their destination's offerings. These can be offered at a minimal or no extra cost.

About the peace of mind dimension which encompasses safety, security, and privacy, it emerged that tourists who visited an urban tourism destination felt more secure and safe and that their privacy was respected (M=3.51) than those who visited the rural tourism destinations (M=3.22). To attract more tourists to rural tourism destinations such as Port St. Johns or Coffee Bay in the Eastern Cape of South Africa, it is important for the government, local communities, headmen, and other stakeholders to work together to eradicate crime and to assure tourists of their safety, security and privacy. This can be achieved through community education, and sharing information of the importance of tourism (e.g. employment, empowerment, development) in the area and the country at large. The government can also intensify police patrols at popular vantage areas where tourists frequently visit. Business owners of lodges, B&Bs and restaurants, can also assist communities in various ways, for example through self-empowerment projects, private security patrols and other logistics, to help the police maintain law and order. It has been shown that in South Africa, support by residents such as night patrols, alerting the police of crime scenes, and collaborative effort with the security personnel's of the community is vital for the rural tourism development. It is therefore recommended that this effort should be encouraged and enforced by the local municipality with more dedication and provision of the necessary resources that can enhance its effectiveness.

Although no significant differences occurred in the other dimensions, their mean scores are worth noting. The mean score for aesthetics for both rural and urban destinations was higher than any of the other dimensions, suggesting that tourists were more positive about the aesthetics provisions such as attractive environment, a sense of harmony and a pleasant environment. These results corroborate the findings of Loureiro (2014) and Oh et al. (2007) that the aesthetic dimension is the most dominant dimension in shaping a tourist's overall experience. The mean score for aesthetics in an urban tourism destination (M=3.81) was higher than the mean score for aesthetics in a rural destination (M=3.72). To be competitive, it is recommended that rural tourism destinations would have to improve the scenery, cleanliness, attractiveness, and pleasantness of the physical environment. Examples of the latter might be the provision of comfortable chairs and functional equipment at the various accommodation options which match those of the urban destinations and maintaining regular cleanliness of the environment. The mean score for education associated with the rural tourism destinations was higher (M=3.57) than the mean score of urban tourism destinations (M=3.46). This might suggest that tourists were attracted to rural tourism destinations owing to opportunities to enhance their skills, acquire new knowledge, or learn more from the rural people. Thus the results are consistent with prior studies by Huang et al. (2016) and MacDonald and Jolliffe (2003) who found that education experience are distinct factors for attracting tourists to rural tourism destinations. From a managerial perspective, it is recommended that managers of urban tourism destinations provide opportunities that can assist tourists in enhancing their skills, learn new things or acquire more knowledge. The use of qualified and knowledgeable guided tours can enhance this dimension. A designated vantage area should be reserved for artistic and craft designs to provide tourist with an opportunity to learn basic art and craft designs from the experts. This can enhance the tourist's education experience. Attractive and well-resourced museums with ample art exhibitions and documented valuables (e.g. history) can also be offered to attract tourists. Displays of these items could be changed on a regular basis to encourage regular visits.

A slightly higher mean score for entertainment was recorded for the rural tourism destinations (M=3.59) when compared to the urban coastal destinations (M=3.56). This lends support to the findings by MacDonald and Jolliffe (2003) that entertainment forms an important component of rural tourism experience. Thus, it is recommended that managers of urban tourism destinations could introduce more entertainment opportunities to attract more tourists who seek to be entertained. For example, incorporating and organising more authentic traditional cultural displays (e.g. songs, acts or dances), the introduction of street carnivals, competitions, international concerts, fashion events, hosting events that would bring local residents and tourists together for a collaborative sharing experience of culture and history and other entertainment facilities within various urban tourism destinations would attract more tourists.

Limitations and recommendations for further studies: As is evident in all other research, the current study has minor limitations which create avenues for future research. Firstly, the study was confined to four (two rural and two urban) tourism destinations in the Eastern Cape, South Africa and this limits the generalisability of the findings. Future research could extend the scope of the study sites to other provinces with the aim of generalising the findings. Secondly, five experience dimensions were selected as the basis of the investigation. Since several experience dimensions exist in the literature, future researchers should incorporate other relevant dimensions such as novelty, hedonics, and economic value (value for money) that may assist businesses and governments to better the experience of tourists at various tourism destinations. Finally, an empirical analysis that compares the satisfaction and behavioural intentions of tourists may be worth investigating.

