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EDITORIAL NOTE

This is the third volume, the second issue of the Pan-African Journal of Business Management (PAJBM) hosted at the Faculty of Business Management at the Open University of Tanzania. This issue includes articles covering predicting academic staff intention to stay, the relation between manufacturing capability and performance, employees job attitudes, and the relationship between brand experience and brand loyalty. All areas are of interest to scholars in Africa. The researchers in this issue deal with conditions in Tanzania and Rwanda.

The Editorial Board hopes that the readers will find the articles useful and contribute to the academic knowledge in the respective areas.

Prof. Jan-Erik Jaensson
Chief Editor

General information

The Journal is produced by the Faculty of Business Management at The Open University of Tanzania. It will accept theoretical, conceptual and research-based papers in a wide range of topics on business management concerning Africa. It also accepts cases, book reviews and summaries of dissertations.

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Predicting Academic Staff Intention to Stay in Tanzanian Universities Using Job Embeddedness Model: Smart PLS Approach

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Abstract: *Turnover is one of the reasons for the inadequacy of academic staff in Tanzanian universities as in many other African countries. This study examined the relationship between job embeddedness and academic staff Intention to Stay in Tanzanian Universities, as a key step towards combating the problem of turnover. A survey of 314 academic staff from selected public and private universities in Tanzania was conducted and Smart PLS Structural Equation Modeling was used in examining the relationship. Further, PLS-MGA was conducted to examine whether a significant difference exists in the influence of job embeddedness on the intention to stay among academic staff in Public and Private Universities. The findings indicated that Job Embeddedness sufficiently predicted academic staff Intention to Stay in Tanzania's universities, with organization fit and organization sacrifice exerting main influences. The relationships varied between public and private universities with stronger relationships in private than in public universities. It was concluded that job embeddedness is an important predictor of intention to stay, and its inclusion in retention models may improve retention of academic staff in Tanzania's universities. Private Universities in Tanzania may especially find more affirmative results in terms of retention, by improving the fit between their academic members of staff and their universities.*

Keywords: Job embeddedness, Academic staff, Intention to stay, Tanzania's universities.

Introduction

Disposition of academic members of staff, in terms of intellectual and creative abilities and commitment, largely affect the performance of a university as a frontier in the creation of knowledge and skills in human capital required for any country's socio-economic development. Empirical evidence indicates that many universities in African countries (Nyahongo, 2015; Tettey, 2010) and Tanzania in particular (Makulilo, 2012; URT, 2010, 2014), suffer from inadequacy of academic staff, where turnover stands to be one of the reasons for the problem. It has been reported that the turnover rate of academic staff in South African universities stood between 5% and 18% (Koen (2003) in Pienaar and Bester, 2008). In Ethiopia, a total of 120 faculty members left the Addis Ababa University College of Health Sciences in a period of 20 years between 1991 and

2011 (Hailu, et al., 2013). Of these 66.6% were at the rank of Assistant Professor and above. In Uganda, 160 out of 1502 academic staff left Makerere University, within one year, between 2011 and 2012 (Bisaso, 2017).

Documentary evidence of isolated cases shows that, between the year 2009 and 2013, a total of 102 academic staff (out of 840), left the University of Dodoma (UDOM) through resignation or termination (Nyahongo, 2015). On the other hand, an empirical study conducted by Mkumbo (2014) revealed that 44.5% of academic staff in public universities and 34.4% in private universities in Tanzania had positive attitudes towards alternative careers. Attitude and intention to leave are considered reliable antecedents of actual leaving, and they have been used as surrogate measures of turnover (Griffeth et al., 2000, Price 2001). According to Mkumbo (2014), academic staff who expressed favour for an alternative career comprised 45.5% of respondents from University of Dar Es Salaam (UDSM), 39.3% of those from Tuzome University (now University of Iringa - UOI), 39.1% from UDOM, and 34.8% of respondents from Saint John University of Tanzania (SJUT). The problem of academic staff turnover is especially critical currently, where the attractiveness of academic jobs is believed to have declined due to increased workloads and work stress, and reduced work autonomy (Pienaar and Bester, 2008) and relatively low compensation (Nyahongo, 2015).

The Tanzania Development Vision 2015 expresses the country's determination to be a nation that produces the number and quality of educated people who are sufficiently equipped with requisite knowledge and skills to solve the society's problems, to meet the challenges of development and to attain competitiveness at regional and global levels. Realization of this vision at the university level depends much on the availability of academic staff. It follows that universities, both public and private, find it increasingly important to invest in retaining their academic staff. This is because the knowledge and skills possessed by these employees are normally acquired over a long period of time, and are accompanied by extensive experiences which are difficult to replace once lost. It is not surprising on these bases to find that more researchers are interested in studying and understanding the mechanisms backing academic staff intention to stay. According to Ghosh and Gurunathan (2015) and Uzoka, et al. (2011), this is a useful step towards the designing of interventions for minimizing turnover.

Traditionally, employee retention has been associated with attitudes about one's current job together with the availability of an alternative job. The wisdom was that employees will stay in the organization if their emotional feelings of liking their jobs (job satisfaction) and attachment to their organizations (organizational commitment) are high, and their judgment of the current situation is favoured to that of the perceived/available alternative jobs (Mitchell et al., 2001). Empirical evidence however, has shown that, much as these traditional affective constructs are significantly associated with turnover, their contribution to variance in employee turnover has ranged from low (5%) to modest (25%) (Griffeth et al., 2000). As an extension of retention studies, Mitchell et al., (2001) came up with Job Embeddedness Theory (JET), which focuses on the non-affective construct termed Job Embeddedness (JE). The main focus of JET is on both, work and non-work aspects of employees that make them stay in the organization, and not what makes them leave, which is a focus of many traditional retention theories. The reasons which make employees stay in an organization are different from those which make them leave (Steel et al., 2002).

JET has been applauded as a promising avenue for understanding employee retention. This theory however, has been tested in different cultural and economic contexts, largely in America and Europe where the theory originated (Besich, 2005; Crossley et al., 2007), but the theory has been scarcely studied in the context of Africa, specifically in Cameroon (Karatepe and Ngeche, 2012), Egypt (Nafei, 2015), Ghana (Nicholas et al., 2016), Nigeria (Karatepe, 2013) and South Africa (Ferreira and Coetzee, 2013; Takawira and Coetzee, 2014; Van Dyke et al., 2013). To the best knowledge of the researchers, the only evidence of a study on job embeddedness in Tanzania's context is by Hokororo et al., (2018). Studies testing the relationships between JE and employee retention (Allen, 2006; Besich, 2005; Robinson, 2014) revealed a considerable variation of results in different contextual settings. This indicates that there is a lack of consensus on the generalizability of Job Embeddedness Theory.

The objective of this study was to test the applicability of JET in predicting academic staff intention to stay in Tanzania's Universities. Specifically, the study first, ascertained the predictive power of job embeddedness model, examining the relationship between job embeddedness specific dimensions and academic staff intention to stay in Tanzania's universities. Second, the study compared the relationship between job embeddedness and academic staff intention to stay in the public and private universities in Tanzania. Though both public and private universities are regulated by TCU, their priorities on specific employment policies are different (Mgaiwa and Poncian, 2016), which imply that they may require different retention interventions or different extent (saliency) of a given intervention.

Theoretical Review

This study examines Job Embeddedness Theory (JET) as an upcoming theory in explaining employee retention, among other organizational outcomes. According to JET, individuals would stay in their jobs because of the attaching forces called fit, links and sacrifices they have with their work organizations and their off the job communities (Mitchell et al., 2001). JE as a concept is defined by Mitchell et al., (2001) as a broad collection of influences on employee retention, which are like a net or web in which employees can become stuck or bound from leaving the organization. It comprises a sort of stuckness, inertia, or bias toward maintaining the status quo. Building on this definition, Lee et al., (2014) defined JE as the extent of an employee's stuckness or enmeshing, within a larger social system, and it results from numerous external or contextual forces in the organization and community that operates on a focal employee.

JET as perspective is different from the traditional perspectives, which associate employee turnover mainly with affective constructs of job satisfaction and organizational commitment (Michael, 2015), and also with perceived availability of alternative jobs. As opined by Mitchell, et al., (2001), the three forces of attachment in the two locations form the six dimensions of JE namely, organization fit, community fit, organization links, community links, organization sacrifices, and community sacrifices, which inhibit an employee from leaving the organization.

Mitchell and Lee (2001) and Holtom et al., (2006), defined *Fit* as the employee's perceived compatibility or comfort with an organization or with his/her community around. While *Organization Fit (OF)* explains the compatibility of an employee's personal values, career goals, and plan for future with the corporate culture and demand of his or her immediate job including

job knowledge, skills and abilities, *Community Fit (CF)* is the perceived compatibility or comfort with the community and the environment such as weather, social services, general culture, outdoor activities, political and religious activities, and entertainment, in the location where one resides. The contention of JET is that, the better the fit, the higher the likelihood that an employee will feel professionally and personally tied to remain in the organization.

Links, on the other hand, refers to the perceived connections, which may be formal or informal, that an individual has with other people, activities or institutions either on or off the job (Mitchell and Lee, 2001; Holtom et al., 2006). Accordingly, *Organization Links (OL)* are the formal and informal connections that an individual has with the organization elements such as departments and work-teams and with other individuals at work such as co-workers, bosses and mentors. *Community Links (CL)* on the other hand connote the social, psychological and financial ties an individual has with the family, friends, groups, institutions and environment in the community outside the work. The theoretical underpinnings of JET suggest that, the more the links an individual has both in the organization and in the community, the more he/she is bound to the work organization.

Lastly, *sacrifice* is the perceived cost of material or psychological benefits that may be forfeited by organizational departure (Mitchell et al., 2001). Accordingly, *Organization Sacrifice (OS)* refers to personal losses such as giving up work colleagues, relevant projects or pleasant benefits, switching costs such as new health care, pension plans, due promotions, and sabbaticals, emanating from leaving an organization. On the other hand, *Community Sacrifice (CS)* is perceived when one has to leave a community, including leaving a safe and attractive neighbourhood, leaving a society in which one is senior, loved and respected, and leaving an easy commute. JET posits that the more an employee will have to give up when leaving, the harder it will be to quit the job in the organization (Holtom et al., 2006).

Empirical Studies

Empirical studies to validate JET in different contexts revealed varied results as manifested right from the findings of a work by Mitchell et al., (2001), for example. In this study, the overall JE and three of its dimensions namely, Organization Fit, Organization Link and Organization Sacrifice, correlated significantly positive with intention to stay, while all three dimensions related to the community had an insignificant correlation with intention to stay in one of the two samples studied. It has been established in subsequent empirical studies on JE (e.g. Besich, 2005, and Crossley et al., 2007), that JE and its dimensions have a relationship with employee intention to stay in their work organizations, and these relationships vary in different contextual settings.

A study specific to academic staff by Shafique et al., (2011) in Pakistan's Universities revealed that only two of the six dimensions of JE namely, organization fit and organization sacrifice had a significant relationship with intention to leave, while organization sacrifice and the rest of community job embeddedness dimensions had none. Though this study involved academic staff similar to our study, the cultural contexts, however, are different, where Pakistan ranks lower in individualism index (14) than Tanzania in East Africa (27) (Hofstede, 1983). According to Ramesh and Gelfand, (2010) culture influences the levels of JE. A study by Wheeler et al., (2010) revealed that, while organization job embeddedness had a negative relationship with leave intention among

academic staff at Midwestern University, community job embeddedness had an insignificant relationship contrary to the proposition of JET. These contradictory findings warrant further examination of JET in the context of our study.

Hypotheses Formulation

The underpinnings of JET formed the bases for the development of the hypotheses tested in this study. JET maintains that; Organization Fit, Organization Link, Organization Sacrifice, Community Fit, Community Link, and Community Sacrifice have a positive relationship with employee intention to stay in their jobs.

The following Hypotheses were therefore formulated:

H₁: Job embeddedness model predicts the academic staff Intention to Stay in Tanzania's universities

H_{1a}...H_{1f}: Job embeddedness dimensions (OF, OL, OS, CF, CL, and CS) have a significant positive relationship with academic staff Intention to Stay in Tanzania's universities

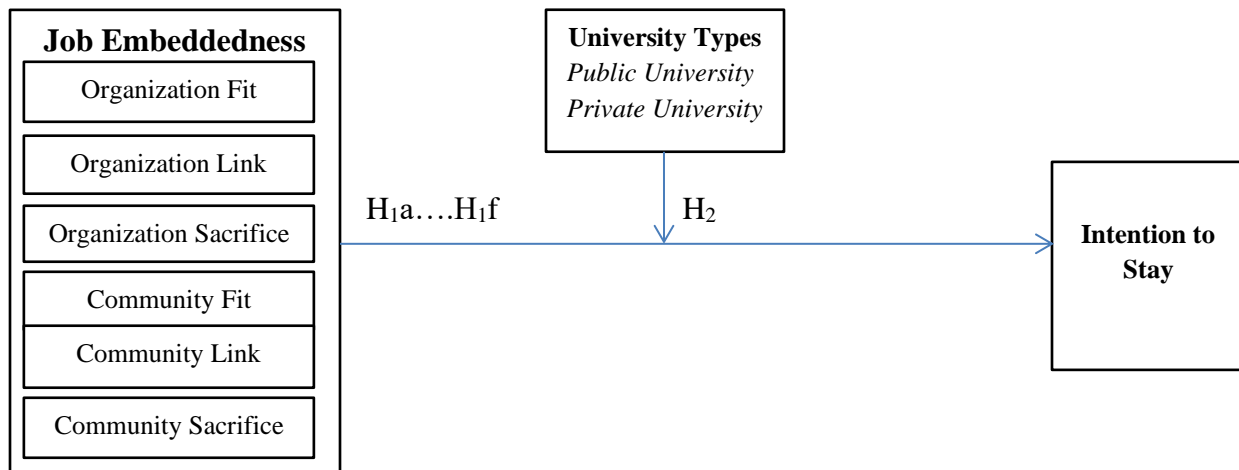


Figure 1. Conceptual Framework of the Study

Furthermore, empirical studies have revealed that there is a difference in turnover intention between academic staff in public and private universities in different countries. A study by Mapolisa (2015) found out that, the quit rate is more in private universities than in public universities in Zimbabwe. According to Mkulu (2018), the general trend globally is the movement of lectures from private to public universities. It was however, not certain how the relationship between job embeddedness, a non-traditional affective construct, and academic staff intention to stay in university would be affected by the type of university in which academic staff is working. Banking on these observations, it was hypothesized that;

H₂ Relationship between job embeddedness and intention to stay differ between academic staff in public universities and private universities in Tanzania

Research Methodology

Sampling and Data Collection

The population for this study was academic staff in public and private universities registered by the Tanzania Commission for Universities (TCU) in Tanzania as of September 2014 (TCU, 2014). Since the updated aggregate number of academic staff in all universities in the country was not available, the total number of academic staff in the studied universities, which was 2,373, represented the population of the study. Based on Krejcie and Morgan's (1970) rule of thumb, this population size corresponds to a sample size of 331 respondents. To accommodate for possible non-response (considered 20% for management studies in Tanzania, as estimated by Goodluck, 2009), a total of 410 questionnaires were distributed to academic staff who were randomly selected from sampling lists provided by five universities, including two public universities, (University of Dar Es Salaam (UDSM) and University of Dodoma (UDOM)), and three private universities (Saint Augustine University of Tanzania (SAUT), University of Iringa (UOI), and Saint John's University of Tanzania (SJUT)).

These universities were selected purposively to represent different types of university (public and private universities), relative age (old versus new as indicated by the registration dates), and relative size of university (number of permanent academic staff). University type and age criteria (as also used by Mkumbo, 2013), are considered important because they ensure representation of the major categories of universities in Tanzania. From the distributed questionnaires, 363 (89.8% response rate) were collected, and 314 found usable and so used in further analysis in our study.

Variables and their Measurement

The structured questionnaire used in data collection comprised three major parts. Part one comprised 12 questions inquiring the personal demographic information of respondents including the type of Employer University and respondent's academic disciplines.

University Type – describes the sector in which a university belongs, which also indicates its ownership. Two types of university namely public universities and private universities are found in Tanzania. Public Universities are the one owned by the government of Tanzania, and in the questionnaire, were represented by number 1. Private universities are the one privately owned, mainly by religious organizations. Private Universities were represented by number 2 in the questionnaire.

Job embeddedness was measured by a six dimensions scale adopted from Shafique et al., (2011). This scale, which is a customized version of the multi-item construct of Mitchell et al., (2001), had 36 formative items of job embeddedness construct. Shafique and colleagues applied this scale in a study of academic staff in universities. Part three of a questionnaire measured academic staff intention to stay in the universities, which is a reflective measure.

Intention to stay was measured by a 4 - item scale adopted and adapted from Besich (2005) Turnover Intention Scale. The scale was reworded and reverse coded to reflect retention instead of turnover.

In both, part two and part three of our questionnaire, respondents were asked to express their level of agreement or disagreement with the statements describing the constructs, on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The scales were tested in a pilot study to confirm their reliability and validity.

