


# Linking Service Innovation to Organisational Performance: Mediating Role of Employee Productivity and Job Satisfaction

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## ABSTRACT

Banks are leveraging on innovation to address the major concerns of their employees including improvements in service delivery, operational efficiency, and enhancing the speed of transactions. The purpose for this study was to explore the mediating role of job performance and job satisfaction in the relationship between service innovation and organisational performance. Data for the study was obtained from 250 bank employees in Ghana through structured questionnaire. The PLS-SEM was the main analytical tool used to analyse the research findings. Findings from this study revealed a positive and significant relationship between service innovation and organizational performance. Additionally, the study revealed that employee job satisfaction and productivity positively influence organisational performance. The study further revealed a mediation possibility for job satisfaction and employee productivity in the relationship between service innovation and organisational performance. The implications as well as the theoretical contributions of this study are discussed.

## KEYWORDS

Employee Performance, Job Satisfaction, Organisational Performance, SEM, Service Innovation

## INTRODUCTION

The service sector is currently witnessing an impressive expansion while contributing positively to the Gross Domestic Product (GDP) of several countries (Ishola & Olusoji, 2020). The dynamism of the service sector, particularly information technology (IT) and IT enabled services has resulted in an unprecedented and rapid growth. Banks are therefore leveraging on technology like ICT and its related services to address the major concerns of their employees including improvements in service delivery methods, enhancing operational efficiency, and reducing the time to perform transactions.

Employees tend to be effective when the needed skills, equipment, knowledge and right technology is provided in the performance of their duties. It is important therefore that organizations give employees the needed tools and skills to motivate them to increase their productivity and achieve better performance for the organization. Employee performance and productivity is linked to employee

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job satisfaction (Bakotić, 2016; Latif et al., 2015; Mafini & Poee, 2013). Job satisfaction refers to the compatible and incompatible feelings that employees have about their jobs. Job satisfaction can be defined as pleasant and positive state of job evaluation or job experience (Amoopour, Hemmatpour & Mirtaslimi, 2014). It reflects the extent to which the work environment (i.e. job, colleagues, and supervision) meet the individual needs. Job satisfaction is therefore one of the important variables in the search for understanding the attitudes and behaviors of employees towards their organizations. According to some recent studies, employees who have experienced job satisfaction are likely to be productive and remain in their jobs (Amoopour et al., 2014). Job satisfaction thus experienced by employees will effect on the quality of the services they provide which in turn will affect their job performance (Eisenberg et al., 2012).

Recent literature links employee performance or productivity to innovation. Osman, Sharif and Lajni (2016) mentioned that one of the methods organizations could use to increase or enhance productivity of employees is innovation. Innovation is essential for achieving a competitive advantage in startups and established companies (Lichtenthaler, 2020). Through innovation, employees are able to generate new product ideas to enhance the competitiveness of their firm (Sadikuglo & Zehir, 2010). Innovative activities thus improve administrative processes, increase efficiencies and make work management more effective (Walker, Damanpour & Devece, 2010). In order to become innovative, organizations must manage and foster an inner environment that supports the innovative behavioral traits among employees (Bysted, 2013).

Favre-Bonte, Elodie and Thevenard-Puthod, (2013) defined innovation as occurring when the bank takes deliberate actions to increase its profits. Innovation has also been explained as creating values that play a significant role in making organizations sustainable in the business market (Belal, Shirahada, & Kosaka, 2014). Organisational performance is linked to employee productivity through innovation. The empirical investigation further shows that the banking sector can develop process innovations, which give the bank a longer-term competitive advantage (Favre-Bonte et al., 2013).

The introduction of innovation in the banking service means that customers need not to be physically present in the banking halls for banking transactions (Yusheng & Ibrahim, 2019). Banking services can thus be performed via innovative platforms such as internet banking, mobile banking, automated teller machines and mobile banking apps.

A careful look at the service literature shows a paucity of research on the effect of innovation on employee productivity in the banking sector especially in Ghana. This study therefore seeks to close the gap identified in the literature in the Ghanaian context. This therefore calls for a research to find out how service innovation could enhance the productivity of bank employees as well as improve organizational performance. The major objective of the study therefore is to explore the impact of service innovation on organizational performance among banks in Ghana.