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Challenge's Impeding Regional Integration in Southern Africa

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Abstract: Regional integration through the establishment of regional groupings has been taunted as a gateway to regional development and growth, the coming together of countries to share and contribute to knowledge, policy development, peace and security, trade and educational development is undoubtedly seen as the key to the development of Southern Africa. However, regional integration in Southern Africa has been hampered by numerous challenges which have derailed the quest of regional countries to deepen integration and cooperation. By strictly analyzing relevant literature related to regional integration in Southern Africa, it became evident that the region is engulfed with serious challenges that are hindering the quest for deeper integration, and often this is further compounded by internal economic challenges that members' states are faced with. The study uncovered the fact that regional integration has been difficult to entrench as member states are confronted with numerous internal challenges which are diverting their need to focus on regional matters. Consequently, regional integration is under threat in Southern Africa as many countries are not effectively prioritizing the development of policies aimed at aiding its entrenchment, mainly because of the significance of the challenges that they are facing and this will further affect members' states regarding socio-economic development. The study underscored the importance for regional governments to cooperate on issues of common threats and urgently develop and institute policies/mechanisms that would ensure the entrenchment of regional integration and more importantly its sustainability.

Keywords: *Regional integration, Socio-economic development, Challenges, Cooperation, Policy*

1. Introduction

For decades, the concept of regional integration has been rallied and preached by many countries globally and regionally, the concept was seen as key in promoting regional growth and development through the implementation and adoption of policies that would be mutually beneficial for a particular region. Indeed, regional integration has been largely beneficial for countries in Europe and Asia. While the latter is characterized by most developing countries, they have, however, been able to jointly negotiate and develop policies that would enable the region to experience economic growth, were all countries would benefit, and undoubtedly, growth in countries such as Singapore, Taiwan and Malaysia serves as a testament to what regional integration can do for regional development. Policies associated with regional integration are usually centred on the liberalization of the markets, free movement of labor and the increase in cooperation between regional states (McNamee et al., 2015). While many countries in the world have been able to put aside their differences and negotiate policies that would be regionally beneficial, countries in Africa who are also part of regional groupings have not witnessed the benefits associated with regional integration compared to their European and Asian counterparts, mainly due to many challenges affecting the region.

Political instability, member state disagreements, and trust issues have been major factors which have affected the ability of regional groupings in Africa to fully benefit from regional integration. While countries in Southern Africa, through the Regional Indicative Strategic Development Plan (RISDP) have advocated for an increase in regional coordination and integration, many member states are challenged economically, hence member states may have difficulties in fully prioritizing regional integration as national issues come first. Southern Africa with its vast embedment of natural resources faces many challenges which are impeding regional economic growth mostly in the areas of trade liberalization and labor movement. The RISDP advocates for the quick harmonization of trade and labor movement policies, however, final decisions regarding the development and implementation of such policies come down to individual member states (Miller, 2010). The paper, therefore, argues that while the region has been continuously advocating for the entrenchment of regional integration and many protocols have been enacted to heed to this call, there are many challenges that hinder its successful consolidation, and these challenges hinder member states from fully prioritizing regional integration in Southern Africa.

The European Union which has over 28 members has over the past 20 years been able to collectively develop, negotiate and implement various developmental policies through commitment and dedication. Hence these policies have aided rapid development within the European Union. The Association of Southeast Asian Nations has also been able to implement economically friendly policies which have greatly contributed to regional development. These examples show that despite the many challenges that confront regional groupings, with commitment and cooperation, countries can overcome challenges and implement mutually benefiting policies. The Southern African Development Community is characterized by the vast availability of natural resources which could spur regional development. However, the region has failed to collectively implement socio-economic policies that would rapidly attract investments, increase regional trade and cooperation. Regrettably, the region trades more with external partners rather than prioritizing regional trade, while there are challenges that aim to hinder deeper regional integration in the region, the Southern African Development Community has unfortunately not shown the political will and dedication to deepen cooperation and implement economic policies that would accelerate development and growth (De Lombaerde, Estevadeordal, & Suominen, 2008). The study, therefore, analyses that challenges impeding regional integration in Southern Africa and what possible mechanisms can be implemented to spur regional development and eliminate these challenges.

2. Methodology

The study relied on extensively secondary data as a means of collecting relevant and required information. It employed strict textual analysis of the available literature relevant the concept of regional integration in Southern Africa. The qualitative research approach was employed in the course of analyzing the data for this study. The purpose of this approach was to put into context of understanding the underlying concept of regional integration in Southern Africa and whether this approach has been successful in contributing to the growth and development of member states within the Southern African Development Community, furthermore the study aimed to understand to what extent have challenges impeded the rapid consolidation of regional integration. Kawulich (2005) asserts that qualitative research uses methods such as participant observation or case studies which result in a narrative, descriptive account of a setting or practice. While relevantly new, various scholars have tried to understand the concept of regional integration in Southern Africa. Therefore, there are rich sources of information, though some of these sources may not comprehensively speak directly on regional integration in Southern Africa. They nonetheless offer views on the subject matter which will be utilized to enrich the study further.