Data Analysis

First, the Statistical Package for Social Sciences (SPSS) for windows version 22 was used, in the descriptive analysis of the demographic characteristic of respondents which were presented in frequency distributions and percentage tables. Second, the Smart Partial Least Square Structural Equation Modeling (Smart PLS-SEM) was used in structural analysis, in examining the relationship between job embeddedness and academic staff intention to stay in Universities, and further, to see whether significant differences exist in the relationships, among the academic staff in Private and Public Universities. Prior to structural analysis, measurement models for both formative and reflective constructs were analysed for validity and reliability.

PLS Measurement Model

PLS path model comprising job embeddedness dimensions, which are exogenous formative constructs, and intention to stay, which is an endogenous reflective construct, was specified (Figure 2) and the measurement models for both were evaluated.

Formative measurement model was evaluated, as guided by Hair et al., (2017) first, for collinearity using outer Variance Inflation Factor (VIF), where a value below 5.0 was considered sufficient to indicate that collinearity is not a problem. Convergent validity was not tested, because job embeddedness scale used in this study had no reflective items required for redundancy analysis. However, VIF values, which assess how a formative construct is not correlated with other predictive constructs, provided an indirect indication of convergent validity. Formative indicators were also evaluated for the significance of the outer weight using bootstrap, where values of p less than 0.05 indicated that formative indicator has a significant relative contribution to the construct. Another rule of thumb given by Andreev et al., (2009), suggests that the desirable weights of the formative indicators should be 0.1 or above.

Reflective measurement model, on the other hand, was evaluated first, for size and significance of outer loadings, where a standardized outer loading of 0.708 or above is considered sufficient (Hair et al., 2017). Composite Reliability (CR) was also evaluated, where a value within a range of 0.70 – 0.90 indicates satisfactory internal consistency reliability of a construct. Finally, convergent validity (Average Variance Extracted = AVE) and discriminant validity (Fornell-Larcker Criterion) were estimated, where the values of AVE above 0.5 support convergent validity and Fornell-Larcker Criterion value of 0.000 support discriminant validity. Cross-loading and HTMT were not feasible, and so not estimated, because the model in this study had only one reflective construct, the IS.

PLS Structural Model

Before hypotheses testing, PLS structural model was assessed for collinearity among predictor constructs using VIF. According to Hair et al., (2017), a VIF above 5.0 among the predictor constructs indicates too high collinearity. Hypotheses' testing then was based on an assessment of

significance (p) and relevance of structural model relationships through bootstrapping procedure, assessment of Coefficient of Determination (R^2) and Effect Sizes (f^2). Predictive Relevance (Stone-Geisser's Q^2) was not estimated since all exogenous (predictor) variables in the model used in this study were formative. Hair et al., (2017) provide rules of thumbs, where p -value of less than 0.05 indicates a significant relationship at 5%, and a larger path coefficient indicates relative greater effect of a particular exogenous variable on the endogenous latent variable. Further, R^2 values of 0.75, 0.50 and 0.25 for endogenous latent variables, indicate respective substantial, moderate, or weak predictive power of a model. The rule of thumb for f^2 is provided by Cohen (1988) that, values of 0.02, 0.15, and 0.35 respectively represent small, medium and large effects. A value below 0.02 indicates that exogenous variable has no substantive effect on the endogenous construct.

Hypotheses testing also involved testing of moderation effects to see whether or not, the university type had an effect on the relationships between job embeddedness and academic staff intention to stay in universities in Tanzania. This made use of PLS Multigroup Analysis (PLS-MGA), which tests whether differences between groups-specific path coefficients are statistically significant. Since a one-tailed test is used, moderation is indicated when a p -value is either very large ($> .95$) or very small ($< .05$) (Hair et al., 2017).

Research Findings and Discussion

Respondents' Characteristics

About 204 academic staff, accounting for 65.0% of respondents in this study was in public universities, while 110 which is roughly one third (35%) was in private universities. Relatively fewer academic staff in Tanzania's private universities has been associated with low investment in staff acquisition and development by these universities (Mgaiwa and Poncian, 2016). These respondents included 210 men (66.9%) and 104 women (33.1%). Women underrepresentation in academia is a common phenomenon, not only in Tanzania but also in many African universities (Mkumbo, 2014; Onsongo, 2011).

Measurement Model

Assessment of measurement model in this study involved evaluation of reflective constructs (intention to stay) and formative constructs (job embeddedness dimensions) as shown in Figure 2 below.

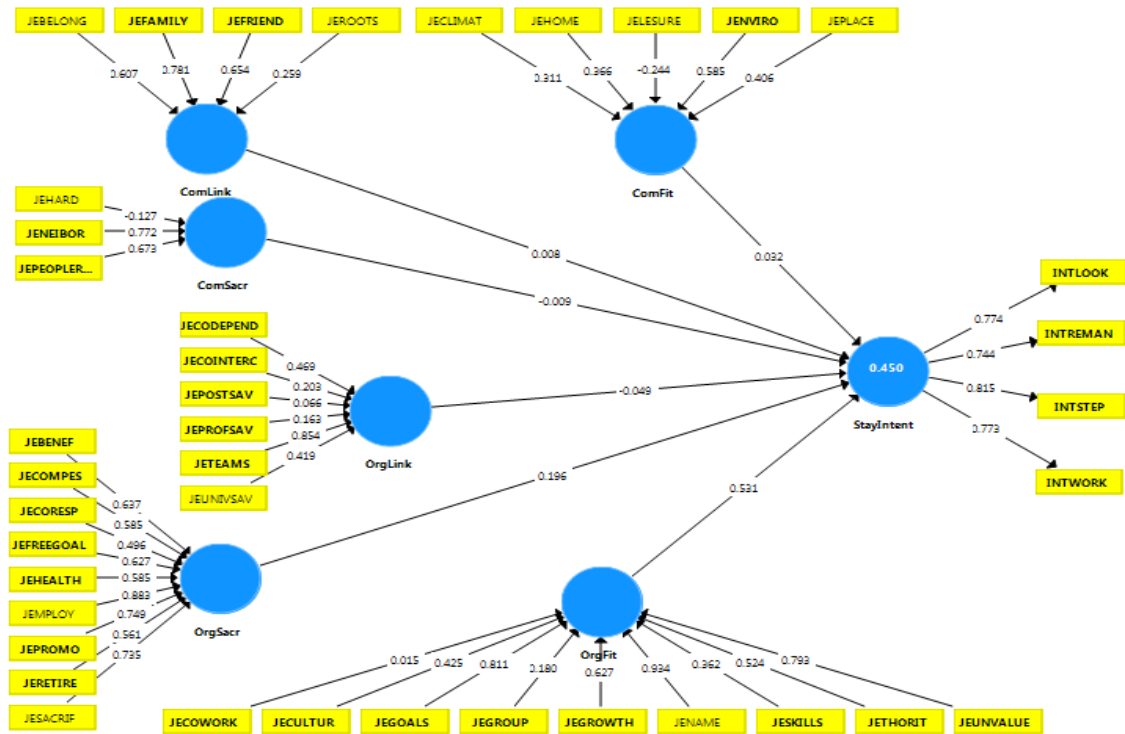


Figure 2. Job Embeddedness – Intention to Stay Path Model

Assessment of Reflective Measurement Model

Reflective measurement model evaluation assessed the size and significance of outer loadings, Composite Reliability (CR), convergent validity (AVE) and discriminant validity (Fornell-Larcker Criterion) of academic staff Intention to Stay. Table 1 and Table 2 present the assessment of reflective measurement model.

Table 1. Assessment of Intention To Stay Measurement Model

Construct	Indicator	Loading	p	CR	AVE
IS	IntLook	0.774	0.000	0.859	0.604
	IntRemain	0.744	0.000		
	IntStep	0.815	0.000		
	IntWork	0.773	0.000		

It is evident from the assessment of reflective measurement model in Table 1 above that the CR of 0.859 for IS, falls with a recommended range of 0.70 – 0.90, which indicates that the internal consistence reliability of a construct is satisfactory. It is also evident that the standardized outer loadings of all four reflective indicators are above the minimum threshold of 0.708 and are statistically significant. These indicators therefore are reliable reflections of the IS. This also shows that more than 50% (0.708²) of variance in each indicator is explained by a construct. Lastly, the value of AVE above 0.5 provides evidence to support for convergent validity of indicators of IS.

Table 2. Assessment of Discriminant Validity (Fornell-Larcker Criterion) of Intention to Stay

Construct	CF	CL	CS	OF	OL	OS	IS
CF							
CL	0.330						
CS	0.130	0.183					
OF	0.226	0.281	0.169				
OL	-0.003	0.179	0.176	0.292			
OS	0.294	0.264	0.218	0.655	0.303		
IS	0.211	0.208	0.120	0.652	0.165	0.537	0.777

Discriminant validity of reflective indicators was measured by Fornell-Larcker Criterion. Since only one reflective construct (IS) was involved in this model, the square root of its AVE was compared with its correlations with all other latent constructs in the model, in this case, the formative constructs (Hair et al., 2017). It is evident from Table 2 that IS discriminated well as indicated by the value of the square root of AVE or Fornell-Larcker Criterion (0.777) that is larger than its correlations with the rest of the constructs. Discriminant validity was therefore supported.

Assessment of Formative Measurement Model

Table 3 indicates that, with exception of seven formative indicators of the six JE dimensions namely OF, OL, OS, CF, CL, and CS, all others had outer weight above 0.1, which is an acceptable minimum for an item to have impact on the construct it is connected to (Andreev et al., 2009). Of the seven low weighted indicators, five (JeSkills, JeBenef, JeCompes, JeCoresp and JeRetire) had significant factor loading (at $p < 0.05$) hence were retained as recommended by (Hair et al., 2017). The remaining two low weighted indicators (JeClimate and JeHome), though had insignificant loadings, were retained because of their theoretical importance to the Job embeddedness model. According to Jarvis et al., (2003) and Roy et al., (2012), merely statistical outcomes should not be the base for removing important items in a formative construct as this would adversely impact the content validity of the construct. The climate of the area and ownership of the house are the key attributes that theoretically determine the fit of individuals to their off-the-job communities.

Table 3. Assessment of Job Embeddedness Measurement Model

Constructs	Indicators	VIF	Loadings	p	Weights	p
OF	JeCowork	1.305	0.015	0.854	-0.154	0.072
	JeCulture	1.453	0.425	0.000	-0.115	0.184
	JeGoals	2.803	0.811	0.000	0.319	0.015
	JeGroup	1.423	0.180	0.052	-0.134	0.100
	JeGrowth	2.315	0.627	0.000	-0.114	0.354
	JeName	3.089	0.934	0.000	0.679	0.000
	JeSkills	1.394	0.362	0.000	0.048	0.534
	JeThorit	1.378	0.524	0.000	0.177	0.026
	JeUnvalue	2.442	0.793	0.000	0.181	0.070
OL	JeCodepend	1.281	0.469	0.076	0.268	0.416
	JeCointeract	1.247	0.203	0.466	-0.200	0.567
	JePostserv	1.879	0.066	0.815	-0.304	0.516
	JeProfserv	2.183	0.163	0.529	-0.381	0.459
	JeTeams	1.365	0.854	0.013	0.842	0.043
	JeUnivserv	2.259	0.419	0.079	0.661	0.227
OS	JeBenef	2.032	0.637	0.000	0.030	0.830
	JeCompes	1.861	0.585	0.000	0.048	0.700
	JeCoresp	1.303	0.496	0.000	0.065	0.599
	JeFreegoals	1.432	0.627	0.000	0.276	0.017
	JeHealth	1.983	0.585	0.000	0.117	0.332
	JeEmploy	2.695	0.883	0.000	0.432	0.001
	JePromo	2.277	0.749	0.000	0.140	0.264
	JeRetire	2.152	0.561	0.000	-0.077	0.571
	JeSacrif	1.505	0.735	0.000	0.320	0.012
CF	JeClimate	2.516	0.311	0.159	0.089	0.816
	JeHome	2.541	0.366	0.130	0.066	0.858
	JeLeisure	1.773	-0.244	0.464	-1.070	0.160

	JeEnviro	2.197	0.585	0.064	1.057	0.135
	JePlace	2.796	0.406	0.116	0.170	0.680
CL	JeBelong	1.281	0.607	0.016	0.395	0.217
	JeFamily	1.653	0.781	0.000	0.742	0.008
	JeFriend	1.272	0.654	0.005	0.492	0.106
	JeRoots	1.699	0.259	0.292	-0.545	0.095
CS	JeHard	1.179	-0.127	0.771	-0.545	0.365
	JeNeighbor	1.277	0.772	0.069	0.729	0.194
	JePeopleresp	1.262	0.673	0.059	0.546	0.204

Structural Model

Assessment of structural model involved evaluation of collinearity among predictor constructs using VIF, before testing hypotheses on relationships between job embeddedness dimensions and IS. Decisions on these hypotheses were guided by evaluation of significance (p) of structural relationships through bootstrapping procedure, and evaluation of Coefficient of Determination R^2 and Effect Sizes f^2 as recommended by Hair et al., (2017). These analyses were also used in the testing of hypothesis on moderation effects of the university type on the relationships between job embeddedness and academic staff intention to stay in universities using PLS-MGA. Table 4 presents the evaluation of structural model as indicated by the values of VIF, significance (p) and the effect sizes (f^2) of exogenous constructs, and the coefficient of determination of the model (R^2).

Table 4. Relationship Between Job Embeddedness Dimensions and Intention To Stay

Latent Constructs	VIF	β	p	f^2
CF	1.210	0.160	0.681	0.002
CL	1.217	-0.096	0.890	0.000
CS	1.084	0.117	0.876	0.000
OF	1.815	0.664	0.000***	0.282
OL	1.166	-0.101	0.780	0.004
OS	1.901	0.183	0.002**	0.037
			R^2	
IS			0.45	

The findings in Table 4 show that all values of VIF are clearly below a threshold of 5, indicating that there is no threat of collinearity among the predictor constructs in the model. The findings also show that JE model adequately (45%) explains the variance in academic staff intention to stay in

the universities as indicated by the R^2 value of 0.45, with the two variables OS ($p = 0.002$) and OF ($p = 0.000$) registering significant relationship ($p < 0.05$). Further, the values of effect size (f^2) indicate that the same two exogenous variables, OS ($f^2 = 0.037$) and OF ($f^2 = 0.282$), had substantive (small to medium) contribution on the endogenous variable's R^2 .

Hypothesis H_1

From the findings, it is evident that *Hypothesis (H_1)*, which states that, *Job embeddedness model predicts the academic staff Intention to Stay in Tanzania's universities*, **is supported**. It is clear from the findings that job embeddedness predicts 45% of the academic members of staff intention to stay in their universities in Tanzania. According to Hair et al., (2017) this predictive power is moderate.

Hypotheses H_{1a} , H_{1b} , H_{1c} , H_{1d} , H_{1e} , and H_{1f}

The findings show that Organization Fit and Organization Sacrifice had *significant* positive relationships with Intention to Stay, at $p < .001$ and $p < .05$ respectively, while Organization Link, Community Fit, Community Link, and Community Sacrifice had *insignificant* relationships with academic staff intention to stay.

From these findings, ***Hypotheses H_{1a} and H_{1c} were supported***. This suggests that the more the academic staff perceives fit or compatibility between their own values, career aspirations, skills and knowledge, and the universities' culture and values, the more they will be bound to stay in the universities. Likewise, the more costly the academic staff finds severing this fit, the more they will be bound to stay. The salience of Organization fit and organization sacrifice on academic staff intention to stay is further substantiated by their significant contributions (f^2) on predictive power of the model.

On the other hand, ***Hypotheses H_{1b} , H_{1d} , H_{1e} and H_{1f} were not supported***. This implies that there is no sufficient evidence in this study, to support the existence of significant relationships between Organization Link, Community Fit, Community Link and Community Sacrifice, with academic staff Intention to Stay in Tanzania's Universities. It was noted that, with exception of Organization Link, these insignificant constructs are related to off-the-job or community embeddedness, suggesting that, the factors in the community may not be important binding forces when academic members of staff in Tanzania's university are faced with the decision to stay in or leave their jobs. This, as also noted by Zhang et al., (2012), may be explained by the fact that individuals are encouraged to sacrifice themselves now and give more of their commitment to work for the future and long-term welfare of their families. Similar findings have been presented by Shafique et al., (2011).

Moderation Analysis

Objective two of this study sought to examine if there is a significant difference in relationships between job embeddedness and intention to stay among academic staff in public and private universities. Since our moderator variable, *university type*, was categorical, a multigroup analysis *PLS-MGA* was used in moderation analysis. Table 5 presents structural path coefficients (β) and significance (p) of their differences between the private and public universities groups.

Table 5. PLS-MGA Moderation Analysis

Structural Path	Private Universities		Public Universities		Path Coefficient (β) Difference	Significance (p) of Difference
	β	p	β	p		
CF ---> IS	0.160	0.024*	-0.125	0.363	0.285	0.952
CL ---> IS	-0.096	0.249	-0.166	0.292	0.070	0.668
CS ---> IS	0.117	0.219	0.059	0.479	0.058	0.690
OF ---> IS	0.664	0.000***	0.374	0.000***	0.290	0.994*
OL ---> IS	-0.105	0.255	0.069	0.527	0.174	0.122
OS ---> IS	0.183	0.070	0.205	0.006**	0.023	0.428

The findings show that there was a significant difference in the relationship between job embeddedness and intention to stay among academic staff in private and public universities. This difference is particularly expressed by a significant difference ($p >.95$) in the path relating organization fit and intention to stay in the two groups. It was further noted that the relationship is stronger in private universities than in public universities as indicated by respective β values.