From the foregoing, this study seeks to achieve the following objectives:

- Assess the effect of employee productivity and job satisfaction on organizational performance
- Explore the mediating role of employee productivity and job satisfaction in the relationship between service innovation on organizational performance

## **MATERIALS AND METHODS**

### **Service Innovation (SI)**

There appears to be little attention to what constitutes service innovation. Berry et al. (2006) posit that the definition of innovation in service organizations is more difficult than say for physical products. Majority of definitions distinguish between “product” and “process” for both service and manufacturing industries (Tether et al., 2002). Some researchers have however tried to provide varied definitions for this term. Flikkema, Spaargaren and Kwakman (2010) defined service innovation as

a multidisciplinary process of designing, realizing and marketing combinations of existing and/or new services and products with the final attempt to create valuable customer experiences (Flikkema et al. 2010). Innovations in services are a mix of reproduced innovations and ‘small’ non-reproduced changes to solve single customers’ problems (Sunbo & Gallouj, 2000). Toivonen and Tuominen (2006) also summed up the definition of service innovation as a new service or such a renewal of an existing service which is put into practice and which provides benefit to the organization. They added that to be an innovation the renewal must be new not only to its developer, but in a broader context, and it must involve some elements that can be repeated in new situations (Vos, 2010).

Tsai and Wang (2017) added that service innovation is a value-added chain service activity in which firms provide novel services by combining existing elements and newly developed ones to create innovative service (Möller, Rajala, & Westerlund, 2008; Åkesson, Skälén, Edvardsson, & Stålhammar, 2016). The SI activity for service-oriented firms accordingly should consider additional characteristics that influence innovation activities within these firms and affect their empirical measurements (Hipp & Grupp, 2005). Service-oriented firms that engage in innovative service not only pursue new knowledge and skills to develop new process and services to fulfill market requirements but also attempt to extend existing knowledge and skills in current service offers for continuous improvement. In this study, we define service innovation as the process of integrating innovative solutions to deliver excellent customer service.

### *Relationship Between Service innovation and Employee Job Satisfaction*

Researchers have given different approaches in defining job satisfaction, and a number of study have also highlighted on the importance of the phenomena. Job satisfaction represents a most complex phenomenon that faces management of today’s organizations (Aziri, 2011). In the literature Job satisfaction has been demonstrated as a subject of motivation (Mokaya, Musau, Wagoki & Karanja, 2013; Jung, Bozeman & Gaughan, 2017; Azadeh & Mousavi Ahranjani, 2014).

Cucina and Bowling (2015) explained that job satisfaction is the mixture of psychological, physiological and environmental issues that causes a person to genuinely say that they are satisfied about their work task. Job satisfaction has remained internal to an employee’s feeling about the job, which are sometimes affected by external factors. There are a lot of satisfiers that set the feelings of employees on a rise (George & Zakkariya, 2015). Some of these satisfiers are what Herzberg (1965) termed as hygiene factors and influence employee job satisfaction. They include achievement, recognition, work itself, responsibility, advancement and growth (Herzberg, 1965; Ghazi, Shahzada & Khan, 2013; Lo, Lin & Hsu, 2016).

Employee satisfaction is impacted by employees’ perceptions of their job and the organization for which they work (Kermani, 2013). Homburg and stock (2004) stated that employee satisfaction is “an attitude that results from an evaluative process, where some comparison standard about the work environment is performed with the actually perceived work environment. Employees’ satisfaction with their work would thus be influenced by how work is carried out and the perceived facilitating condition for smooth work process. We therefore advance the hypothesis that:

**H1:** Service innovation has a significant, positive and direct effect on employee satisfaction

### *Relationship Between Service Innovation and Employee Productivity*

Most firms have adopted innovation in their service operations in order to be more efficient and productive. It should be noted that adoption of innovative techniques or technology by firms could be said to speed up transaction process, reduce operation time and also reduce time spent by employees in serving customers. Thus, service innovation techniques go a long way to increase the output of employees by making them more productive (Mutuku & Nyaribo, 2015). In the banking sector for

instance, the adoption of ATMs, internet banking and telephone banking, eases the process of banking and allow employees to serve much bigger customers.