Theoretical framework: ATheoretical framework provides a particular perspective, or lens, through which a topic is examined (Miller, 2010). To understand regional integration in Southern Africa, the study used the theory of Regionalism.In the context of international relations and political studies, regionalism is the expression of common sense (by countries, people, or organizations) of identity and purpose combined with the creation and implementation of institutions that express a particular identity and shape collective action within a geographical region, the main aim is to economically advance the growth of the region through cooperation (Zeb, 2012). We can, therefore, opine that the creation of the SADC was a sign that regional states in Southern Africa wanted to increase cooperation and economic development. The creation of the Southern African Development Community (SADC) was the expression of regionalism as member states of the BLOC share numerous similarities and developmental traits. We can, therefore, study the cooperation of these countries from the regionalist point of view, also taking into account the numerous bilateral agreements and protocols that have been erected to ensure the consolidation of regional cooperation, so the provisions and groundings of this theory are relevant in explaining regional integration in Southern Africa despite the challenges currently facing the region. The regionalism theory rests on the notion that governments and stakeholders must contribute effectively to the development of a particular region, this could be done by increasing trade, regional investments and creating policies that deepen regional cooperation and integration (Söderbaum, 2004). The theory asserts that to a great extent, the ideologies of regions are inter-connected and that regional countries should harness these ideas and work together to contribute to the overall development of the region as a collective. The theory asserts that national governments have a huge role to play in this regard. Undoubtedly, SADC states have in the face of constant challenges advocated for the deepening of regional integration to spur economic growth and development; hence the idea of regionalism in Southern Africa is very well alive, despite the many challenges that are impeding is successful consolidation.

3. Literature Review

Regional integration SADC: An Overview: There have been numerous efforts continentally which have been aimed at increasing regional integration, some of these efforts go back to as early as 1963 when the organization of African unity was formed (Elhiraika et al., 2016). This period saw many African states coming together with the aim of advocating for greater integration and harmony in terms of policy. This led to the creation of the OAU, which was unpinned by the need to ensure that African states achieved economic growth, increased levels of cooperation on issues of peace and security (Oppong, 2011). Regional and continental cooperation has been an ongoing phenomenon for decades now in Southern Africa, results and commitment from member states have been observed and the results have been rather satisfactory, clearly this shows that there is a huge room for improvement in terms of ensuring that regional groupings are contributing to the socio-economic development of member states (De Lombaerde et al., 2008). Greater cooperation among states is very imperative in order to have greater regional and continental development, especially considering that Africa is currently faced with numerous issues such as infrastructural challenges, illiteracy and poverty and more recently the increase in terror-related issues among others (Gutowski et al., 2016), therefore regional groupings have a huge role to play in aiding members states effectively tackle these challenges (Copson, 2007).

Undoubtedly, the establishment of the SADC in 1990 was underpinned by the idea that regional coordination and cooperation would undeniably lead to socio-economic development and faster integration among member states (Kararach & Besada, 2016), and fortunately; when one observes the positive rates development that regional communities have brought to other countries in the world, it becomes evident that regional communities are in fact a pathway to growth and development, they encourage cooperation between member states and surely contribute significantly to regional stability and security (Yin, 2012). Furthermore, the successful entrenchment of regional integration contributes to decreasing poverty levels, unemployment, increases the standards of living and finally supports the socially disadvantaged through regional cooperation and integration (Tekere, 2012). Madyo (2009) opines that the fundamental aim of regional communities in Africa should be to ensure mutual cooperation, more especially because the colonial past that many African countries share. Therefore, the Southern African Development Community as regional body was meant to rapidly accelerate the development of regional policies that would cement socio-economic development for the region, and ever since its establishment (Ramutsindela, 2007), the SADC has incorporated many policies which aim at encouraging regional growth, debatable though, one may argue that the success rate of these policies in the region have been rather doubtful. Some of the most important protocols/policies developed by the SADC to promote integration and cooperation include:

Preferential Trade Agreement: It was greatly debated and agreed that to increase trade between member countries, customs duties had to be reduced as they were a huge barrier, hence the development of the Preferential Trade Agreement (PFA) (Khandelwal, 2004). Furthermore, eliminating tariffs and tariff quotas was also imperative in enabling member states to increase trade regionally. The SADC through the Regional Indicative Strategic Development Plan (RISDP) advocates for member states to agree on policies that would promote trade regionally and countries must eliminate trade barriers that suffocate trade in the region (Gathii, 2011). Trade liberalization has been associated with economic growth and employment; hence the SADC has encouraged member states to harmonize trade policies (Moreira, 2004). The reduction in tariffs and customs duties will enable member states to increase their exports to other countries which will be beneficial economically for the region (Than & Gates, 2001). While the PFA has not been fully entrenched regionally itself, the SADC has continued the call for its full realization as it would contribute significantly to development regionally. Plummer et al. (2011) also opine that globally, countries are embracing the idea of free trade and the SADC should not be left behind in this regard. Kühnhardt (2010) further, states that for the SADC to fully reap the rewards associated with regional integration, the region must:

- Reduce regional trade tariffs, customs and duties, however, their total elimination would be brilliant for the region
- Limit regional bureaucracy when it comes to agreeing on mutually benefiting polices and

- Work together to rectify any challenges in the region that might be hindering economic growth and development

Monetary union: Sorgenfrei (2011) states that one factor which has contributed significantly to the development of the European Union (EU) was the establishment of a monetary union. As countries in the EU use one single currency, regional trade is very easy to undertake and furthermore the currency protects the region from market uncertainty. The SADC through the RISDP acknowledges that importance and benefits of a monetary union and aimed at formally establishing one (Ferreira, 2011). However, one main problem with the SADC is the mistrust between member states, since its inception the SADC should have long instituted a monetary union in the region to increase growth and economic stability (Nathan, 2013), however, till his day, there is no union and implementing a monetary union may face resistance from some member states as they may feel it will encroach their sovereignty and integrity. The author does, however, agree that its implementation would be beneficial for the region.

Common Market for Eastern and Southern Africa (COMESA): It was a historic day on the 12th June 2011, when various heads of state from Southern African Development Community and East African Community officially welcomed the inauguration of the Common Market for Eastern and Southern Africa (COMESA) free trade area (Khandelwal, 2004). The aim was to further entrench the idea of regional integration through trade policies that would enable the easy flow of goods, services and capital, factors which are very important in contributing towards job creation and increasing trade regionally between member states (Elbushra et al., 2011). USA International Business Publications (2011) opines that while there have been very significant and important policies which have been developed by the SADC to promote regional integration, often their implementation has been very slow and their benefits to member states have been questionable. This may be because the required technical and infrastructural capacity needed to support these policies is lacking in the region and moreover, the ever-growing economic disparity in the region will further impede the entrenchment of regional integration. Additionally, a constant delay in the implementation policies is also contributing to the region's inability to achieve rapid socio-economic development.

Regional integration in SADC: Current status: Increased trade volumes would be a great indicator that SADC countries are deepening and prioritizing regional integration. However, statistics show that regional trade is dismally low, roughly 15-17 percent (Tralac, 2017). Chidede (2017) further opines that SADC intra-regional trade is only 10 percent which is very low compared to 24 percent in Asia and 40 percent in the European Union. This implies that SADC trades 90 percent with external countries. What's more, the Organization for Economic Co-operation and Development (OECD) opines that regional trade and growth will be a problem going forward mainly because of tariffs, duties, lack of infrastructure, poor economic growth and the slow ratification of regional policies meant to induce growth in Southern Africa (Jenkins, 2001). McNamee et al. (2015) argue that while the SADC is very good at developing policies aimed at encouraging regional development; the unwillingness to quickly implement these policies are another compounding factor affecting regional development and growth. An increase in intra-regional trade can create employment, support and expand markets and aid in the attraction of foreign direct investment. Moreover, it ensures competition for local firms enabling countries to have a diversification of products which surely contributes to innovation (Hallaert, 2007). From observation point of view, one can surely observe that the SADC has prioritized trade with external countries rather than investing in increasing trade from a regional perspective. Hence the region does not really accrue benefits associated with regional trade compared to countries in the European Union (Narlikar, 2011). Lewis (2001) also states that regional trade is dominated by South Africa, which enjoys a huge surplus in the region, thus achieving equal rates of economic growth becomes merely difficult. While there are many challenges to be addressed, the SADC has not taken drastic steps to commit itself in increasing regional trade.

Labor Movement: Rönnmar (2011) opines that as a result of the European Union's policy on free labor movement, countries like Germany, Britain, France and Austria have tremendously benefited from the free labor movement policy as millions of skilled individuals for the bloc have migrated to these countries, which has resulted in skills transfer, innovation and development, while the increase remittance flows has been a great source of income for sender countries, who are mostly from Eastern Europe. Deacon et al. (2009) posit that the provision of a free labor movement policy in SADC remains a controversial topic, despite many agreements and commitments by governments of the region to reduce the barriers associated with regional labor movement, many countries in the bloc are still opposed to a policy advocating for the free movement of people. McNamee et al. (2015) mention that an effective policy framework to manage labor movement would help spur development in the region, however, Nshimbi & Moyo (2017) opine some countries would be huge receivers, while some will be huge senders, hence perhaps the probability of the unequal rates of labor movement in the region is another factor preventing its establishment let alone implementation. Mayr & Peri (2009) emphasize that while the free labor movement policy of the European Union been hailed, it has its drawbacks, most notably because Eastern European countries lose a considerable amount of skills to the Western part of Europe and no matter how much remittances are sent back, unfortunately, they alone cannot compensate the loss of so many skilled professionals, moreover unlike the SADC, the EU has is characterized by rapid development and industrialization, hence implementing regional policies is easier as there are adequate technical and infrastructure capabilities to support these polices in terms of their implementation, operation and monitoring (Takács, 2015).