Hypothesis H₂

From the findings, it is evident that Hypothesis (H₂), which stated that, *Relationship between job embeddedness and intention to stay differ between academic staff in public universities and private universities in Tanzania, was supported*. This implies that university type has a moderation effect on the relationship between job embeddedness and academic staff intention to stay in Tanzania's universities. This type of moderation is partial moderation, since the relationship is significant in both groups, (Baron and Kenny, 1986). Further, the stronger relationship in private than in public universities suggests that private universities are likely to realize more retention outcomes through improved compatibility between academic staff and the universities, than the public universities. The weaker effects of affective factors, such as pay and working conditions, which are known to be less favourable in private universities in Tanzania (Mgaiwa and Poncian, 2016), leave room for the effect of job embeddedness, a non-affective construct, to be more pronounced.

Conclusion

Job embeddedness model sufficiently predicts academic staff's intention to stay in Tanzania's Universities. Specifically, organization fit, which represents academic staff compatibility with the universities values, culture, career opportunities, and knowledge and skills requirement, and organization sacrifices, which are personal losses such as giving up work colleagues, relevant projects or pleasant benefits, switching costs such foregone due promotions, and sabbaticals, emanating from leaving an organization, forms the important dimensions of job embeddedness that influence academic staff intention to stay. It is also evident that private universities benefit more with job embeddedness as a driver of academic staff retention. It is recommended that, first, corporate strategic plans of the universities in Tanzania should embrace job embeddedness factors especially those encouraging fit between academic staff and universities as interventions for staff retention. Universities in Tanzania, and more especially the private universities, may find job

embeddedness as a valuable alternative retention approach that inherently relaxes the ordeals of unfavourable working conditions. Second, the revealed differential relationship between job embeddedness and intention to stay when university type is considered, informs the researchers on the role of moderator variables when job embeddedness theory is used in guiding research.

While evidence of the predictive ability of job embeddedness on academic staff intention to stay in universities has been provided in this study, we need to declare one inherent limitation that also points to the advancement of research in the body of knowledge. The scale used in measuring job embeddedness was applied for the first time in the context of the study. Though a measurement model was generally sufficient, the fact that some items had insignificant loadings may indicate that maybe they were not relevant in capturing the construct in the context. Future research may start with a qualitative study in order to establish the most relevant indicators of job embeddedness dimensions in the context of this study. We also recommend future studies to examine how other crucial boundary conditions such as academic disciplines of the academic members of staff may affect the relationship between job embeddedness and intention to stay in universities. Empirical evidence has shown that together with university type, the academic discipline is a very crucial attribute through which most of the behavioural and functional variations among academic staff are generated and strengthened (Jones, 2011).

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The Effect of Manufacturing Capability on Firm Performance: Empirical Evidence from Small and Medium Manufacturing Companies in Kigali-Rwanda

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Abstract: *This research paper examined the effect of the attributes of manufacturing capability on the performance of small and medium manufacturing companies in Kigali-Rwanda. Data were collected from a final sample of 111 small and medium-sized manufacturing firms. To analyze the collected data, a two-step approach to Covariance-Based Structural Equation Modelling (CB-SEM) was applied using the Analysis of Moment Structures (AMOS) statistic software version 25.00. Data were inspected for the presence of outliers, multivariate normality, and multicollinearity, while the reliability of the construct was assessed by Cronbach's Alpha, convergent and discriminant validity. The findings revealed that all the attributes of manufacturing capability namely quality, cost efficiency, delivery, and flexibility have a positive and significant effect on the performance of small and medium manufacturing firms. It has been concluded that manufacturing capability contributed positively and significantly to inter-firm performance validating than the resource-based view applicability to SMEs. This study contributed to the existing strategic management literature on how manufacturing capability can enhance firm performance. Therefore, the study recommended that a firm should develop a complete approach of implementing the four dimensions as they should not be considered in isolation rather integrated and combined to leverage and sustain the performance over time.*

Keywords: Manufacturing Capability, Performance, Rwanda, Manufacturing sector

Introduction

The pending issue that most strategic management scholars struggle with is “Why some firms succeed in environments that others fail?”. Two influential paradigms (Barreto, 2010) seek to answer to this question: The Structure-Conducted-Performance (SCP) paradigm which focuses on external factors (industry structure); and the resource-based view (RBV), which focuses on internal factors (resources and capabilities of firms).

By the effects of globalization of markets, competition has become more complicated and challenging, forcing firms to develop improved business models to gain and sustain competitive advantage. The manufacturing sector across the world has grown steadily and profitably during the recent years and the management has been involved in its ups and downs for a decade. The ambition of growth is still strong and looking for performance heterogeneity only outside the firm seems -to the researcher’s best knowledge- aberrant. The raise of the resource-based view has brought insightful success as the SCP, even if still largely applied (Leonidas *et al.*, 2017; Wu and Yang, 2014) has shown its limits because it neither pays attention to the firm itself nor the

capabilities of the management. As a result, the framework's application on the contexts outlined in the global competition of today is insufficient.

The necessity of locating performance differentials internally to the firms using resources and capabilities is nowadays widely acknowledged by most strategy scholars. However, albeit the resource-based view provides a useful framework for explaining the heterogeneity of firm performance based on capabilities, its framework was designed to fit larger enterprises. It is not clear whether this theory which was developed for larger enterprises should also be of great importance to small and medium-sized companies. Within this context, Trott *et al.*, (2009) called for more works to validate the applicability of this theory to small to medium-size enterprises (SMEs).

While the importance of manufacturing capability is acknowledged in improving firm performance within the resource-based view, the prominence of small and medium enterprises (SMEs) for economic and social development is also universally documented since they play a vital role in economic growth and job creation (Lave and Roper, 2013). For instance, in Rwanda SMEs comprising 99% of total businesses contribute to the Gross domestic product (GDP) at 50% and make 37% of total employment (National Institute of Statistics of Rwanda, 2018).

With an average 8% annual growth rate for the past two decades, Rwanda has been one of the fastest-growing economies in Sub-Saharan Africa (SSA), backed by a strong policy framework (Calabresse *et al.*, 2017). However, despite positive developments, the Rwandan economy remains relatively uncompetitive on several indicators. Ninety-nine percent of firms are SMEs (NISR, 2018) with only 24% of chance of surviving (NISR, 2018b). More specially, compared with agriculture and services, the Rwandan manufacturing sector has struggled to gain a strong place in the country's economy. For the most recent, manufacturing value-added in GDP has remained stagnant, at around 5%, according to the World Bank (2018). Manufacturing provides a small contribution with only 15% of total merchandise exports in 2015 (for Uganda and Tanzania this figure is much higher, at around 25%, according to the World Bank (2018). This is exacerbated by -to the researcher's best knowledge- limited capabilities and especially manufacturing capability forcing companies to perform poorly.

Therefore, this study examined the effect of the dimensions of manufacturing capability on firm performance based on the RBV perspective; more specifically, to determine the impact of quality, low cost, flexibility and delivery capabilities on firm performance in the Rwandan manufacturing sector.

Literature Review

The RBV is a strategic management theory which claims that companies compete on the basis of "unique" organizational resources and capabilities that are valuable (in the sense that they exploit opportunities and neutralize threats in a firm's environment), rare (among a firm's current and potential competition), difficult to imitate, and non-substitutable by other resources (Barney *et al.*, 2011). Barney *et al.*, (2011) claim that these attributes of a company's resource signify an indicator of how heterogeneous and immobile a firm's resources are and, thus, how useful these resources are for generating sustained competitive advantage. The RBV treats capabilities as unique path-dependent processes difficult to imitate by competitors (Amit and Schoemaker, 1993). Therefore,

the RBV has been considered as one of the most conspicuous and influential theories to explain organizational behaviour (Barney *et al.*, 2011) and firm performance (Leiblein 2003) based on capabilities.

Capabilities abound within the resource-based view but Jiang, (2014) and Wilden and Gudergan (2015) distinguish between managerial, manufacturing and marketing capabilities as they are considered the most important functional attributes of a manufacturing firm to maintain daily operations, generate technical fitness and consequently earn a competitive advantage for the firm.

Capability and Manufacturing Capability

Broadly, capability refers to a firm's ability to efficiently exploit its resources, to manufacture products or develop services to achieve business objectives (Amit and Shoemaker, 1993; Kumar *et al.*, 2010). Capability is a subset of an organization's resources, defined as tangible and intangible assets, that enable the organization to take full advantage of other resources it controls (Barney and Hesterly, 2012). Pearce and Robinson (2011) defined capabilities as skills or ability and way of combining assets, people and processes that an organization uses to transform inputs into outputs. For the foregoing, because manufacturing is the basic purpose of all manufacturing firms (being it small or large) share together when discussing manufacturing SMEs, the focus should be on the manufacturing capability.

On the other hand, being a useful amplification of general capability, manufacturing capability is according to Gao and Tian (2014) the most basic part of the original capability and the core operational capability in manufacturing enterprise since it provides organizations with certain competitive power and used as a competitive weapon to achieve manufacturing performance in cost containment, quality and time dimension. According to Terjesen *et al.*, (2011) manufacturing capability refers to the ability to maintain simultaneously a high level of balanced performance in productivity, quality, delivery, cost, and flexibility. As such, this capability is embodied by all available manufacturing resources and corresponding processes which can be performed by those Sarjana (2015).

However, there appears to be a consensus in manufacturing literature that manufacturing capabilities are manifested in four dimensions: quality, cost, delivery and flexibility (Jacobs *et al.*, 2007; Krause *et al.*, 2001; Mukerji, *et al.*, 2013; Rosenzweig *et al.*, 2003; Swink *et al.*, 2007;) to which some authors like Kumar *et al.*, (2010) and Schroder *et al.*, (2011) add innovation that has not been considered in this study because according to Kasema (2019a) is one of the core components of Dynamic capability. The fact that different scholars have connected the concept of manufacturing capability to unequivocally measurable variables is a very significant step for further analysis. Without this possibility to overtly express how manufacturing capability is observed in practice, this concept could not be observed with reliability and validity.

Therefore, this study conceptualizes manufacturing capability as the process of combining quality, flexibility in producing and delivering goods on time at a cost that enables the firm to gain and sustain competitive advantage. This conceptualization encompasses the four attributes of manufacturing capability (see Figure 1) as per Mukerji *et al.*, (2013) because they have been scientifically proved to be sufficiently complete to cover all critical dimensions of the concept and are relatively easily measurable (Schorder *et al.*, 2011; Zahra *et al.*, 2006). However, Raymond *et*

al., (2010) opined that rarely even the most successful companies excel all the dimensions with the same propensity, i.e. some maybe with high propensity than others.

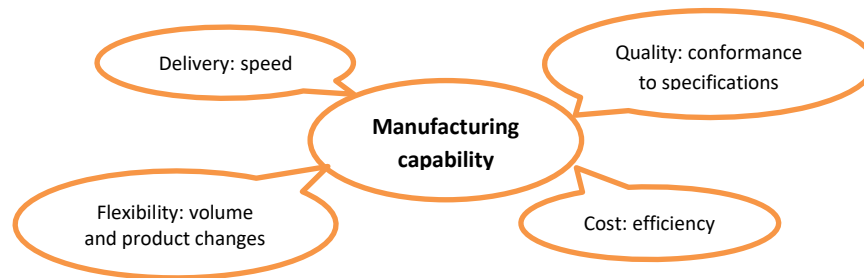


Figure 1. Conceptualising Manufacturing Capability

The figure above illustrates the consensus among scholars of what manufacturing capability means. These four dimensions are a simple but inclusive approach of breaking down what shapes excellent manufacturing capability.

Quality is the degree to which products meet manufacturing specifications (Lau Antonio *et al.*, 2007; Slack *et al.*, 2009). Quality can be defined as fitness for use and includes product performance, reliability, and durability (Tracey *et al.*, 1999; Ward *et al.*, 1996). It includes also, according to Lau Antonio *et al.*, (2007) the degree to which the product is fit for use, the degree to which it contains the functionality, features (defective rates) and styling required by customers. Delivery refers to the ability to provide products at the specified time (Ward *et al.*, 1998). A fundamental objective is to minimize lead time to effectively meet customer requirements reliably (Jacobs *et al.*, 2011). Delivery incorporates both the dimensions of dependability (reliability) and speed (Droge *et al.*, 2012). While dependability refers to doing things on time and the ability to deliver orders correctly on promised due dates (Lau Antonio *et al.*, 2007; Slack *et al.*, 2009) speed is the ability to deliver goods faster than competitors, which can be vital to winning orders (Ward *et al.*, 1998).

Cost capability refers to a firm's actual ability to produce products at a lower cost than its competitors. Slack *et al.*, (2009) defined cost capability as doing things cheaply, producing goods and services at a cost that enables them to be priced appropriately for the market while still allowing a return to the organization. Most of the time, cost efficiency stimulates effectiveness and builds share through the manufacturer's ability to adjust prices dynamically in response to its market and competition (Swink *et al.*, 2005).

Flexibility refers to the ability to adapt and respond to changes in production volume or mix to give customers individual treatment or to introduce new products/ services (Slack *et al.*, 2009). Lynn (2000), Dangayach and Deshmukh (2003), and Zhang *et al.*, (2003) conceptualized flexibility as a mixture of product customization, mix changes, design changes, volume changes and responsiveness to customer requirements. All these dimensions of manufacturing capability allow the flexible production of a high-quality product with high consistency, at a low cost that can be launched quickly in the market to gain an advantage.

Firm Performance

Being an important variable in business research, the concept performance is ambiguous since there is no simple agreed definition and measurement to evaluate the performance of a firm. As a multidimensional construct, performance has several names, including growth (Dobbs and Hamilton, 2007; Wolff and Pett, 2006), survival, success and competitiveness. In this study, the firm performance was conceptualized as referred to growth in sales, profitability, customer satisfaction, market share and product quality (Kasema, 2019a).

For the foregoing, it was hypothesized the following:

- *H1: Quality capability positively affects firm performance.*
- *H2: Cost efficiency positively affects firm performance.*
- *H3: Delivery capability positively affects firm performance.*
- *H4: Flexibility capability positively affects firm performance.*

Empirical Studies

In order to connect manufacturing capability to firm performance, the empirical literature has been reviewed to assess how reliable and valid the perception of capability is. Indeed, from the extant literature review, the manufacturing capability has been posited as an important contributor to firm performance (Peng *et al.*, 2008; Terjesen *et al.*, 2011). Let some being examined and summarized as follows:

An empirical research study by Mukerji *et al.*, (2013) of 238 Canadian manufacturing companies, using the Maximum likelihood estimate (MLE) technique, revealed that only cost is positively correlated with performance whereas flexibility is negatively correlated with commercialization performance. The results suggested further that the ability to lower manufacturing cost without paying due attention to other dimensions of manufacturing capability; such as quality and manufacturing flexibility, leads to an unsatisfactory commercialization performance. Despite the fact of using the RBV with a strong sample size, the study, however, was conducted in a developed country. Therefore, the limited focus to developed countries poses a serious problem to the completeness of this theory and is a major gap in the literature since there are many dissimilarities between firms in developed and developing countries.

A study by Selcuk and Talha (2006) investigated the effects of a firm's manufacturing capability choices on business performance. A proposed model was developed based on the manufacturing literature. To test the proposed model, a survey instrument was developed and conducted to 200 firms in Ankara and Istanbul/ Pakistan. within a survey design, confirmatory factor analysis was applied to evaluate the survey instrument. Study results supported the proposed structural equation modelling. According to the analysis' results cost and quality positively affect a firm's business performance. Even if the study findings revealed a positive a significant effect of manufacturing capabilities on firm performance, it is, however, believed that generalizability of these results can be enhanced by examining the capabilities which have been identified from a variety of larger firms operating in different industries from small and medium-sized firms' perspective.

METHODS

Research Philosophy and Design

This research adopted a positivist philosophy that accords with survey research design in a deductive approach. The following table summarizes the entire methodology used in this study such as philosophy, design, approach, method and data collection method.

Table 1. Research philosophy, approach, and method of this study

Domain	Position
Research Philosophy	Positivism
Research Design	Descripto-Causal
Research Approach	Deductive
Research Method	Quantitative
Time Horizon	Cross-Sectional
Data Collection Method	Survey Questionnaire

Population, Sampling Method and Sample Size

The Rwandan manufacturing sector currently consists of 14,054 companies of which 868 small and medium companies (Micro manufacturing companies are excluded). Kigali city, the research area, counts 397 small and medium companies (NISR, 2018) formally registered with the Rwanda Revenue Authority (RRA) which constitute the population of this study. Using a stratified sampling technique, the sample has been selected using Sloven's formula $n = \frac{N}{1+N(e^2)}$ and the sample was 154 participants.

The key respondents for the study were production managers/directors or Chief operations officers from manufacturing firms that have extensive experience, in this case, firms that have been working for at least four years. This because those that have not been in business for that long are considered new or nascent SMEs (Fatoki and Garwe, 2010). This study used a personal interview-based survey method with a drop and collect approach for executing the survey. Both pre-testing and piloting were done before the final survey to assess the wording and psychometric analysis (reliability and validity) Saunders *et al.*, 2007).