Chang, Gong and Shum (2011) assert that, training and empowering employees to undertake creative initiative improves employees' productivity. Also, Obeng and Mkhize (2017) were of the view that, providing high-quality innovative outputs improve the satisfaction level of employees that eventually increases the productivity of these employees. As noted by Dauda and Akingbade (2011), innovation in the way of technology can lead to increased productivity or improve employee performance. Thus, improving service innovation in the way employees do their work would greatly influence employee output or enhance their productivity. We therefore propose the hypothesis that;

**H2:** Service innovation has a significant, positive and direct effect on employee productivity

### *Relationship Between Employee Job Satisfaction and Employee Job Performance (Productivity)*

Whilst employee satisfaction contributes positively to organizational success it can also be said to be a source of discouragement to employee's work when they feel dissatisfied with their work environment (Bin Hussin, 2011). Satisfied employees are expected to show more commitment to their organization as well as customers. Employees who are satisfied with their work are likely to bring success for employer and thus influence customer satisfaction. This supports the assertion of Kreitner and dan Knicki (2005) who stated that one of the consequences of job satisfaction is improved job performance of employees. Dehkordi et al. (2011) posit that job satisfaction is an important factor in occupational success, which increases the performance/productivity of an employee in an organization. Research findings have demonstrated to some extent the impact of job satisfaction on the motivation of employees which also has a direct impact on productivity/performance, as well as enhancing business performance (Aziri, 2011).

Some studies (e.g. Mamiseishvilli and Rosser (2011) have found significant but negative relationship between job satisfaction and performance, whereas others have found no relationship (see Betaineh, 2011). This apparent contradiction between research findings on the relationship between these two variables therefore calls for more research on the link between the two variables. This leads to the hypothesis that:

**H3:** Employee Job satisfaction is expected to have a significant, positive and direct influence on employee productivity

### *Relationship Between Service Innovation and Organizational Performance*

Performance refers to the company's ability to realize its strategic objectives by adopting the best practices (Souissi, Azouzi, & Jarboui, 2018). Innovation is increasingly considered to be one of the key drivers for long-term success of a firm in today's competitive markets (Rajapathirana & Hui 2018; Gunday, Ulusoy, Kilic, & Alpan, 2011). This is because, firms with the capability to innovate will be able to respond to environmental challenges faster and better than non-innovative firms (Brown & Eisenhard, 1995; Miles & Snow, 1978).

Previous research findings have established that innovation adoption is positively linked to bank performance (Rajapathirana & Hui, 2018; Ameme & Wireko, 2016; Wang, Nguyen, & Tran, 2014; Gunday et al., 2011). These findings suggest that, the more banks adopt innovation in their activities, the better they perform (Gunday et al., 2011). We therefore propose the hypothesis that:

**H4:** Service Innovation would have a significant, positive and direct effect on Organisational performance

### *Relationship Between Employee Productivity and Organizational Performance*

Employee productivity is generally defined as the output (amount of goods and services produced per person or system) per unit of input (resources) used during a given period (Murdick, Render, & Russell, 1990). Also, Gordon (2000) explained performance or productivity to mean “what employee does or does not do. In the banking industry, banks that sustain continuous improvements in performance (mainly, growth and profitability) show better ratio of human capital efficacy (Singh & Kamlesh, 2013). Thus, banks are committed to increase knowledge and enhance the skill sets of their employees since their productivity is crucial in their overall efficiency (Yadav & Garima, 2015; Kaur & Bhatia, 2016). Moreover, employees are directly related to banking activities and are crucial in the development and success of every organization (Yadav & Garima, 2015). We therefore propose that:

H5: Employee performance or productivity is expected to influence organizational performance positively