Regional integration in SADC: Possible benefits: Due to many regional and internal member state barriers, regional integration in Southern Africa has not been fully realized as member states would have anticipated. Regional integration in many parts of the world has been aided by the liberalization of trade and the free movement of labor policies, and regrettably, for Southern Africa, the region has not fully prioritized the implementation of these important elements (Chingono & Nakana, 2009). The SADC (2012) submits that should member states overcome challenges that are hindering the entrenchment of regional integration; it's successful consolidation would:

- Contribute to increasing in member states market development
- Increase regional trade and investments flow
- Promote the transfer of technology and expertise
- Create and sustain employment
- Improve standard of living and
- Increase cooperation on issues of common threat

Jabara et al. (1996) however, mention that SADC member states are very slow in ratifying regional protocols, mainly because they put national interests first than that of the region. Furthermore, there are numerous challenges that are hindering the region from successfully entrenching regional integration.Southern Africa is confronted with numerous barriers in promoting and realizing economic growth and development, and most importantly the provision and entrenchment of clear channels of communication which will ensure the region meets its regional and international commitments, particularly in relation to trade liberalization, poverty eradication, the entrenchment of regional integration and improving standards of living. Kawendu (2009) further states that the major problem affecting socio-economic development in Southern Africa is that member states have failed to attract the much-needed capital investment, this is mainly due to the absence of robust regional policies that prioritize trade and investments. Additionally, the lack of infrastructure to support trade policies has also been a major contributor. Chimbga (2009) also alludes that Southern Africa is one of the hardest hit regions in terms of brain drain, the region losses numerous skilled professionals to mainly developed Western countries, and this itself has significantly contributed to the failure of the region to achieve sustainable socio-economic development. Skilled professionals have been known to contribute extensively in a country's development; they contribute immensely in sectors such as research, construction, education, science and technology and manufacturing, and therefore, their migration negatively impedes development.

Tekere (2007) blames the increasing rate of HIV in the region as a huge stumbling block in terms of entrenching regional integration, governments have had to allocate billions of dollars to fight the disease, yet it is on the constant increase, and unfortunately, numerous people have died as a result of the ever-spreading disease. Governments have had to divert a lot of resources in trying to control the disease, which ultimately affects trade as resources are diverted to tackle the epidemic. Belshaw (2002) acknowledges that while the region is grappling with series of issues which are affecting regional development, the region however needs to urgently implement sustainable macroeconomic policies that will improve the business environment for investment and regional trade, more ever, the political instability in some resource-rich countries in the region will further be a barrier to attracting the necessary investments and growth. In conclusion, Tekere (2007) states that HIV/AIDS pandemic poses a stern challenge regionally and if is not severely dealt with, it will result in numerous resources being diverted hence affecting the fight against other challenges such as poverty, education and limited trade.

Challenges facing regional integration in Southern Africa: The following challenges have greatly affected regional integration in Southern Africa. They have continuously impeded regional efforts by governments to integrate and increase cooperation; these challenges are a combination of socio-economic and surely, their continued existence will keep on impeding the successful consolidation of regional integration in southern Africa.

HIV/AIDS: The HIV epidemic has remained one of the biggest challenges facing regional integration in Southern Africa. Zungu-Dirwayi (2004) state that within the region, South Africa has the largest and highest profile in terms of the prevalence of HIV in the world, with 7.1 million of the population living with the disease in 2016. In the same year, there were a reported 270 000 infections and 100 000 South Africans died from HIV. Morna&Dube (2014) state that member states have spent billions of dollars on trying to combat the disease, member states have diverted funds meant for education, healthcare and infrastructure development in order to fight the disease, which has further hampered the successful entrenchment of regional integration in Southern Africa, and this further prolongs the cycle of underdevelopment and poverty. Southern Africa has alone accounted for 64 percent of people living with HIV; furthermore, the life expectancy has been greatly reduced because of the ever-increasing rate at which the disease is spreading (Jamison, 2006). Mbuya (2000) states that countries such as Zambia, Zimbabwe, Namibia, Swaziland, Malawi, Botswana and South Africa have a high percentage of citizens who are living with the disease, and regrettably, the infection rate in the region is on the continuous increase, despite the huge amounts of monies which have been spent by regional governments. While many SADC states have poured significant resources in the fight against HIV, factors such as illiteracy, alcoholism and poverty are major contributors to the spread of the disease in the region.