Measurement of Variables and Instrumentation

The study measured manufacturing capability -the independent variable- using four metrics: quality, cost, flexibility and delivery with every four items adapted from previous studies and adapted to fit the Rwandan context. More importantly, manufacturing capability items were borrowed from Selcuk and Talha (2006), Swink *et al.*, (2007) and Terjesen *et al.*, (2011). In measuring firm performance, subjective (self-reported) measures by production managers were used which are consistent with earlier studies such as Chari and David (2012), Kasema (2019a), and Nath *et al.*, (2010).

The firm performance consisted of six questions related to sales growth, profit growth, market share growth, customer satisfaction, and quality product. The respondents were asked to give their responses based on a five-point Likert-type scale with 1= strongly disagree; 2= disagree, 3= Neutral, 4= agree; 5= strongly agree. A survey questionnaire with a cover letter explaining the main purpose of the study and assuring confidentiality was sent to 154 firms selected to participate

and provide information for the research. However, only 111 questionnaires were returned; making a response rate of 72%.

A pilot study was conducted to detect the psychometric properties of the measures in the survey instrument. Piloting serves to conduct the reliability test for internal consistency of the instrument using Cronbach's alpha for which the results are reported hereunder:

Table 2. Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.971	.968	22

Source: SPSS results, 2019

The results showed Alpha values greater than the cut-off of 0.7 (Hair et al., 2010; Hair *et al.*, 2017b) indicating adequate reliability with Cronbach's alpha values of 0.971 considered excellent for the final survey.

Data Analysis Procedures

Collected data were analyzed using both IBM-SPSS version 25 and IBM-AMOS (Analysis of Moment Structures) for the Structural Equation Modelling (SEM). The preliminary analysis like the detection and treatment of missing data, normality assumptions and exploratory factor analysis (EFA) was conducted with SPSS. The two-step covariance-based structural model (CB-SEM) i.e. measurement model and structural model for SEM was tested using AMOS.

The measurement model was assessed by a series of the goodness of fit indices such as GFI, RMSEA, TLI and CFI and reliability and validity including convergent and discriminant validity. The structural model was assessed using the same goodness of fit indices as per measurement model and the path estimates and critical ratio (CR). So, according to Hox and Bechger (2012) any relationship which will result in a critical ratio (C.R or t-values) greater than 1.96 is considered significant.

Findings and Discussions

Findings

Test of Normality: Normality was tested using the value of skewness and kurtosis. In this stage, the skewness and kurtosis value of all variables were identified and showed that all variables i.e. both independent and dependent variables had a value between -2 and +2. Thus, all variables in this study have a normal distribution.

Test of multi-collinearity: testing multi-collinearity was done by using the Variance Inflation Factor (VIF). If the Variance Inflation Factor (VIF) value lies between 1-10, then no multi-collinearity (Hair *et al.*, 2009). The results of the VIF values (1.00) indicated that all variables in the model were consistently within this value (Max VIF=10.00), which indicates that multicollinearity is not a concern in this research (O'Brien, 2007; Sekaran, 2000).

Test of Reliability: testing for reliability was done using Cronbach's alpha formula. The closer the reliability coefficient to 1.0 is the better. In this study, the Cronbach's alpha value obtained is 0.889, greater than 0.7 the generally accepted lower limit of alpha values (Hair *et al.*, 2010).

Unidimensionality test: exploratory factor analysis (EFA) was conducted on the initial set of items to ensure the unidimensionality of the measurement model. Unidimensionality is based on the traditional common factor model in which sets of items share only a single underlying factor (Gerbing and Anderson, 1998). Indeed, the appropriateness of factor analysis should be determined with the KMO (Kasier-Meyer-Olkin) measure of sampling adequacy (Norusis, 1993). In this study, KMO was found to be 0.855, with a significant result (0.000) i.e. $p < 0.001$ of Bartlett's test (see Appendix 3) indicating that all chosen variables were correlated adequately for EFA and acceptable for further analysis (Pallant, 2013).

The Principal components analysis and Varimax rotation method were used as a factor extraction method. Kaiser's criterion of Eigenvalues greater than one and scree plot were applied for factor's extraction. As can be seen from Table Appendix 4, the five factors with Eigenvalues greater than one account for 57.155% of the total variance. According to the rule of principal component analysis, only factors that have Eigenvalues greater than one should be retained and this was the case for this study. In the same vein, the results revealed that the first factor has an Eigenvalues of 6.968 and a percentage of the variance of 31.672%. This factor explained 31.672% of the total variance and the other four factors explained the remaining variance in the model.

Profile of Respondents

The surveyed manufacturing companies are young (with less than 10 years old) 67%; are almost evenly spread across the three districts that form Kigali city; mostly owned by adults (people aged between 40-59 years old) 63%; men (66%) towards food, beverage, and tobacco sub-sector (33%).

Structural Equation Modelling (SEM) Findings

To perform SEM a two-step approach was used. The measurement and structural models were performed sequentially (Fynes *et al.*, 2005). In the first step, confirmatory factor analysis (CFA) was used to evaluate the purified measurement model. Confirmatory factor analysis tests the measurement scale developed according to the results of exploratory factor analysis. The pictorial measurement model results are presented in Figure 2.

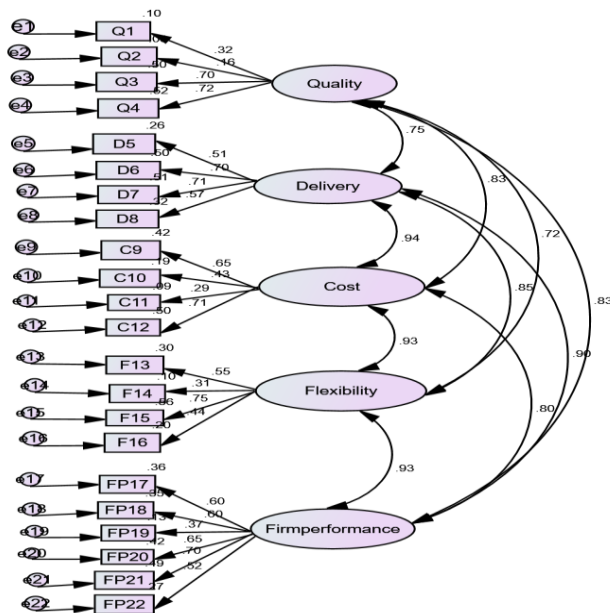


Figure 2. CAF Results for the Measurement Model

Source: AMOS Output, 2019.

The CFA affords a stricter interpretation of unidimensionality than can be provided by EFA (Garbing and Anderson, 1988). The fit of the purified measurement model was tested using AMOS 25 and the Composite Reliability (CR) and Average Variance Extracted were first tested followed by fit indices such as Absolute fit indices (AFI) and Incremental fit indices (IFI) for which results are reported in Table 3. To recall, CR indicates the consistency of the constructs while AVE measures the amount of variance attributed to the construct relative to the amount due to measurement error (Azwa *et al.*, 2016). The rule of thumb suggests that the value of AVE should be 0.5 and above (Chin, 1988) and that of CR should be 0.6 and above (Hair *et al.*, 2014).

Table 3. Reliability and Convergent Validity

Construct	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Quality	0.714	0.812	0.662
Delivery	0.723	0.799	0.691
Cost	0.879	0.772	0.614
Flexibility	0.708	0.822	0.679
Performance	0.924	0.781	0.698

Source: Researcher's compilation based on AMOS results, 2019.

The measurement results revealed that all the five constructs have got the minimum requirements for AVE (0.662, 0.691, 0.614, 0.679 and 0.698) and CR (0.812, 0.799, 0.772, 0.822 and 0.781) respectively for quality, delivery, cost, flexibility and firm performance as reported in Table 1. When taken altogether with the values of composite reliability (which were higher than 0.6 for each construct) and AVE greater than 0.5 it can be concluded that convergent validity was established.

Table 4. Fit Indices for the Measurement Model.

Fit Index	This Research	Recommended Values	Sources
χ^2 (p-value)	0.056	≥ 0.05	Byrne (2016)
CMIN/df	2.623	≤ 3	Gefen et al. (2000)
GFI	0.918	≥ 0.9	Rehman et al. (2015)
RMSEA	0.53	≤ 0.06	Hu and Bentler 1999
TLI	0.916	0.9	Lei and Wu (2007)
CFI	0.935	0.9	Lei and Wu (2007)

Source: Researcher’s compilation based on AMOS results, 2019.

Furthermore, with the χ^2 of 47.22 and $df= 18$; the fit indices showed that the Goodness of Fit Index (GFI) = 0,918, Tucker Lewis Index (TLI) = 0,916, Root Mean Square Residual (RMR) = 0,053 and Comparative Fit Index (CFI) = 0,935. Consequently, taken altogether, composite reliability (CR) and average variance extracted (AVE) assessment and model assessment results support the overall measurement model i.e. the theorized model fits well with the observed data.

The second step of a SEM analysis consists of assessing the fit of a structural model and validating the research hypothesis. The pictorial results of the structural model are reported in Figure 3.

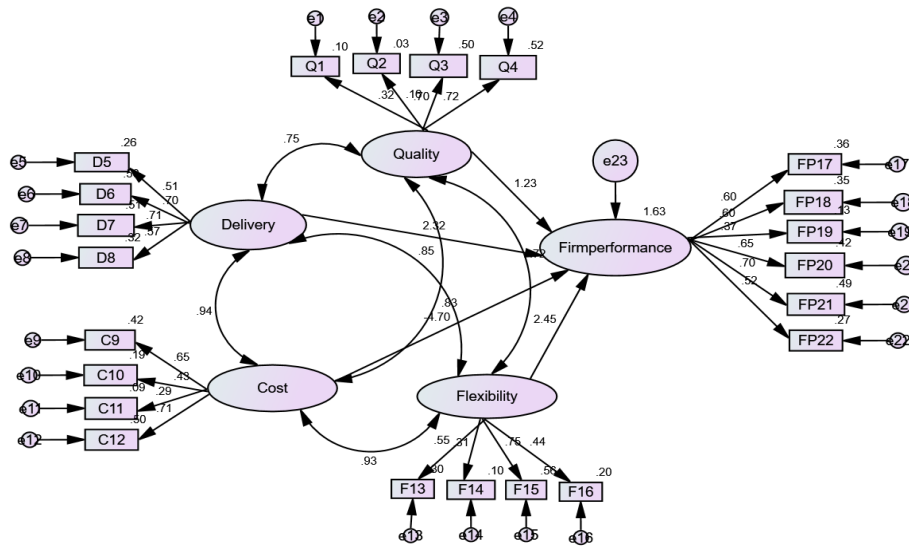


Figure 3. SEM Results for the Hypothesised Model

Source: AMOS Output, 2019.

Goodness of fit indices and parameters estimates and critical ration were used to evaluate the hypothesized structural relationships. The fit indices reported in Table 3 indicated that the hypothesized model provided a good fit to the data.

Table 5. Fit indices for the Structural Model.

Fit Index	This Research	Recommended Values	Sources
χ^2 (p-value)	0.052	≥ 0.05	Byrne (2016)
CMIN/df	1.830	≤ 3	Gefen <i>et al.</i> , (2000)
GFI	0.925	≥ 0.9	Rehman <i>et al.</i> , (2015)
RMSEA	0.517	≤ 0.06	Hu and Bentler 1999
TLI	0.968	0.9	Lei and Wu (2007)
CFI	0.956	0.9	Lei and Wu (2007)

Source: Researcher’s compilation based on AMOS results, 2019.

The GFI and RMSEA were 0.925 and 0.517 respectively indicating a good fit of the model. The TLI and CFI were 0.968 and 0.956 respectively indicating a good fit of the model. Furthermore, the $\chi^2/df = 1.830$ was within the threshold level i.e. $1.0 < \chi^2 / df < 3.0$), i.e. χ^2 of 38,44 and $df = 21$. However, as the fit indices alone are not sufficient to validate the theoretical model, it is therefore interesting to examine the parameter estimates and critical ratio (C.R) that reported the hypothesized relationships for which the results are reported in Table 4.

Table 6. Regression Estimates of the Latent Constructs

Paths	Standardized Regression weights (β)	C.R	P	Result
Perf <--- Quality	0.749	9.128	0.019	Supported
Perf <--- Delivery	0.745	8.466	***	Supported
Perf <--- Cost	0.795	18.991	***	Supported
Perf <--- Flexibility	0.788	17.012	***	Supported

Source: Researcher’s compilation based on AMOS output, 2019

Using the path estimates and C.R values, four causal paths were examined in this research study and all of them were above the 1.96 critical values (18.001, 17.012, 9.128 and 8.466 respectively for cost, flexibility, quality and delivery dimensions of manufacturing capability) as recommended by Hox and Bechger (2012) at the significant level $p \leq .05$. Based on these results, cost efficiency capability is the most critical ($\beta = 0.795$) followed by flexibility capability ($\beta = 0.788$) in improving firm performance.

Discussions

The main findings of this study are that most surveyed firms believed that all four dimensions of manufacturing capability positively and significantly affect a firm's performance. This was theoretically and empirically supported by previous studies. Indeed, these findings are consistent with the proposed models reported from the studies of Mukerji *et al.*, (2013), Selcuk and Talha (2006), and Terjesen *et al.*, (2011) that found a positive and significant effect of manufacturing capability on firm performance.

Theoretically, it is believed that the lower cost and high-quality capabilities will decrease demand uncertainty problems resulting from the needs of customers and lower entry barriers to the markets (John *et al.*, 2001). In the same vein, flexibility which increases product variety a new product development ability is crucial to sales increment and profit growth (Zhang *et al.*, 2003). Flexibility has also potential to directly contribute to other competitive capabilities such as delivery speed,

quality and customer satisfaction. Therefore, a firm which fulfils these dimensions even if at different magnitude tend to leap their competitive advantage over competitors.

Conclusion and Recommendations

Conclusion

This research paper examined the effect of the attributes of manufacturing capability on the performance of small and medium manufacturing companies in Kigali-Rwanda. The structural equation modelling (SEM) was applied to test the hypothesized model. The Analysis of Moment Structures (AMOS) software version 25.0 was performed on data collected from a final sample of 111 small and medium firms using a survey questionnaire. Data were first inspected for the presence of outliers, multivariate normality, and multi-collinearity, while the reliability of the construct was assessed by Cronbach's Alpha, convergent and discriminant validity. The findings revealed that all the attributes of manufacturing capability namely quality, cost efficiency, delivery, and flexibility have a positive and significant effect on the performance of small and medium manufacturing firms in Kigali-Rwanda. Moreover, cost efficiency followed by flexibility was proven to play the most important role in determining a firm's performance. Therefore, based on these results, it has been concluded that manufacturing capability contributed positively and significantly to inter-firm performance validating the applicability of the resource-based view to SMEs.

Limitations of the Study

Although the findings of this study are encouraging and useful, this research study has some limitations like most field surveys have:

- (i) It would be very difficult to confirm that the accuracy of these findings may not vary over time because of the nature of the cross-sectional design used in this study.
- (ii) Although subjective perceptual measures, especially from top management, can be considered as accurate or considered as a substitute of objective performance measures (Fonti *et al.*, 2017; Quigley *et al.*, 2017) it is imperative to acknowledge the problems associated with the fact that the respondents' perceptions might not be impartial;
- (iii) The generalization of the findings is bounded due to the geographical limits imposed by Kigali, the capital of Rwanda as the sole study site.
- (iv) The size of the sample being small this limits the generalizability of the findings.

Research Recommendations

Recommendations for Managers

The study findings suggested that all four dimensions of manufacturing capability are needed to gain and sustain firm performance over time. Therefore, the study recommended that a firm should develop a complete approach of implementing the four dimensions as they should not be considered in isolation rather integrated and combined to leverage and sustain a competitive advantage. Although they cannot be considered in isolation, they have different magnitude when it comes to boosting performance. The findings showed that they are all important movers to performance differentials but with a propensity to cost and flexibility capabilities. This because it has been found in this study and supported by Swink *et al.*, (2005) and Slack *et al.*, (2009) that on one hand most of time cost efficiency stimulates effectiveness and builds share through the

manufacturer's ability to adjust prices dynamically in response to its market and competition and on the other, customizing design, volume and responsiveness to customer requirement is a must if the firm wants to gain and sustain performance against its competitors over time.

Recommendations for Policymakers

The government of Rwanda should not only quicken the industrial "Skill development and labour productivity plan" to improve competitiveness as outlined in the Made in Rwanda Policy but also should continue with the approach of providing tax incentives to imported raw and packaging materials to unpack the issue of production cost one of the major drivers of performance. The government should also provide full support to manufacturing firms for product certification by the Rwanda Standard Board (RSB) to allow all manufacturing sectors to cope with the issue of quality standards one of the dimensions of the manufacturing capability.

Recommendations for Future Research

This paper has drawn some limitations which need to be overcome by future research; the study, therefore, recommended the following:

- (i) The use of longitudinal data and comparisons with this study would provide further insight that would assist in generalizing knowledge on the manufacturing capability-performance nexus.
- (ii) Future research should supplement the subjective measures of firm growth rate used in this study by objective (accounting) measures to capture the performance heterogeneity over time.
- (iii) It will be interesting for future research to test and explore the model developed for this study at the national level and in other cultural settings. This will be valuable in providing evidence concerning the robustness of the research model across different cultural settings.