### *Relations Between Employee Job Satisfaction and Organisational Performance*

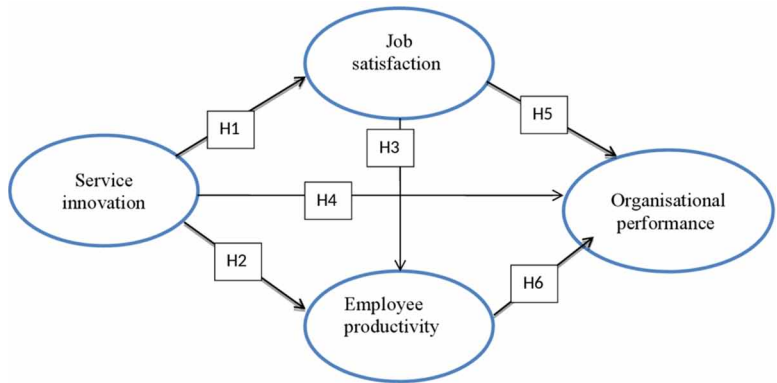
A review of the empirical literature has established positive relationship between employee job satisfaction and organizational performance (Bakotić, 2016; Latif et al., 2015; Mafini & Poee, 2013). On the other hand, some have not discovered any statistically significant correlation between these two variables (Mohr & Puck, 2007). Organisational performance according to Bakotić (2016) is influenced by both internal and external factors that are beyond the company’s influence. He mentioned that attitude and job satisfaction influence organizational behavior in a number of cases, but not always. This impact he stressed is sometimes blocked by the influence of external factors, conditions and circumstances (Bakotić, 2016). Lannoo and Verhofstadt (2016) in their studies also affirmed that, there is a positive relationship between job satisfaction and job performance, which increases organizational performance. Latif et al. (2015) suggested that, job satisfaction has a positive impact on organizational performance which is measured by productivity, profit, employee turnover and customer satisfaction (Harter, Schmidt & Hayes, 2002). It is therefore assumed that employee satisfaction would lead to increased productivity by employees thereby enhancing organizational performance. We therefore propose the hypothesis that;

H6: Employee Job satisfaction exerts a significant, positive and direct influence on organizational performance

## **METHODOLOGY**

The survey method was employed in this study to examine the effect of service innovation on employee job performance and job satisfaction. The survey method strategy is deemed appropriate due to the fact that it is usually associated with a deductive approach and explanatory research of this nature. Adopting a convenience sampling technique, 250 responses were obtained from staff at various branches of the 24 banks operating in Ghana. A self-administered, structured questionnaire was developed, pre-tested and finally administered to the respondents through personal contact by the researchers. The researchers used informed consent form to seek permission from the respondents and assured the respondents of anonymity and confidentiality of their responses. A five point Likert scale was used to measure variables for the research constructs as recommended in previous works. The Likert scale ranged from strongly disagree to strongly agree, coded 1 to 5 respectively. In all, there were four multi-item constructs which had 21 items that were derived from previous studies and

Figure 1. Conceptual framework and hypotheses



modified to suit the research context. The questionnaire also contained respondents' demographic data: gender, age, education, department and work experience.

The Statistical Package for Social Sciences (SPSS V.20) was used for the preliminary coding and inputting of the raw data as well as for data cleaning and exploratory factor analysis (EFA). Three main steps were followed in carrying out the EFA (Pallant, 2011). First, we assessed the suitability of the data for factor analysis. Second, we extracted the main factors; and third, we performed factor rotation and interpretation. After the EFA test, a confirmatory factor analysis (CFA) was performed before onward transferal to STATA for further analysis.

## RESULTS OF THE STUDY

### Confirmatory Factor Analysis (CFA)

The study used Harman's Single-Factor test to check the common method variance. This test was conducted using exploratory factor analysis (EFA). Twenty-one items were initially entered but 1 was later removed leaving 20 items. Together, these components explained about 81% of the variance in the sample (see table 1).

Table 1. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.806
Bartlett's Test of Sphericity	Approx. Chi-Square	2377.831
	Df	190
	Sig.	.000

### Reliability and Validity of Scales

To check the reliability and validity of the scales, we first analyzed the data to ensure instrument quality through convergent and discriminant validity. Using SPSS, the exploratory factor analysis (EFA) was carried out to measure the underlying dimension associated with the research items. The constructs validity was measured using Bartlett's test of Sphericity and Kaiser-Mayer-Olkin (KMO) measure of the sampling adequacy of individual variables. This states that for sampling adequacy

the overall KMO score should be 0.6 or over to perform factor analysis (Özdamar, 2017). The result of the Bartlett's test of Sphericity and KMO revealed that both tests (Bartlett's test of Sphericity and Kaiser–Mayer–Olkin (KMO) are significant and suitable for the factor analysis (see Table 1). The cumulative variance explained is 81% which exceeds the acceptable limit of 60% (Özdamar, 2017). The value of Bartlett's test of Sphericity indicate sufficient correlation between the variables; it shows 2377.831 and significant ( $p > 0.000$ ). The factor loading of all items of each scale exceeds 0.5 (Hair, Ringle, & Sarstedt, 2011; Ringle, Wende, & Becker, 2015). Thus, these values constitute evidence of convergent validity (see Table 2).