Poverty: Another great challenge hindering the successful entrenchment of regional integration in Southern Africa is the high levels of poverty experienced by member states. Aris & Wenger (2013) opine that nearly half of the SADC population lives below $1 per day. According to the intentional council of social welfare, hunger, gender inequalities, exploitation, marginalization and HIV are the major contributors to the ever-increasing rates of poverty in the region (Skoet & Stamoulis, 2006). While the SADC through the RISDP, prioritizes the eradication of poverty through effective policy, the poverty rate in the region appears to be on the constant increase, and according to Jenkins et al (2000) this is mainly because SADC states are unable to effectively deal with the root factors that are contributing to the increasing rate of poverty regionally. According to Kanyenze & Jauch (2016) 45 percent of the total population in Southern Africa live in poverty. The region accounts for 9 percent of extreme poverty worldwide, surprisingly though, the region only accounts for 2.5 percent of the world population. Extreme poverty in the region is set to increase drastically over the next 40 years (Porter, 2017), hence, the urgent need for regional governments to develop policies that would contribute to the reduction of poverty levels.

Human capital development: Human capital development is another problem affecting regional integration in Southern Africa. The difficulty in accessing education makes it extremely difficult for citizens of member states to contribute effectively to the consolidation of regional integration and development (Fosu, 2015). Maumbe (2009) opines that accessibility of education in the region is still a huge problem, as most of the population was still finding it difficult to access quality education. Only 20 percent of children completed secondary education in SADC, less than 5 percent of secondary school graduates went to college. Ross (2008) opines that the illiteracy levels in Southern Africa are very challenging for the region and have contributed to the cycle of poverty and underdevelopment. Omamo& von Grebmer (2005) opine that there the region is characterized by a huge number of uneducated people and this means governments have a reduced number of educated professionals to aid in the implementation and sustaining of policies related to regional integration, hence further affecting its consolidation in Southern Africa.

Economic growth: The fundamental challenge for the SADC is to create an environment that will be conducive enough to ensure the attraction of foreign direct investment which will contribute to socio-economic development in the region (Mundial, 1992). The region has to reduce or perhaps eliminate policies that hinder the attraction of foreign direct investment. Mapuva & Muyengwa-Mapuva (2014) state that the region has drastically failed to increase inter-regional trade in order to promote economic growth, more especially considering that the region itself is characterized by huge unequal rates of development. Deeper levels of integration require an environment that is characterized by economic growth, and unfortunately, many countries in the region are currently experiencing sluggish rates of economic growth, therefore debatable, one may argue that the region's quest to rapidly integrate may not be feasible in the current economic climate (De Bruyn, 2012). Economic growth ensures countries are able to increase investments in fundamental sectors such as education, health and infrastructure, however with the region struggling economically, Mapuva & Muyengwa-Mapuv (2014) opine that the goal of the SADC to achieve equal rates of economic growth in the region would be extremely difficult going forward, unless policies to attract investment, harmonize trade and allow free labor movement are implemented.

Corruption: Africa is considered to be a very corrupt continent, where leaders are continuously accused of syphoning off public funds for self-enrichment at the detriment of the African people (Mekonnen, 2015). Undeniably, while such statements have often been in contradictory with each other, African leaders have indeed amassed millions of dollars in personal wealth. Hence their corrupt ways have contributed in the way in which the international community views Africa, as a corrupt continent. The Protocol against Corruption established by the SADC was a response to the growing rates of corruption in the region. A report by Transparency International (2011) stated the corruption was on the constant increase in the region and urged governments to enact tougher national laws that would aim at combatting corruption. Furthermore, from a regional perspective, the region needs to invest more in regional policies that would aid in eradicating corruption.

The rise of Multinational cooperation's: Chiozza & Goemans (2011) mention that currently, the political and governance system in some regional countries have only benefited those in power, while the masses linger in poverty, malnutrition and degrading standards of living. Tangri & Mwenda (2013) state that the influx of multinational cooperations (MNC's) in the region has exacerbated the corruption problem in the continent, especially because of money hungry politicians. Gekonge (2013) mentions that cases of corruption reported in countries such as Angola and the Democratic Republic of the Congo have significantly decreased the growth potential of Southern Africa. Numerous MNCs are operating in many countries and many have been caught up in scandals of bribery and intimidation, surprisingly though no action has been taken, mainly because of their partnerships with politicians, and unfortunately this has devastated the socio-economic development prospects of Africa, further increased the rate of poverty and failed to improve the standards of living for the African people at large. Vlassenroot & Raeymaekers (2004) mention that the Democratic Republic of Congo which is rich in diamonds and coltan has been engulfed in never-ending sectarian wars, and often MNC's have been fingered as perpetrators of such wars, to gain access to the vast resources that are currently embedded in the country's land. The rise of multinationals in Southern Africa will threaten good governance, transparency and accountability in the region because of their exploitative nature of doing business.