A future empirical examination should emphasize multiple informants' views (production manager, marketing manager and other employees for instance) for inter-rater validity to improve the internal validity of the measurements.

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Appendices

Appendix 1: Multi-collinearity Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.162	.110		1.477	.141		
Mafcap	.791	.049	.743	16.014	.000	1.000	1.000

a. Dependent Variable: Performance

Appendix 2: Reliability Statistics

Cronbach's Alpha	N of Items
.889	22

Appendix 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.855
Bartlett's Test of Sphericity	Approx. Chi-Square	1684.807
	df	231
	Sig.	.000

Appendix 4: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.968	31.672	31.672	6.968	31.672	31.672	3.441	15.640	15.640
2	1.817	8.261	39.933	1.817	8.261	39.933	3.070	13.955	29.595
3	1.394	6.334	46.267	1.394	6.334	46.267	2.740	12.453	42.048
4	1.323	6.012	52.280	1.323	6.012	52.280	1.489	6.767	48.815
5	1.073	4.875	57.155	1.073	4.875	57.155	1.464	6.656	55.471
6	.894	4.698	61.853						
7	.889	4.039	65.892						
8	.839	3.812	69.704						
9	.766	3.481	73.185						
10	.746	3.392	76.577						
11	.665	3.023	79.600						
12	.605	2.752	82.352						
13	.541	2.460	84.812						
14	.527	2.395	87.207						
15	.480	2.184	89.390						
16	.447	2.030	91.421						
17	.418	1.901	93.322						
18	.361	1.641	94.963						
19	.346	1.571	96.534						
20	.299	1.358	97.892						
21	.240	1.091	98.984						
22	.224	1.016	100.000						

Extraction Method: Principal Component Analysis.

Relationships Among Employees' Job Attitudes of Perceived Supervisory Support, Job Involvement, and Organisational Commitment

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Abstract: *Organisational commitment has been shown to influence various work outcomes like job performance and turnover intention. Thus, understanding its antecedents has been an essential preoccupation of many researchers. However, research linking organisational commitment to the other job attitude variables has been scant, especially in frontier markets like Tanzania. The purpose of this study was to investigate the relationships among job attitudes of perceived supervisory support, job involvement and organisational commitment of employees in Tanzania. A structured questionnaire was used to collect data from a sample of 190 employees. Descriptive statistics, correlation, and multiple regression analysis were used to establish the relationships while the Hayes' Process Tool was used to test for the mediation effect. The results indicated that both job involvement and perceived supervisory support significantly positively affect organisational commitment and that perceived supervisory support was the most influential predictor. Job involvement significantly but partially mediated the relationship between perceived supervisory support and organisational commitment. The findings call for organisational managers to design and implement measures aimed at enhancing supervisors' supervising and supporting capacity in order to build the committed workforce required for the attainment of the organisation's vision and mission.*

Keywords: job involvement, organisational commitment, perceived supervisory support, mediation

Introduction

Continued success and performance of any organisation require, among other things, human resource capacity that is made up of a workforce committed to the organisation's vision, mission, and values. Employees' organisational commitment is among the top job attitude variables that have attracted research in the field of organisational behaviour. Other top job attitudes include job satisfaction, job involvement, perceived organisational support (supervisory and managerial) and work engagement (Robbins and Judge, 2018). Employees' organisational commitment is also a discretionary behaviour, and it is increasingly becoming an important factor that affects organisations' efficiency, growth, and development (Khaleh and Naji, 2016), profitability, and competitiveness (Ramay and Ramay, 2012). Its growing importance draws from the premise that employees who are highly committed towards their organisation, its vision, mission, and values, are likely to have more intention to stay, superior performance records, and involve themselves more with their work (Chughtai and Zafar, 2006). Such employees are also more likely to be more present at work, deliver better work quality and make more personal sacrifices in the interest of

the organisation (Randall, 1990). Besides, such employees are also more likely to be loyal and productive (Dey, Kumar and Kumar, 2014). All these premises put together imply that committed employees not only show a positive attitude towards the organisation's goals, mission, and values, but they also tend to develop positive work behaviour.

It is generally asserted that employees will exhibit positive or negative work attitudes and behaviours depending on how they perceive the employer is committed to their well-being (Eisenberger *et al.*, 1986; Wayne *et al.*, 1997). Consistent with the social exchange theory (Blau, 1964, Emerson, 1976; Homans, 1958), employees will reciprocate with positive attitudes and behaviours valued by the organisation they serve, if they perceive the employer positively. Also, consistent with the person-environment fit theory (Brown, 1996), workplace factors positively or negatively affect employees. If there is a good fit between the person and the work environment, there generally will be positive work results such as job involvement and organisational commitment. Otherwise, if there is a poor fit between what employees expect and what they get from their workplace, adverse outcomes are more likely to occur (Edwards *et al.*, 2006). Consequently, it becomes imperative for managers to understand the predictors of employees' commitment. Knowledge of such predictors is, therefore, key to focusing management's efforts towards the creation of a supportive environment necessary for employees' commitment to flourish.

Previous studies have linked employees' organisational commitment to perceived supervisory support (Kang, *et al.*, 2015; Lambert and Hogan 2009; Lambert *et al.*, 2015; Latif and Gulzar, 2011; Rabban *et al.*, 2017; Tankebe, 2010) and job involvement (Abdallah *et al.*, 2017; Kuruüzüm *et al.*, 2009; Mathieu and Zajac, 1990; Zopiatis *et al.*, 2014). There are also studies linking job involvement to perceived supervisory support (e.g., Lambert *et al.*, 2015). All these studies are consistent in their findings by showing that both job involvement and perceived supervisory support positively affect employees' organisational commitment and that perceived supervisory support positively affect job involvement. They are, however, focused on the Western, Middle East, and East Asian economies, with very little from Africa, except for Tankebe's (2010) study from Ghana. In addition, the evidence is scantier in the frontier market segment, such as Tanzania.

Moreover, all these studies focused on the link between either perceived supervisory support or job involvement and organisational commitment, leaving the possible indirect effect. For example, while the evidence shows perceived supervisory support and job involvement, each having a significant positive impact on organisational commitment, scantier evidence is available on the possibility of job involvement mediating in the relationship between perceived supervisory support and organisational commitment. Job involvement has been shown to mediate in such other relationships as between organisational commitment and job satisfaction (Culibrk *et al.*, 2018) and employees' moral values (Dinc and Aydemir, 2013), and between job characteristics and organisational citizenship behaviour (Chen and Chiu, 2009).

There have been studies on organisational commitment in Tanzania. Such studies include Jonathan, Darroux and Thibeli (2013), Jonathan, Thibeli and Darroux (2013), and Nguni (2006). However, all three studies are limited to the education sector. The first two studies focus on organisational commitment of public secondary school teachers, covering three schools in

Dodoma. Nguni (2006), on the other hand, focused on primary school teachers in 70 schools in Tanzania. Therefore, their results may not be generalizable to other sectors in Tanzania.

Furthermore, the three studies differ in terms of the constructs to which organisational commitment is linked. Jonathan, Darroux and Thibeli (2013) and Nguni (2006) link organisational commitment to the antecedents of job satisfaction (and demographics) and leadership style respectively. Jonathan Thibeli and Darroux (2013), on the other hand, links organisational commitment to one of the documented consequences – turnover intention. Thus, the studies that examined the antecedents of organisational commitment left out the other important job attitude variables of job involvement, perceived organisational support, and work engagement in the Tanzanian context. This analysis, therefore, shows a fertile avenue for extending our knowledge on the relationships among job attitude variables in Tanzania because of the cultural differences (Robbins and Judge, 2018), as well as industrialisation differences, relative to the Western World (Bae and Chung, 1997). Robbins and Judge, for example, argues that the level of expectations by employees in countries with high power distance (e.g., Tanzania) are likely to be very different from those of employees in countries with low power distance (e.g., the developed world). These differences imply, therefore, that the conclusions about the relationships among job attitudes may not be generalizable over the developing countries, warranting further research in the latter. Also, Kiggundu (1989) argues that employees in the emerging economies may hold values utterly different from those of employees in the developed economies.

This paper argued that employees would be more involved with their jobs and subsequently commit more to their respective organisations if they perceive that they receive quality supervisory support and encouragement. In addition, the existing evidence of a positive and significant relationship between organisational commitment (as an outcome variable) and perceived supervisory support and job involvement (as predictors) and between perceived supervisory support and job involvement, presents the necessary conditions for possible mediation (Field, 2018). The objective of the present study was therefore to examine the relationships among the job attitudes of perceived supervisory support, job involvement and organisational commitment of employees in selected organisations from a frontier market – Tanzania. In addition, the study investigated whether or not job involvement mediates in the relationship between perceived supervisory support and organisational commitment. Hence, the study extends the knowledge of job attitudes by: (i) including more job attitudes excluded in previous studies, i.e. job involvement and perceived supervisory support as antecedents to organisational commitment; (ii) extending the context from education to include other fields and more regions than just Dodoma; and by (iii) testing for the mediation role of job involvement in the relationship between perceived supervisory support and organisational commitment.

Review of literature

Organisational commitment

Organisational commitment is arguably a vast construct to have a single definition or an effective analysis of (Benkhoff, 1997). For example, Porter *et al.* (1974) define organisational commitment as “the strength of an individual’s identification with, and involvement in, a particular organisation” (p. 604). Porter *et al.* further identifies three components of organisational commitment as (i) the firm belief in organisation values and goals; (ii) the willingness to expend

considerable effort for it; and (iii) the strong intent or desire to remain employed by the organisation. Later on, Meyer and Allen (1991) came up with three components; namely (i) the affective commitment - the state in which an employee wants to stay with an organisation as a result of the “emotional attachment to, identification with, and involvement in, the organisation”; (ii) continuance commitment - the feeling of being “stuck” leading to a decision to stay with an organisation because it is too costly to leave; and (iii) normative commitment - the feeling of a moral obligation to remain with the organisation. However, it is the latter set of components which have dominated, and still, are dominating, the assessment of organisational commitment to date. Researchers and practitioners alike have grown interest in organisational commitment and its antecedents because of its linkage to vital organisational outcomes such as absenteeism (Mathieu and Zajac, 1990), employee turnover intention (Chughtai and Zafar, 2006; Jonathan *et al.*, 2013; Stallworth, 2004), job performance (Chughtai and Zafar, 2006; Karrasch, 2003; Meyer, *et al.*, 1989), organisational citizen behaviour (Devece, *et al.*, 2016), and productivity and service quality (Shagholi *et al.*, 2011). Many studies have been carried out on the antecedents of organisational commitment and established three categories - namely, personal factors, job-related factors, and job involvement factors. While research on personal factors have been many, similar types of research on job-related factors (job variety, job autonomy, and job training), and job attitudes (job involvement, perceived supervisory support) have been scarce. Job attitudes were the pre-occupation of the present study.

Perceived Supervisory support

According to Bourke *et al.* (1992), perceived supervisory support is “the level to which employees recognise that their supervisor is affording them support and encouragement for work performance and concerns for their well-being.” Perceived supervisory support has been shown as vital in organisational effectiveness across many industries (Lu *et al.*, 2013) and ensures employees’ retention (Rabban *et al.*, 2017). It is vital because (i) it alleviates the difficulties employees encounter in acquiring information that is useful for their personal growth and performance improvement (Zhou, 2003); (ii) it represents the frontier of the organisation, i.e. it is its human face (Rabban *et al.*, 2017); (iii) it inculcates in employees the need for self-fulfilment and satisfaction (Qgaard *et al.*, 2008); and (iv) it influences employees’ perceptions of their work climate in the organisation (Wandhwa, 2012). Supervisors are viewed as two-faced individuals (Kang *et al.*, 2015) - as a source of emotional, informational and social support as well as an averter of job stressors in workplaces (Himle *et al.*, 1989), on the one face, but on the other face as organisational mediators in their actions towards subordinates (Eisenberger *et al.*, 2002). Thus, when employees perceive a supportive environment from their supervisors, they are more likely to support these supervisors by contributing more to the attainment of organisational goals (Eisenberger *et al.*, 2002). Moreover, supervisors who care about their subordinates, look out for them, and are considerate, can create a positive work experience (Lambert *et al.*, 2015). Conversely, supervisors who lack quality supervision can result in strained and frustrated employees (Cooper *et al.*, 2014).

Job involvement

Job involvement is a concept that defines an employee in terms of how he perceives his job in relation to the job itself, and the working environment, as well as how his work and life fit together (Hirschfeld and Field, 2000). One of the earlier scholars to define job involvement is Lodahl and Kejner (1965), who defined it as “the level to which an employee is identified psychologically

with his job or the importance of that job in his total self-image.” Sahel and Hosek (1976) defined it as “the degree to which a person identifies with his/her job, actively participates in it, and considers his/her performance important to his or her self-worth.” Kanungo (1982) adds that job involvement reflects the level of importance that the job plays in a person’s life. Furthermore, the literature has a lot to say about an involved employee. For example, an employee with a high level of job involvement would place his job at the centre of his overall interests (De Carufeland Schaan, 1990); is more independent and self-confident (Chen and Chiu, 2009); and tend to see his job as central to his personal character and focus most of his attention on it (Hackett *et al.*, 2001). Conversely, an employee with low levels of job involvement, is said to concentrate on his interests rather than on his job and will be less creative and innovative (Abdallah *et al.*, 2016). A critical observation in the literature that is also relevant to the present study is the distinction of job involvement from organisational commitment. For example, Brown and Leigh (1996) point out that while job involvement is more associated with an employees’ identification with his immediate job activities, organisational commitment is more associated with the employee’s attachment to the organisation.

Theories and development of Hypotheses

Supervisory support and organisational commitment

From the social exchange theory (SET) literature (Homan, 1958, Blau, 1964, Emerson, 1976) it is suggested that quality supervisory support creates a positive effect on employees/subordinates’ attitudinal and behavioural outcomes such as job involvement and organisational commitment. The theory postulates that a set of reciprocity relationships exists between employees and their employers. For example, employees feeling supported by their immediate supervisors (representing the employer) would involve themselves more with their job and commit more to the organisation as a reciprocal reaction. Some of the early studies to investigate such supervisor-subordinate exchanges are Wayne and Green (1993) for organisational citizenship behaviour (OCB) and Liden and Green (1980) for performance and job satisfaction in health care and university settings, respectively. Recent studies on the link between perceived supervisory support and organisational commitment have consistently found a significant and positive relationship between them in different contexts. Examples of such studies include, Rabban *et al.* (2017) on a sample of 340 employees of the Pakistani’s manufacturing sector, Kang *et al.* (2015) on a sample of 356 hospitality frontline employees in South-Western USA, and Lambert *et al.* (2015) on a sample of Indian police officers. These results were consistent with those that were reported earlier, such as Joiner and Baikalis (2006), on a sample of casual academics in Australia’s tertiary education sector. Both Tenkebe (2010) on a sample of 220 police officers in Greater Accra Ghana and Lambert and Hogan (2009) on a sample of 160 employees of a correctional facility in Midwest USA reported a significant positive effect of supervisory support on organisational commitment. Lambert and Hogan went further by isolating the two segments of organisational support, i.e. the degree of feelings of being supported by the organisation (Griffin, 2002), into – managerial support (support from high ups) and supervisory support (support directly from supervisors), and studied the effect of each on organisational commitment. They found the impact of supervisory support on organisational commitment to be higher than that of managerial support. From the preceding discussion, the present study hypothesises that:

H₁ There is a positive relationship between employees' perceived supervisory support and organisational commitment

Supervisory support and job involvement

The person-environment fit theory holds that there is an interaction between employees and their working environment. The theory suggests that workplace factors can lead to positive or negative employees' work outcomes, such as job involvement (Brown, 1996). Generally, employees want positive and rewarding work experiences. Such experiences include, among other things, quality supervision. It follows, therefore, that if there is a good (poor) fit between what employees want from the workplace, e.g., quality supervision, and the actual workplace environment, positive (negative) work outcomes are more likely to occur (Edwards *et al.*, 2006). One example of such a positive work outcome is job involvement. Quality supervisors, i.e. supervisors who care about their subordinates, look out for them, and are considerate of their situation, are likely to create positive work experiences; but lack of such supervisors leads to strain and frustration among the employees (Cooper *et al.*, 2014). Mathieu and Zajac (1990) had it that a supervisor who provides more accurate and timely communication enhances the work environment and thereby likely to increase work-related outcomes such as job involvement. The Mathieu and Zajac's view is supported by the study by Lambert *et al.* (2015), in which increases in supervision was shown to have a significant positive effect on the job involvement of a sample of Indian police officers. The present study, therefore, hypothesises that:

H₂: There is a positive relationship between employee's perceived supervisory support and job involvement

Job involvement and organisational commitment

The literature advances several arguments on the possible relationship between job involvement and organisational commitment. For example, it is argued in Ineson *et al.* (2013), and in Rotenberg and Moberg (2007), that highly job involved employees would be more committed to their organisation and invest substantial effort in order to achieve its objectives. The link between job involvement and organisational commitment has attracted many empirical types of research. For example, Toga and Mjoli (2013) examined the relationship in a sample of motor-car manufacturing employees in South Africa. Other studies include Abdallah *et al.* (2017); Kuruüzüm *et al.* (2009); Mathieu and Zajac (1990); Uygur and Kilic (2009); and Zopiatis *et al.* (2014). Moreover, Mathieu and Zajac (1990) (in a meta-analytic study) and Moynihan and Pandey (2007) found a significant moderate relationship between the two variables. The critical differences in these studies are their contextual differences and analytical techniques. While most of these studies used OLS estimation techniques, others like Abdallah *et al.* (2017) and Kuruüzüm *et al.* (2009) for bank employees used structural equation modelling (SEM) estimation techniques. Biases in industry and geographical locations are widely observed, with Toga and Mjoli (2013) the only study in Africa. However, all these empirical studies agree in their results that job involvement is significantly and positively related to organisational commitment. What is lacking most is evidence from a frontier market. From the above discussion, the present study hypothesises that:

H₃: There is a positive relationship between employees' job involvement and organisational commitment.

The indirect effect of Job involvement

From the two theories discussed in this paper – social exchange theory and person-environment fit - it is established that perceived supervisory support would have a positive effect on both organisational commitment and job involvement. Moreover, the empirical evidence also discussed in this paper shows that job involvement positively affects organisational commitment. This position in the literature creates a fertile ground for suspecting an indirect effect (mediation). According to Field (2018), mediation is said to have occurred if the strength of the relationship between the predictor and outcome is reduced by including a mediator, where a full mediation occurs when the relationship between the predictor variable and outcome variable is wiped off; short of which it is a partial mediation. From the social exchange theory, employees feeling supported by their immediate supervisors (representing the employer) would involve themselves more with their job and commit more to the organisation as a reciprocal reaction. Also, highly job-involved employees would be more committed to their organisation and invest substantial effort in order to achieve organisation objectives. Job involvement has been shown to mediate similar situations. Examples of such situations include the relationship between job satisfaction and organisational commitment (Ćulibrk *et al.*, 2018); between employees' moral values and organisational commitment in Bosnia (Dinc and Aydemir, 2013); and between job characteristics and organisational citizenship behaviour (Chen and Chiu, 2009). It is from this background that the present study hypothesises that:

H4 Job involvement mediates in the relationship between employee's perceived supervisory support and organisational commitment

Conceptual model

Figure 1 presents the study's conceptual model as developed from the preceding literature review.

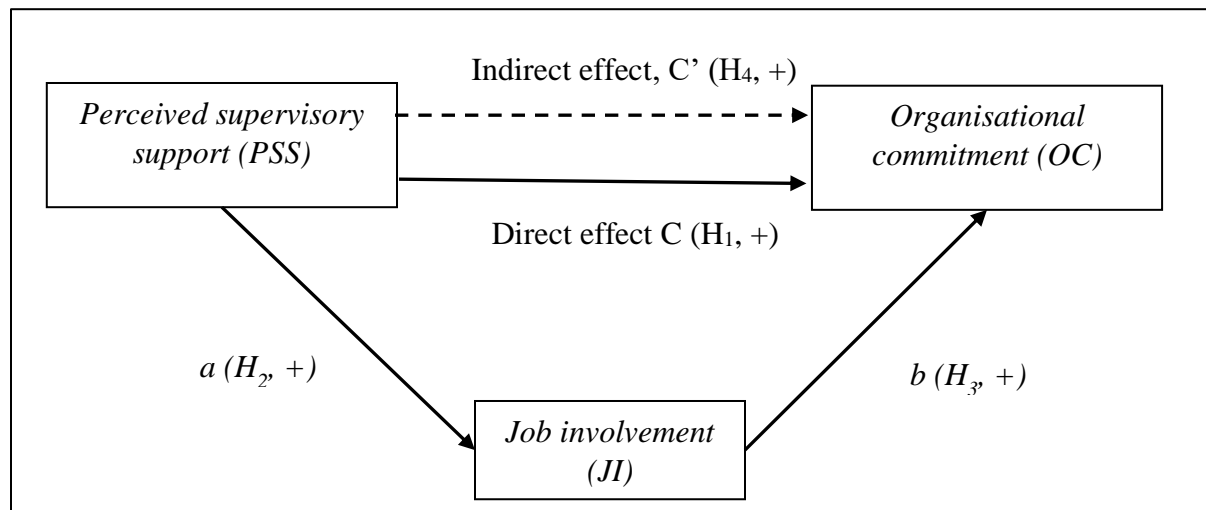


Figure 1. Conceptual Model

Methodology

A cross-sectional descriptive design was adopted with survey as a research strategy. A questionnaire was administered to employees from various organisations in the Lake zone covering public, private, and non-governmental organisations. A snow bowling strategy was used to peddle the questionnaires starting with 19 employees who were attending a soft research skills course at the Open University of Tanzania's Shinyanga Regional Centre. These employees were registered students with the university, pursuing different postgraduate programmes. Each employee was given ten structured questionnaires to fill one and administer the rest to fellow employees in their organisations and beyond. The filled questionnaires were then scanned into pdf and either "WhatsApped" or emailed to the researcher. The employees were asked to ensure that participation was voluntary. In addition, they were asked to fully inform the recruited participants that all of their responses would be confidential and that the results of the analysis would be reported in aggregate terms. A total of 123 questionnaires were returned out of the 190 distributed, a response rate of 64.7 per cent. Data screening lost three cases for being uninvolved (2) in filling the questionnaires and outlier (1), leaving 120 usable questionnaires

Variables and their measurement

Dependent variable: Organisational commitment was measured by a four item-scale adapted from Mowday *et al.* (1982). A sample item was "*I am proud to tell people that I work for this organisation*". Responses were based on a five-point Likert-type rating scale ranging from strongly disagree (1) to strongly agree (5). The four items returned a Cronbach's of .795, which was higher than the $\alpha = .68$ reported in Lambert *et al.* (2015), on the same scale, but on a sample of police officers in India. Scores in these four items were summed up into a total score for each respondent to serve as the dependent variable scores.

Independent variables: Perceived supervisory support was measured by six items from Tears (1981). A sample item was "*my supervisor is friendly and approachable*". Cronbach α improved from .67 to .73 after deleting one item "*my supervisor does little to make it pleasant to work here*". Job involvement was measured by a four-item scale adopted from Kanungo (1982) with a Cronbach's α of .73. A sample item was "*the most important things that happen to me in my life usually occur at my job*". Responses to individual questions under each of the three scales followed a five-point Likert-type rating scale ranging from strongly disagree (1) to strongly agree (5). Both scales were also used in Lambert *et al.* (2015) with Cronbach's α of .70 (based on all six items) and .63, respectively. Total scores were computed for each respondent by summing the items in the respective scales and were used in the regression model as independent variables.

Finally, several demographic characteristics – age and tenure, (both continuously measured), education, gender, marital status and job rank (categorically measured) – were added for understanding the study sample (Table 1). Male respondents were twice the number of female counterparts, while those who were married were three times the sum of those who were divorced (1) and single. More than 62 per cent had a bachelor's qualification, while about 20 per cent held a postgraduate qualification. The rest had a below bachelor qualification. Top and middle management levels constituted about 43 and 54 per cent of the sample, respectively. The rest were in the operational cadre. Average age and tenure were 36.7 (SD = 8.69) and 8.16 (SD = 7.48) years, respectively.

Table 1. Sample Description

Variable	Freq.	%age	Mean	S.D.
Gender (<i>n</i> = 116)				
Male	79	68.1		
Female	37	31.9		
Education (<i>n</i> = 113)				
Below Bachelor	20	17.7		
Bachelor	71	62.8		
Above Bachelor	22	19.5		
Marital Status (<i>n</i> = 118)				
Married	88	74.6		
Others	29	25.4		
Job Rank (<i>n</i> = 110)				
Operational	4	3.6		
Middle Management	59	53.6		
Top Management	47	42.7		
Age			36.7	8.69
Tenure			8.16	7.48

Data preparation

The collected data was screened for accuracy and missing values (scale items only), as well as and lack of participants' engagement when filling the questionnaire, leading to the loss of two cases. This process also supported the decision to drop item SP6. Multivariate Outliers were checked by Mahalanobis distance using $\chi^2_{(13)}$ at $\rho = .001$, losing one case. Missing values were not replaced for failing the 5 per cent missing value criterion for both cases and variables. The final sample reduced to 120 respondents. Normal distribution assumption was tested by the histogram of organisational commitment vs. the regression standardised residuals with mean = -.002 and a standard deviation of 1.002 (*n* = 92). Linearity assumption was tested through normal p-p plot followed by correlation between organisational commitment and perceived supervisory support ($r = .456$, $p < .01$) and job involvement ($r = .42$, $p < .01$) against the recommended minimum of $r = .3$ (Pallant, 2016), representing moderate correlation (Cohen, 1988). Thus, the linearity assumption was not violated. The data passed the multicollinearity test with $r = .3$ between the independent variables which was well below the recommended maximum of .7 (Pallant, 2016). Collinearity diagnostics confirmed this result with a $VIF = 1.106$, which was below the recommended maximum of 10.0 (Pallant, 2016; Tabachnick and Fidell, 2013). However, the data failed the homoscedasticity assumption test using both Breusch Pagan ($\chi^2 = 16.52$, $\rho < .001$) and Koenker ($\chi^2 = 9.30$, $\rho = .01$). Consequently, the study reported the regression results after controlling for this heteroscedasticity problem.

Analysis

Descriptive statistics were used to generate frequencies and descriptive statistics for the categorical and continuous variables, respectively while the correlation was used to assess the relationship between the variables. Multiple regression analysis was used to test the hypotheses. The heteroscedasticity problem reported above was controlled for by generating heteroscedasticity-robust standard errors using Ahmad Daryanto's plug-in for IBM SPSS. The direct and indirect effects were tested using the mediation model (No. 4) from the Process tool plug-in in SPSS (Hayes, 2012). The effect size and the significance of the indirect effect were assessed using Preacher and Kelley's (2011) K^2 and Sobel test respectively, where K^2 has cut-offs of .01, .09, and .25 for small, medium and large effect respectively.

Results

Descriptive, reliability and correlation statistics

Descriptive and correlation analyses were performed to describe the data and test from both linearity and multicollinearity assumptions, respectively. Scale test for reliability analysis was also performed to determine the internal consistency of the latent variable scales. In the results (Table 2), perceived supervisory support had the highest mean and standard deviation. Both perceived supervisory support and job involvement had $r = .46, p < .01$ and $r = .42, p < .01$ respectively which are within the range of .3 to .49 (Cohen, 1988) indicating their significant moderate correlation with organisational commitment.

Table 2. Descriptive Statistics, Correlation and Reliability Test Results

Variable	N	Mean	S. D.	1	2	3	4	5
1 PSS	107	17.59	3.67	0.73				
2 JI	107	13.21	3.24	.310**	0.73			
3 OC	113	14.52	3.51	.456**	.420**	0.80		

* $p < .05$; ** $p < .01$ (2-tailed)

PSS = Perceived supervisory support, JI = Job involvement, OC = Organisational commitment.

Bold figures in the diagonal are scale Cronbach's alpha coefficients

Thus, these results also indicate that the assumption of linearity between the independent variables and the dependent variable was fulfilled. In addition, the correlation between perceived supervisory support and job involvement was much below .7 ($r = .3$) which indicate that multicollinearity is not suspected between these two independent variables.

Multiple regression analysis results

Multiple regression analysis techniques were used to test the ability of the two independent variables of perceived supervisory support and job involvement to predict levels of organisational commitment. Consequent to the heteroscedasticity problems observed in the preliminary analysis, the study reported results based on heteroscedasticity-robust standard errors. Results (Table 3) show that the total variance in organisational commitment explained by the model was 34.8%, $F(2, 89) = 23.76, p < .001$. Both job involvement ($b = .4, t = 3.17, p = .002$) and perceived supervisory support ($b = .38, t = 3.39, p = .001$) significantly positively predicted organisational

commitment. In addition, perceived supervisory support with a higher beta value (beta = .36) had more impact on organisational commitment.

Table 3. Multiple Regression Results

Variable	<i>b</i>	<i>SE (b)</i> [§]	β	<i>t</i>	ρ	95%LB	95%UB
Constant	2.47	2.29		1.08	.283	-1.02	5.96
JI	0.40	0.13	0.31	3.17	.002	0.20	0.60
PSS	0.38	0.11	0.36	3.39	.001	0.21	0.55

$R^2 = 34.8\%$, $F(2, 89) = 23.76$, $p < .001$. [§]heteroscedasticity-robust standard errors
PSS = Perceived supervisory support, JI = Job involvement, OC = Organisational commitment

Indirect effect analysis results

The indirect effect of job involvement in the relationship between perceived supervisory support was estimated using the process tool (Hayes, 2012), application details of which are well demonstrated in Field (2018). In the results (Figure 2), there was a significant indirect effect of perceived supervisory support on organisational commitment through job involvement, $b = .09$, BCa CI [.158, .606]. This represents a relatively medium and significant effect, $K^2 = .105$, 95% BCa CI [.029, .215], $z = 1.99$, $p = .046$. These results indicate that job involvement partially and significantly mediated the relationship between the two job attitudes of perceived supervisory support and organisational commitment. There could, therefore, be other potential mediators to include in the model in addition to job involvement.

Discussion and conclusions

The present study assessed the relationships among the job attitude variables of perceived supervisory support, job involvement, and organisational commitment. Based on the reviewed theoretical and empirical literature, an initial conceptual model and four hypotheses were developed about the connections between the three variables. The study argued that both perceived supervisory support and job involvement would positively affect organisational commitment and that job involvement would mediate the relationship between perceived supervisory support and organisational commitment. All four hypotheses were confirmed.

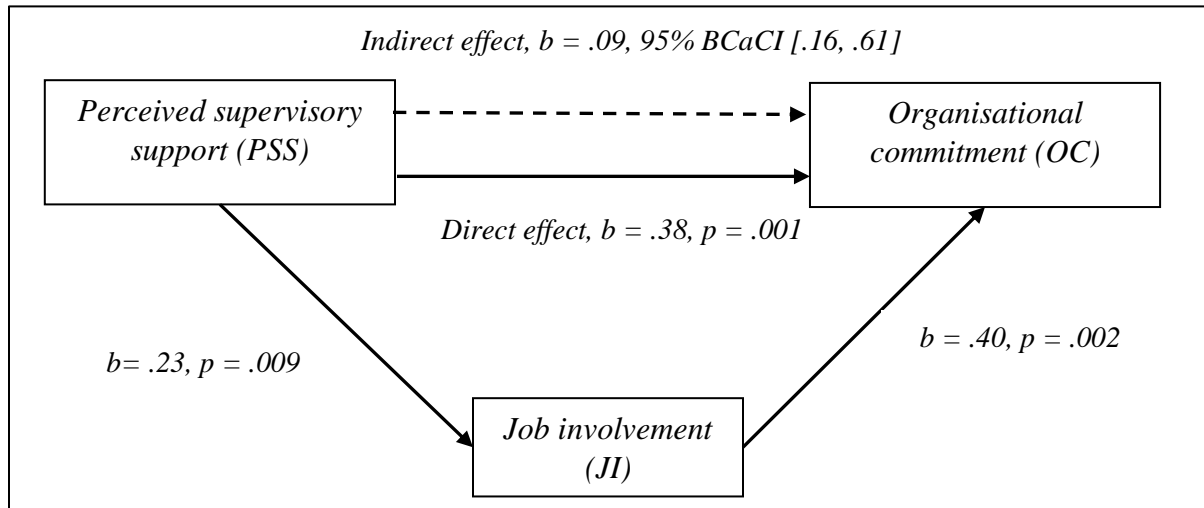


Figure 2. Parameter estimates

Firstly, perceived supervisory support had a significant positive effect on organisational commitment (H1). The result confirms the claim in the social exchange theory that employees who receive advance notice of changes, full credit for the ideas they contribute, friendly treatment and atmosphere, and attention for their welfare, from their supervisors and are asked for their opinions before a decision expected to affect them is made, reciprocate with a stronger commitment to the organisation. The results are also consistent with those reported in earlier studies, examples of which include, Rabban *et al.* (2017), Kang *et al.* (2015), Lambert *et al.* (2015), Joiner and Baikalis (2006) Tenkebe (2010) and Lambert and Hogan (2009). An important contribution of this line of research is empirical evidence on the relationship between a job attitude variable and organisational commitment from a frontier market which was lacking to the best of the researcher's knowledge. The finding suggests that organisations should train, orientate and support new and current supervisors so that they can support their subordinates better. All employees seeking guidance on career development should be supported no matter how much development is needed. Performance appraisal should also insist on the provision of constructive feedback. Furthermore, consistent with Wayne *et al.* (1997), organisations should develop supervisors' performance management skills, create an environment where task delegation is used as an opportunity for learning because "meaningful task delegation can both increase support perception and strengthen job performance."

The second hypothesis was on the relationship between perceived supervisory support and job involvement. Perceived supervisory support was found to have a significant positive effect on job involvement. Consistent with the prediction of the person-environment fit, which posited that quality supervision creates a positive work experience, leading employees to portray positive work outcomes such as job involvement. Job variables with motivating potential such as perceived supervisory support could increase employees' display of positive work outcome such as job involvement. The results are also in line with those reported in Lambert *et al.* (2015) on a sample of Indian police officers.