Limited participation of civil society in governance: Civil society is undoubtedly an important element in promoting good governance, stabilizing democracy, contributing to policy development and holding the government to account. Civil society plays a key role in pushing for new laws, programmes, policies or strategies on promoting good governance and growth; they have the power to hold governments to account on their commitments and promises. Unfortunately, many governments are yet to fully understand and accept the role of civil society in governance and development and in Southern Africa, not all countries have welcomed the role played by civil society especially in terms of contributing to the formulation of government policy. Many countries restrict the holistic operation of civil society organizations especially those that are concerned with governance and human rights issues (Teferi, 2010). While many governments in SADC have welcomed the establishment of local civil society organizations, some SADC member states are sceptical of civil society. However, globally, the role of civil society in governance has been welcomed and surely governments in Southern Africa will going forward understand the importance of civil society on governance and policy development.

4. Findings and Discussion

Regional integration has been at the forefront in terms of countries aiming to promote regional growth, cohesion and development in the past 50 years (Soesastro, 2006). The SADC has understood the importance of regional integration and has challenged itself to develop and implement policies that would ensure regional development and growth. However, challenges have to a great extent impeded the realization of the benefits associated with regional integration and hampered its effective consolidation.

Economic growth and development: The failure or perhaps the reluctance of the SADC to implement policies aimed at harmonizing trade policies, labor movement, investment policies and regional policies aimed at rapidly increasing integration will further impede economic growth and development going forward (Oosthuizen, 2006). Despite the existence of disagreements, countries in Asia and Europe Union have forged ahead with regional implementation policies aimed at enhancing and contributing to economic development. However, SADC countries have not prioritized the implementation of economically friendly policies that would induce growth and development. Faye et al. (2004) however, mention that many countries in Southern Africa are confronted many internal challenges; hence many countries are focusing in fighting internal challenges rather than focusing on policies meant to consolidate regional integration further. While the RISDP clearly stipulates what needs to be done in Southern Africa in order for the region to achieve growth and development, regional structural challenges in member states impede the successful consolidation of regional integration in the region. These challenges, unfortunately, contribute extensively to underdevelopment and poverty in SADC, hence the call for the region to prioritize the development and implementation of policies that will induce growth and development in SADC.

Poverty and HIV: Economic growth automatically improves the standard of living and a country's ability to provide public services. Unfortunately, the SADC through its failure to implement robust economic policies to spur growth has, in turn, exacerbated the poverty and HIV problem (Tekere, 2012). The region is characterized by a high number of people living in poverty and this has affected the ability of regional member states to prioritize regionalism as they have had to divert resources in order to combat the increasing rate of poverty in the region (Zungu-Dirwayi, 2004). Furthermore, the ever-increasing rates of HIV infections in the region pose a significant challenge. HIV will undoubtedly decrease the availability of skilled human capital and this will further hamper regional integration efforts. Poverty and HIV will increase the rate of under development in the region; it will increase the failure to consolidate regional integration in Southern Africa fully.

Infrastructure challenges and the late ratifying of protocols: The provision of free trade and the liberalization of trade policies require robust and functional infrastructure for them to be fully entrenched and beneficial for member states. Weak infrastructure provision characterizes the region and a low rate of industrialization and of course, with the region experiencing poor rates of economic growth, investing in infrastructure development becomes very difficult (Khandelwal, 2004). Infrastructure availability is the driver of international trade and market development, hence the lack of infrastructure development and availability in Southern Africa further hampers the goal of increasing regional trade, affects the growth potential of regional economies and ultimately the regions ability to attract foreign direct investments (Huang, 2010). Crush & Dodson (2017) state that from a technical point of view, the SADC has not prioritized the quick ratification of policies and this further creates a hindrance to the aim the SADC which is to rapidly foster regional integration and growth. The late implementation of agreed policies, according to Aall& Crocker (2017), is because of mistrust or unwillingness of member states, for example, the free labor movement policy has not been ratified despite the continuous call by the SADC to implement such a policy.

5. Conclusion and Suggestions

Undoubtedly, Southern Africa had pinned its hopes that the formulation of the SADC would propel the region towards sustainable and equal rates of economic growth. Having seen regions such are Europe and Asia develop significantly because of regional integration, the SADC has hoped the same level of growth will be witnessed in Southern Africa, however, with so many challenges, the realization of equal rates of economic growth in Southern African has been rather difficult to achieve. Undoubtedly, regional groupings such as the