The third hypothesis was on the relationship between job involvement and organisational commitment. The findings show that job involvement positively and significantly affected organisational commitment. The results support the notion that the more employees identify with their job and consider the job important to their lives, the more they commit to the organisation. These findings are consistent with those reported in earlier studies, e.g. Abdallah, *et al.* (2017), Cohen, (2000), Toga and Mjoli (2013), and Zopiatis *et al.* (2014) as well as in the earlier meta-analytic study of Mathieu and Zajac (1990). A comparison of the effects of the two job attitudes, i.e. job involvement and perceived supervisory support shows that the latter was the most important predictor of organisational commitment.

Finally, in hypothesis four, the findings confirmed the notion that job involvement mediates significantly the relationship between perceived supervisory support and organisational commitment, albeit partially. The fact that it is partial mediation signals two possibilities. One is the possibility that a major part of the effect of perceived supervisory support on the organisational commitment is achieved directly. The other possibility is that there could be more mediators to be included in the mediation model. This finding is new linking a job variable (perceived supervisory support) to a work outcome (organisational commitment) with a mediator (job involvement), not only in the general literature but only in the empirical evidence from a frontier market – Tanzania. The direct effect of perceived supervisory support on organisational commitment is not eliminated even after accounting for the impact of job involvement.

Overall the study suggests that both perceived supervisory support and job involvement are vital in making employees committed to the organisation. Dinc and Aydemir (2013) suggest that managers who understand this and try to enhance these two concepts with seminars and training programmes will be able to increase employee's commitment to their organisations.

Limitations and suggestions for future research

Possible limitations lie on the sample and the number of job attitude variables involved. Data was limited to the sample snowballed from the student employees who participated in the course. Coverage was dictated by where these employee students came from and their employing organisations. This sample threatens generalizability of the results, not only on Tanzania as a country but even within its lake zone. The study recommends that future research should obtain a more representative sample to confirm whether the conclusions from this study stand out.

Another limitation is on the job attitude variables involved. More of them such as job variety, job autonomy, training, job satisfaction, work engagement, etc. which have been shown to affect organisational commitment (Lambert *et al.*, 2015) should be considered. Furthermore, the results of this study indicate that the size of indirect effects was significant but partial, suggesting that mediators other than job involvement could be at play. Finally, a full range of organisational commitment dimensions could also be explored as each of these dimensions might lead to different behaviour.

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Influence of Brand Experience on Brand Loyalty: Evidence from Mobile Money Services in Tanzania

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Abstract. *This study aimed at determining the influence of brand experience in generating the loyalty of customers towards mobile money service brands in Tanzania. It applied an explanatory research design in which structural equation modelling was utilized to analyze survey data from 299 respondents that were obtained through random sampling techniques. The findings reveal that sensory, affective, behavioral, intellectual and relational experiences have a significant and positive impact on brand loyalty. However, the relational experience was found to be more powerful in building the loyalty of customers. It is concluded that sensory, affective, behavioral, intellectual and relational experiences are antecedents of brand loyalty. Thus, it is recommended that mobile money operators and other dealers should devotedly develop brands that impart customers with better experiences which in turn increases the loyalty of customers on their brands. This will enable them to be competitive and differentiate themselves from competitors. This study strengthens the theoretical foundation of the link between brand experience dimensions and brand loyalty.*

Keywords: Brand experience, brand loyalty, mobile money services, Tanzania.

Introduction

Mobile money services have extended the financial inclusion in low and middle-income countries particularly in rural areas where there have been no financial services for decades. In Sub-Saharan Africa, the industry had 277 million registered accounts more than the commercial banks in 2016 and 0.5 billion globally (GSMA, 2017). It processes a total of \$ 1.3 billion per day (GSMA, 2019). A rapid spread of mobile services has been observed also in Tanzania. In March 2019 there were 22.8 million registered mobile money accounts with a share of 40% M-Pesa, 33% Tigo Pesa, 17% Airtel money, 6% Halotel money, 2.36% Ezy-Pesa and 2% TTCL (TCRA, 2019). This remarkable growth of mobile money services and an increased number of service providers has increased competition among mobile network operators (MNOs). The problem is even tenser when MNOs see customers switching from one mobile brand to another (Ndesangia, 2015) and others have become users of more than one service brand.

This condition is of major concern particularly to MNOs and dealers as loyal customers are required for the existence of their businesses. Loyal customers buy more than non-loyal customers, recommend the business brands to other customers, repurchase the brands, decrease price sensitivity and increase market share for the company (Jafari et al., 2016). Brand loyal customers also reduce the marketing expenses of business firms as the expenses of attracting a new customer

is six times more than the expenses of retaining an old customer (Mwai et al., 2015). Therefore, the achievement of business firms depends mainly on its ability to attract loyal customers. However, it has been a challenge for business firms to make their customers continuously and repeatedly purchase their brands.

Consequently, marketing researchers and practitioners have been searching for the factors determining the loyalty of customers toward different brands to alleviate this problem. However, this study aimed at studying brand experience as one of the important factors affecting brand loyalty in the mobile money services. This is because customers of these days are searching for brands that create memorable experiences and no longer just buying the functional needs of products and services (Zarantonello and Schmitt, 2010). Brand experiences associated with emotions impact loyalty of customers, increase sales and pave a way to brand differentiation. In this experience era, firms must develop brands that impart customers with positive and memorable experiences because the traditional methods of marketing like advertisements are now bringing reverse results. For example, studies show that 69 percent of customers in China and 50 percent in America and England try their level best to get rid of the advertisements they receive from marketers (RAZORFISH, 2015). Thus, the brand experience remains one of the factors which develops an emotional connection to a brand which in turn increases the loyalty of customers towards brands.

Problem statement

The increase in demand for mobile money services and the number of service providers in the country has increased competition in the industry. MNOs are using diverse strategies to guarantee their long triumph in the existing competitive market environments. Despite these strategies, customers are still switching brands (Ndesangia, 2015). Customer's brand switching is a sign of disloyal customers and a lack of customer retention among MNOs. To alleviate this problem marketing researchers and practitioners have been searching for factors determining the loyalty of customers towards brands. To the best of our knowledge, there is no study that has examined all factors influencing brand loyalty of customers particularly in mobile money services.

For that case, this study devoted to determining the influence of brand experience in the Tanzanian mobile money industry. It is worth noting that, the existing findings of the influence of brand experience on brand loyalty have generated debatable and controversial findings. Some findings show direct influence of brand experience to brand loyalty (Akin, 2016; Jafari et al., 2016) while others indicate that, it impacts brand loyalty through other variables such as brand relationship quality (Francisco-Maffezzoliet al., 2014), customer satisfaction (Kim et al., 2015) and consumer confidence (Pollalis and Niros, 2016), to mention the few. However, some researchers posit that brand experience doesn't have a significant impact on brand loyalty (Ardyan et al., 2016; Forsido, 2012; Iglesias et al., 2011; Nysveen et al., 2013). This disagreement among scholars reveals that the relationship between brand experience and brand loyalty is still equivocal and hence creates a research gap that needs to be filled by conducting more studies on the relationship between these constructs. On the other hand, extant studies on brand experience are mainly from developed countries such as the USA, UK, and Australia leaving the developing countries such as Tanzania under searched. Besides, brand experience studies in the service sector (such as mobile money services) are also scarce (Khan and Rahman, 2015) and this also justified the need to conduct this study to enrich the brand management literature about experiences encountered by customers in the service brands of developing economies.

Literature review

Brand loyalty

Brand loyalty is regarded as a customer's commitment to constantly repurchase certain brands in the future, irrespective of the condition and marketing efforts of other brands possibly making those customers switching brands (Semadi and Ariyanti, 2018). It is a psychological process that consists of behavioral, emotional and cognitive loyalty (Worthington et al., 2009) as well as attitudinal loyalty (Russell-Bennett et al., 2007). Behavioural loyalty relies on actual consumption and repetitive buying behavior of customers (Tweneboah-Koduah and Farley, 2016), whereas the attitudinal loyalty involves the psychological commitment of customers to repurchase the brand. Worthington et al. (2009) define cognitive loyalty as the choice made by to stay with a brand while observing the switching costs and brand's characteristics whereas emotional loyalty is the degree of positive feelings triggered by repurchasing a brand (Oliver, 1999).

Building a loyal customer base is important particularly in a competitive business environment like in the Tanzanian mobile money services. Loyal customers help businesses by purchasing more of their brands, giving premium prices and attracting new customers through a positive word-of-mouth recommendation (Moreira et al., 2017). In other words, loyal customers are not prone to promotion lures, reduces marketing costs for businesses, act as a source of competitive advantage and increase profits to the company. Therefore, it is necessary for MNOs to take steps to determine the factors that most valued by customers to enable them to appropriately allocate resources to enhance the loyalty of their customers.

Brand experience

Brand experience is "subjective, internal consumer responses (sensations, feelings, and cognition) and behavioral responses evoked by brand-related stimuli that are part of a brand's design and identity, packaging, communications, and environments" (Brakus et al., 2009, p.53). Brand experience by customers differs, some experiences are stronger than others, may be positive or negative and may last for a long or short time compared to others. Experiences are generated when customers utilize brands; converse to others on issues related to the brand; search for information about the brand and when brands are promoted (Nadzri et al., 2016). Moreover, the brand experience can either be direct or indirect. The direct form of brand experience occurs when customers have physical contact with the brand whereas indirect brand experience is generated through advertisement or other channels of marketing communications (Jafari et al., 2016).

Brand experience comprises four dimensions namely sensory, affective, intellectual and behavioral dimensions. Zarantonello and Schmitt (2010) refer to behavioral dimension as the dimension that includes bodily experiences, lifestyles, and contact with the brand whereas sensory dimension relates to visual, auditory, tactile, gustative and olfactory stimulations provided by the brand. The intellectual dimension, on the other hand, is the capability of the brand to engage convergent and divergent thinking while affective dimension consists of feelings generated by the brand and its emotional bond with the consumer. Although the four dimension scale by Brakus et al. (2009) have been utilized by majority of brand experience studies, it misses the relational dimension which is believed to be important in the service brands (Nysveen et al., 2013; Scmitt, 1999) like this study and in one of the emerging marketing perspective i.e. stakeholder' co-creation of brand value (Nysveen et al., 2013). As a result, Nysveen et al. (2013) recommend that "future research should further explore the complexity of the relational component of brand experience,

both in a product brand and a service brand setting" (p.421). The current study opted to explore this complexity in the service brands where limited research has been done. In the competitive business environment imparting customers with memorable experiences seems to be a source of sustainable competitive advance and a differentiation tool which can be used to win the loyalty of customers

The relationship between brand experience and brand loyalty

The extant literature shows that the relationship between brand experience and brand experience is still equivocal. Hidayanti et al. (2018) reveal that the increase in better experiences from brands increases the loyalty of customers towards brands. Semadi and Ariyanti (2018) also support the idea that an increase in experiences from brands makes customers loyal to those brands. However, unlike the above scholars, Ardyan *et al.* (2016) studied the influence of brand experience on brand loyalty in the Indonesian mobile industry and found that the increase in better experiences received by customers does not build the loyalty of customers to the brand. Similarly, studies by Moreira *et al.* (2017) in Portugal, Mabkhot (2016) in Malaysia and Forsido (2012) in Sweden indicate that brand experience has no impact on brand loyalty. Besides, other scholars have shown that brand experience indirectly influences brand loyalty (Hussein, 2018; Mohammad, 2017). These controversial findings call for more studies to be done to have more insights about the link between the two constructs. Moreover, the majority of empirical studies on the link between brand experience and brand loyalty have been done in the developed world and product brands while leaving the developing world (such as Tanzania) and the service industry (such as mobile money) under searched. It is worth mentioning also that the majority of brand experience studies have considered the effect of the overall brand experience on brand loyalty rather than testing the influence of individual effects of brand experience dimensions on brand loyalty. However, Ong et al. (2018) studied the individual effects of brand experience dimensions in the restaurant industry of Malaysia and found that sensory, affective, behaviour and intellectual brand experiences have a positive impact on brand loyalty. Conversely, Nysveen *et al* (2013) conducted a study using brands that offer telecommunication services and found that the relational experience has a positive and significant impact on brand loyalty. However, these scholars found that sensory, affective, behaviour and intellectual experiences do not have an impact on brand loyalty. Thus, it is hypothesized that:

H₁: Sensory experience has a positive and significant impact on brand loyalty

H₂: Affective experience has a positive and significant impact on brand loyalty

H₃: Behavioral experience has a positive and significant impact on brand loyalty

H₄: Intellectual experience has a positive and significant impact on brand loyalty

H₅: Relational experience has a positive and significant impact on brand loyalty

Methodology

This study utilized the positivism research philosophy in gathering data on observable reality and establish causal relationships. A deductive research approach and explanatory research design were applied. Purposive sampling was applied to select Sumbawanga and Mpanda Municipal

councils from Rukwa and Katavi regions respectively. Thereafter, random sampling was used to select users of mobile money services from micro, small and medium enterprises (MSMEs). A structured questionnaire was used to gather information from selected respondents.

In selecting the sample size, references to other scholars were considered. These included Field (2009) who recommend that a scholar should have at least 10 – 15 respondents per variable. Kass and Tinsley (1979) propose having between 5 and 10 respondents per variable up to a total of 300. Moreover, Tabachnick and Fidell (2013) consider 300 cases as enough for factor analysis. However, Kline (2011) demonstrates that, for studies utilizing Structural Equation Modeling (SEM), 200 cases are the minimum suggested cases for data analysis. Therefore, the current study applied a sample size of 300 as proposed by preceding researchers (Kass and Tinsley, 1979; Tabachnick and Fidell, 2013) which are in line with that of Kline (2011). The study used scale items from previous studies (Brakus *et al.*, 2009; Jones and Taylor, 2007; Kuenzel and Halliday, 2008; Nysveen *et al.*, 2013).

During coding, the negatively worded items were reverse coded. Data gathered were checked for missing values, outliers, multicollinearity problems and whether they were normally distributed. There were missing data on the income variable and hence we decided to drop that case and remained with 299 usable questionnaires. Mahalanobis D statistic (Mahalanobis, 1936) was used for identifying outliers. The data values are regarded as outliers if the Mahalanobis distance (D²) values are greater than the Chi-square values of the items applied (DeSimone *et al.*, 2015). Multicollinearity was tested using Variance Inflated Factor (VIF) and Tolerance. VIF values higher than 5 and Tolerance values less than 0.2 reveal the presence of multicollinearity (Hair *et al.*, 2010). Normality assumption, on the other hand, was tested using the Kolmogorov-Smirnov test.

Data Analysis

This study utilized SEM due to its proven strengths. It is a comprehensive statistical method for hypotheses testing concerning the relationship between observed and latent variables (Hoyle, 1995). It also clearly takes care of the measurement error in indicators of latent variables something that confounds, other traditional statistical methods such as multiple regression, correlation and ANOVA. Moreover, SEM tests construct validity extensively and more deeply compared to traditional correlation analyses (Bagozzi and Yi, 2012). The study used IBM AMOS version 22 to run the measurement model and structural models. The measurement model was applied to examine the reliability and validity of all constructs whereas the structural model was employed for hypothesis testing.

Evaluation of the measurement model

Confirmatory Factor Analysis (CFA) was utilized to test the measurement model of the study. Model fit indices were applied to determine whether the model fitted the data well. Table 1 presents the fit indices used and their cut-off points.

Table 1. Goodness-of-fit indices for the measurement model

Fit indices	Cut off point
The ratio of chi-square and degree of freedom(χ^2/df)	≤ 3
Goodness of Fit Index (GFI)	≥ 0.90
Comparative Fit Index (CFI)	≥ 0.90
Adjusted Goodness of Fit Index (AGFI)	≥ 0.80
Parsimony Normed Fit Index (PNFI)	≥ 0.50
Root Mean Square Error of Approximation (RMSEA)	≤ 0.08
Parsimony Comparative Normed Fit Index (PCNFI)	≥ 0.50

Source: Al-Msallam (2015) and Kumar (2015).

Results and discussion

Table 2 reveals that there was no multicollinearity problem in the data as the tolerance and VIF values did not surpass the threshold values. Table 2 also shows that the p-values of the Kolmogorov-Smirnov test for the dependent and independent variables were not significant at 5% level. This implies that the data were approximately normal and hence the normality assumption was met.

Table 2. Multicollinearity statistics and Reliability test

Measured variables	Collinearity Statistics		Kolmogorov-Smirnov p-value	Cronbach's Alpha
	Tolerance	VIF		
Sensory	.736	1.360	0.200*	0.812
Affective	.816	1.225	0.200*	0.927
Behaviour	.714	1.400	0.179	0.847
Intellectual	.720	1.388	0.090	0.821
Relation	.597	1.674	0.178*	0.861
Brand loyalty			0.168	0.916

. This is a lower bound of the true significance
 Dependent Variable: Brand loyalty

The measurement model

The model fit index generated the following results: CMIN/DF = 2.60, GFI = 0.85, AGFI = 0.80, CFI = 0.92, PNFI = 0.73, PCNFI = 0.77 and RMSEA = 0.08 which signify an adequate model fit (Al-Msallam, 2015; Jafari et al., 2016; Kumar, 2015).