European Union and the Association of Southeast Asian Nations are enjoying the benefits of jointly implementing policies that are aimed at spurring regional development, and as a result, they have over the past decades experienced positive rates of economic development. However, while regional groupings have at times being criticized for overriding the national sovereignty of member states, nonetheless, they have been praised for consolidating deeper levels of integration between regional countries. Unfortunately, though, many challenges prevalent in Southern Africa have not permitted the region to enjoy the benefits that are associated with regional integration. Furthermore, the region has been rather slow in terms of enacting economically friendly policies to attract investments. Southern Africa to a great extent is experiencing increasing rates of economic disparity which further hinders the regions capacity to consolidate closer levels of regional integration as member states are preoccupied with national issues rather than prioritizing regional problems. Regional protocols meant to spur growth have also been hindered by economic and infrastructural challenges experienced by member states. While the region will surely strive to achieve greater levels of regional integration, it is quite evident that as long as these challenges persist, regional integration in Southern Africa will be difficult to achieve. It is with these findings that the study suggests the following:

Establishment of inter-regional trade committee: Barriers are hindering closer trade and the attracting of economic investment should be centralized, and a special committee on trade should be established. The committee will be different from that of the Committee of Ministers of Trade which is already in existence. The trade committee will be responsible for conducting extensive research to determine the nature of the barriers that are hindering trade and then develop the best solutions to respond to them. Trade experts from each member state will contribute to the formation of this committee and it will work hand in hand with the Committee of Ministers of Trade to rectify challenges affecting regional trade.

Harmonization of trade policies and consolidate the SADC free trade area: The region has the potential to increase regional trade, however, because of member state bureaucracy and the failure of states to regionally prioritize the reduction of trade tariffs and duties, inter-regional trade is at an all-time low, underdeveloped and not prioritized by the region. Trade policies should be aligned with national policies of member states in order to avoid any disagreements, the elimination of tariffs will surely increase regional trade, therefore countries should implement policies to increase trade and harmonize trade policies. While the continental free trade area is still in the pipeline, the SADC should strive to consolidate a regional free trade area and ensure that all member states are involved in its development and consolidation. The SADC has regional free trade area, however, regional trade remains very low and dominated by South Africa, Furthermore, not all SADC members have joined the free trade area, hence this call for the revitalization of the FTA to ensure that all members state are participating, this has to be done through effective policy coordination and cooperation between member states. Moreover, the SADC has to ensure that the free trade area does not affect individual member states policies on trade.

Improve the provision of good governance: Undoubtedly, good governance is key in promoting regional integration. Transparency and accountability need to be at the forefront when developing policies and mechanisms aimed at enhancing regional economic cooperation. The region should deal decisively with corruption as it has been identified as the major hindrance of regional integration, and it has hindered regional integration as many SADC countries are confronted by rampant corruption, embezzlement and maladministration.

Invest infrastructure development: One of the major challenges impeding greater regional integration in the SADC is the unavailability of robust and well-functioning infrastructure in the region. Telecommunications, road, rail and modern trade facilities are all imperative necessities needed to spur growth and development. Perhaps to alleviate this problem, SADC states could establish an investment fund, where member states would on a monthly contribute a certain amount needed to fund regional infrastructure in member states, of course the criteria for which type of infrastructure is urgently needed would be left to the SADC, but nonetheless this would contribute effectively in ensuring the provision of quality infrastructure in the region and it will also benefit the region in the long run.

Institute a regulated border policy: European countries undertook great sacrifices to ensure the creation of the EU's free labor movement policy. The SADC should jointly implement policies that would ensure the uninhibited movement of labor across the region, however, the mere fact that countries in the region are characterized by unequal rates of migration, perhaps this has been one of the major stumbling blocks that has prevented the region from implementing a free labor movement policy. However, Hepple (2005) mentions that a regulated labor movement policy will surely contribute to innovation and the transfer skills, hence developing and implementing a free labor movement policy would be beneficial for the region.

Rectify regional policies and coordinate the fight against HIV and poverty: The problem of delaying the ratification of regional policies is another problem impeding the successful consolidation of regional integration. The SADC must ratify policies in a timely manner to ensure that regional integrating is consolidated effectively. Regional integration can only be successful if member states ensure the fight against HIV which has been a huge factor affecting regional cooperation and growth. The SADC should strive to collaborate with international partners to ensure the fight against HIV, this could be in the areas of training of medical staff, construction of medical facilities and prevention programs as this would aid the region in its fight against the disease, especially considering that regional governments have spent billions of dollars fighting the disease. Furthermore, poverty has been devastating for the region, it has not aided the region in its quest to achieve development, therefore regional governments should establish policies that would contribute extensively to the reduction of poverty, these policies may be centered on education, trade and investments as these three elements have been proven to contribute to the reduction of poverty. While these suggestions may go a long way in aiding the entrenchment of regional integration in SADC, ultimately the will has to come from individual member states as they are the decisions makers when to comes to the adoption of policies agreed at regional level, and until the region has prioritized regional economic development through observable actions, challenges such as HIV, poverty and the lack of adequate infrastructure will continue negatively impacting socio-economic development in the region.

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