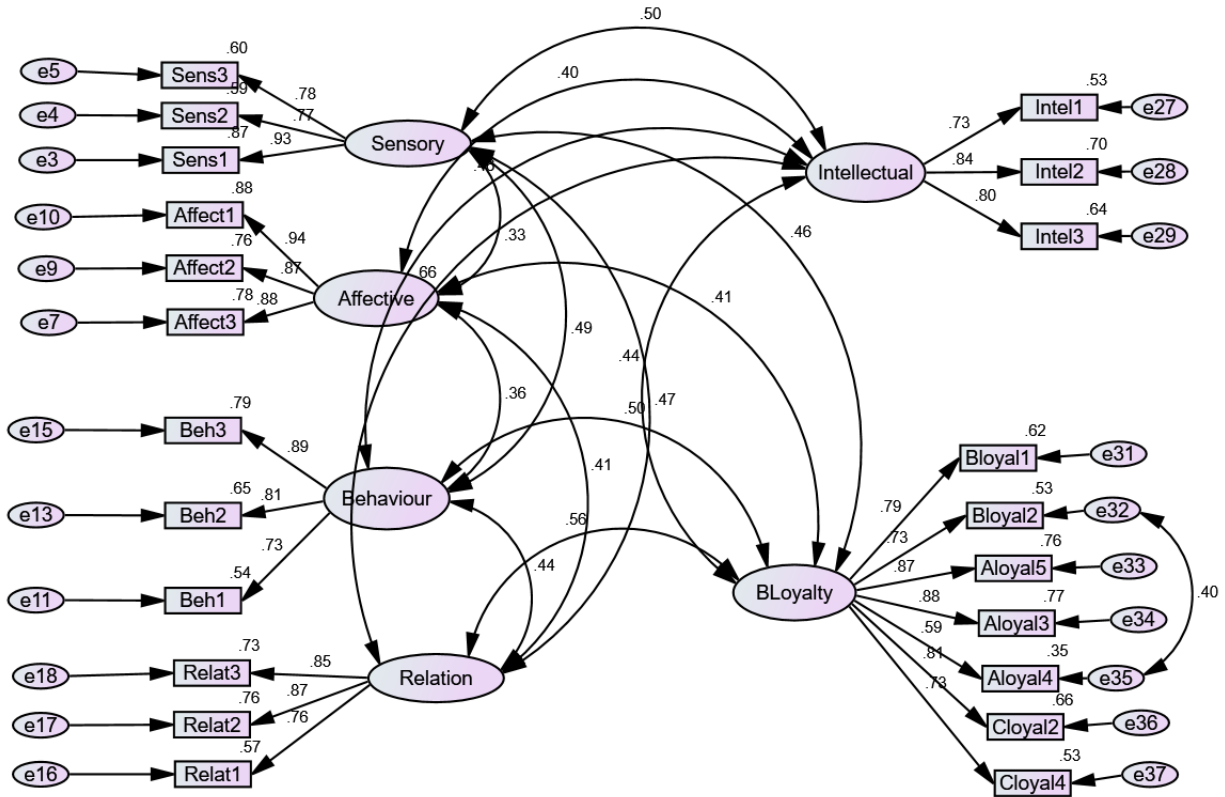


Figure 1. Measurement model of the study

Key: Sens1 – Sens3 = sensory, affect1-Affect3 = Affective, beh1-beh3 = behavior, relat1-relat3 = relation intell1-intel3 = intellectual, Bloyal1-Bloyal2 = Behavioral brand loyalty, Aloyal3-Aloyal5 = Attitudinal loyalty, Cloyal2-Cloyal4 = Cognitive loyalty

The Structural model

The structural model was examined if it perfectly fitted the data before testing the hypothesis. In evaluating the model fit the following model fit indices were achieved: CMIN/DF = 2.49, GFI = 0.85, AGFI = 0.81, CFI = 0.92, RMSEA = 0.079, PNFI = 0.73 and PCFI = 0.77 which suggests that the model fits the data (Al-Msallam, 2015; Jafari et al., 2016; Kumar, 2015) and hence there was no need to re-run the analysis (Figure 2).

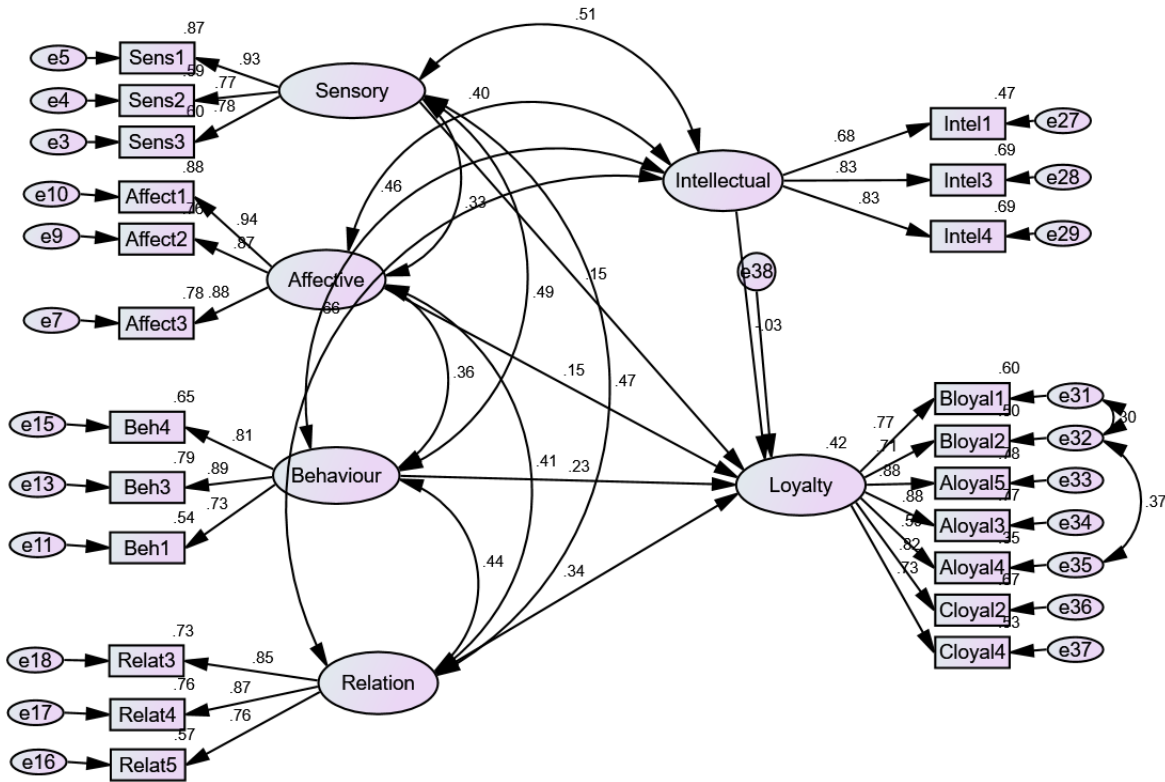


Figure 2. Structural model of the study

Key: Sens1 – Sens3 = sensory, affect1-Affect3 = Affective, beh1-beh3 = behavior, relat1-relat3 = relation intell1-intel3 = intellectual, Bloyal1-Bloyal2 = Behavioral brand loyalty, Aloyal3-Aloyal5 = Attitudinal loyalty, Cloyal2-Cloyal4 = Cognitive loyalty

Hypothesis testing

In testing the hypothesis, the recommendation by Hox and Bechger (1998) was considered i.e. p-value was set at 5% level and $t = 1.96$. Table 3 summarizes the results of the hypotheses tested. It reveals that sensory experience has a significant and positive relationship with brand loyalty ($t = 2.036$, $\beta = 0.138$, $p < 0.04$) and hence H_1 was supported. Table 3 also shows that affective experience has a positive and significant impact on brand loyalty ($t = 2.362$, $\beta = 0.115$, $p < 0.018$) and hence H_2 is supported. The findings also supported H_3 which stated that behavioral experience has a positive and significant impact on brand loyalty ($t = 3.023$, $\beta = 0.228$, $p < 0.003$). However, the results did not support H_4 which stated that intellectual experience has a positive and significant impact on brand loyalty. Moreover, the findings reveal that relational brand experience has a significant and positive influence on brand loyalty ($t = 3.704$, $\beta = 0.290$, $p < 0.000$). Thus, H_5 was supported.

Table 3. Hypotheses test

Hypothesis	Path	T-Statistic	Beta	P-value	Remarks
Hypothesis 1	Sensory experience → Brand loyalty	2.036	0.138	0.042	Supported
Hypothesis 2	Affective experience → Brand loyalty	2.362	0.115	0.018	Supported
Hypothesis 3	Behavioral experience → Brand loyalty	3.023	0.228	0.003	Supported
Hypothesis 4	Intellectual experience → Brand loyalty	0.273	0.025	0.785	Not Supported
Hypothesis 5	Relational experience → Brand loyalty	3.704	0.290	0.000	Supported

Discussion of findings

This study has revealed that sensory experience, affective experience, behavioral experience and relational experience significantly and positively influence the loyalty of customers towards mobile money brands. However, this study has found that the most important dimension with a greater positive influence on brand loyalty was the relational dimension followed by behavioral experience, affective and lastly was a sensory dimension. This confirms the importance of relational brand experience particularly in the service brands. Similarly, Nysveen et al (2013) found that the relational brand experience exerted more influence on building the loyalty of customers in the service brands than sensory, affective and behavioral experiences which did not influence the loyalty of customers.

The findings of this study connote that the loyalty of customers towards mobile money service increases with an increase in better experiences from these brands. In other words, the more customers are exposed to better experiences generated by mobile money brands in the country, the more they continue to repurchase these brands. In particular, the findings suggest that the more customers are exposed to sensory experiences the more they become loyal to these brands. The findings also suggest that the increase in affective experiences from mobile money service brands raises the desire of customers to be loyal. It is also confirmed from this study that when behavioral experiences increase, the loyalty of customers towards mobile money service brands also increases. In other words, if one wants to make customers loyal to mobile money brands that individual should increase the behavioral experiences.

Similarly, the findings of this study reveal that the higher the relational experiences imparted to customers, the more customers become loyal to mobile brands. This suggests that MNOs managers and other mobile money dealers should invest in building environments that will ensure that customers have better experiences on every touchpoint of their services. This will enable them to have a larger loyal customer base. These loyal customers will spread word of mouth

recommendations to existing and potential customers. In the current experience era, firms should appreciate the importance of experiences encountered by customers as they play a big role in loyalty generation. MNOs which will be able to create unique experiences from its brands will be able to attract a larger number of buyers as customers of these days are buying the functional needs of the brands plus the experiences created by these brands. Similarly, other scholars (Akin, 2016; Brakus et al., 2009; Jafari et al., 2016, Ong *et al.*, 2018) found a positive relationship between brand experience dimensions and brand loyalty. However, different from the current study, other scholars such as Ardyan et al. (2016) and Iglesias et al. (2011) found that brand experience doesn't have an impact on brand loyalty. In other words, these authors suggest that better experiences encountered by customers cannot build the loyalty of customers. The current study strengthens the theoretical foundation of the link between the individual brand experience dimensions and brand loyalty.

Conclusion and recommendations

This study has revealed that brand experience dimensions namely sensory, affective, behavior, intellectual and relational experience has a positive impact on brand loyalty. However, the relational experience is more powerful in influencing the loyalty of customers towards mobile brands. It is concluded from these findings that when mobile money customers are exposed to better brand experiences, they tend to feel obligated to pay back the benefits they get from mobile money brands by being loyal to these brands. In other words, when mobile money customers receive experiences that touch their hearts and minds, they feel a sense of indebtedness which compels them to repeatedly and continuously use mobile money services. Therefore, the study concludes that sensory, affective, behavior, intellectual and relational experience are one of the antecedents of brand loyalty particularly in the mobile money service industry in Tanzania. We, therefore, recommend that to become more competitive, MNOs and dealers should devotedly create brands that will impart better experiences to their customers. However, more emphasis should be given to relational experiences that have more influence compared to other brand experience dimensions. This seems to be the best option, particularly on the existing competition among MNOs as it will make customers loyal to their mobile money brands.

Limitation and areas for future research

This study strengthens the theoretical foundation of the link between brand experience and brand loyalty in mobile money services and adds knowledge to the brand management literature. However, further research can be done in other service brands like the banking and airline industry to have more insights on how experience builds the loyalty of customers in these services. Besides, other studies may consider factors such as word of mouth, brand image and brand identity which are likely to influence brand loyalty either directly or indirectly. Moreover, other studies may involve other Tanzanian regions to have a broader understanding of how mobile money customers experience these brands.

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Appendix 1: Exploratory Factor Analysis Output of retained Items for Brand Loyalty

Brand loyalty	Item retained	Description of items retained	Factor Loadings
Attitudinal loyalty	ALOYAL2	I encourage friends and relatives to do business with this brand	.903
	ALOYAL3	I will speak positively about my mobile money brand	.851
	ALOYAL1	I recommend this brand to someone who asks my advice	.805
	ALOYAL4	I am committed to this brand	.781
	ALOYAL5	I would purchase this service again, even if it receives bad evaluations from the media or other people	.748
Behavioural loyalty	BLOYAL4	I would like to switch to another mobile money operator that offer better services	.965
	BLOYAL3	When I last used mobile money services, this brand was my first choice	.885
	BLOYAL5	I would like to switch to another mobile money operator that offer more services	.793
Cognitive loyalty	CLOYAL2	Price is not an important factor in my decision to remain with this brand	.780
	CLOYAL1	I would be willing to pay a higher price for using this brand over other brands	.612
	CLOYAL4	I am very interested in what others think about my mobile money brand	.559
Brand experience	Item retained	Description of items retained	Factor Loadings

Sensory	SENS3	This brand does not appeal to my senses ®	.961
	SENS2	I find this brand interesting in a pleasure/excitement way (sensorial way)	.865
	SENS1	This brand makes a strong impression on my visual sense or other senses	.813
Behavior	BEHAV2	This brand results in bodily experiences	.876
	BEHAV1	I engage in actions when I use this brand	.736
	BEHAV3	This brand is not action oriented ®	.850
Intellectual	INTEL 2	This brand does not make me think ®	.999
	INTEL1	I engage in a lot of thinking when I encounter this brand	.857
	INTEL3	This brand stimulates my curiosity and problem solving	.552
Affective	AFFEC1	This brand induces feelings	.976
	AFFEC3	This brand is an emotional brand	.850
	AFFEC2	I do not have strong emotions for this brand ®	.779
Relation	RELAT1	As a customer of this brand, I feel like I am part of a community	.873
	RELAT2	I feel like I am part of this brand family	.523
	RELAT3	When I use this brand, I do not feel left alone ®	.691

NB: ® means the item was reverse coded

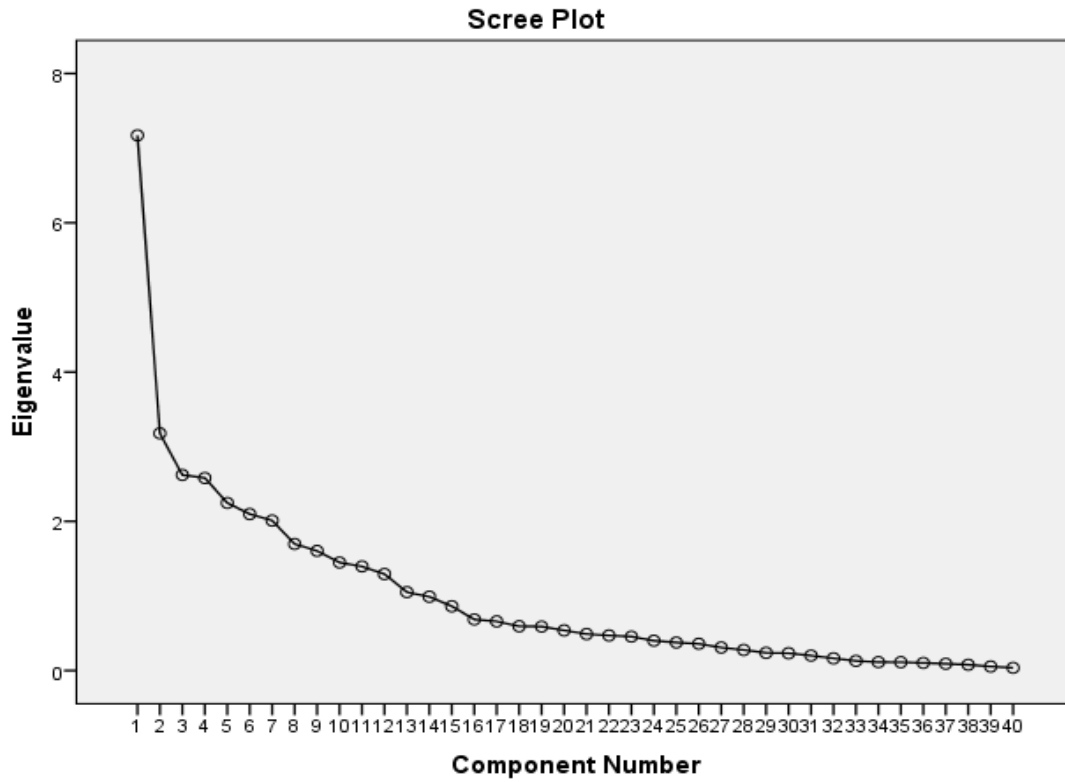


Figure: 1 Screen Plot

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