### *Demographic Characteristics of Respondents*

Some demographic variables were collected in this study: gender, age, level of education, type of accounts and average 47.6% of the respondents are females and 52.4% are males. With regards to age, 30% of the respondents were between 18 and 29 years; 46% were between 30 to 39 years; 18% were between the ages of 40 to 49 years; and 6% were between 50 to 59 years.

In terms of education, about 67.6% of the respondents had university degree; 10% had College degree; 12.8% had Polytechnic degree; and 9.6% had other qualifications. With regards to the current position of respondents, 8.8% are Accountants and HR officers respectively; 14.8% are Customer Service Reps and Sales Reps respectively; 12.4% are Finance officers; 14% are Loan officers; 8% are branch managers; and 12% Tellers. 14% of the respondents have worked for the bank for less than a year; 46% between 1 to 5 years; 31.2% have worked for 6 to 10 years; and 8.8% have worked for more than 10 years.

### *Measurement Model Reliability and Validity*

Construct reliability measures the extent of internal consistency of measures used, and it is assessed through at item factor loadings with acceptable value of 0.70 and through Cronbach's alpha with the acceptable level of 0.7 (Ringle et al., 2015; Hair et al., 2011, p.144). Data reliability was tested via Cronbach's  $\alpha$  and CR. For CR, the values recorded a range between 0.70 and 0.90. Evidently, all the CR values in this study were above the minimum threshold 0.6 as stipulated by renowned research scholars (Hair et al., 2016). Again, the Cronbach's  $\alpha$  coefficients ranged from 0.80 to 0.92.

**Table 2. Discriminant validity and construct reliability**

	EP	ES	OP	SI	CA	rho_A	CR	AVE
EP	0.885				0.908	0.909	0.936	0.784
ES	0.840	0.819			0.837	0.851	0.891	0.671
OP	0.809	0.718	0.786		0.793	0.794	0.866	0.617
SI	0.806	0.825	0.721	0.828	0.907	0.913	0.929	0.685

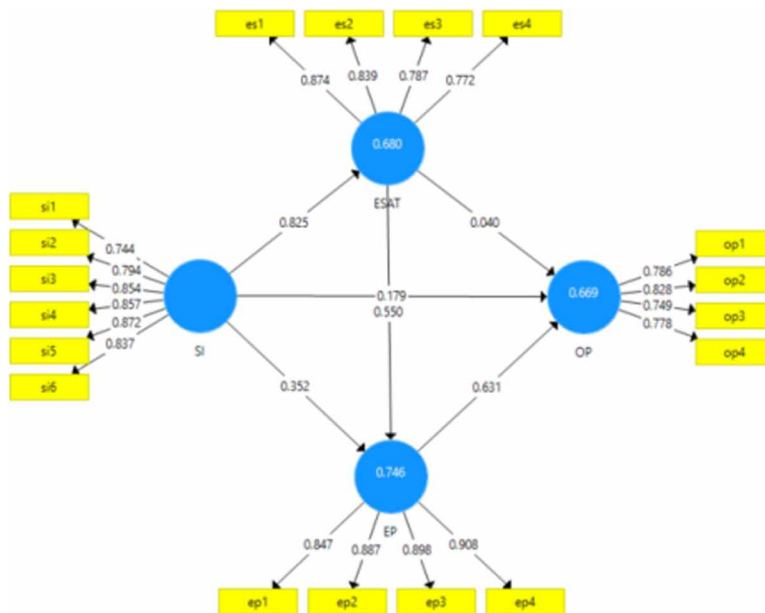
Notes: FL – Item Loadings, EP – Employee performance/productivity, ES – Employee satisfaction, OP – Organisational performance, SI – Service Innovation; AVE-Average variance extracted, CR- Composite reliability, CA – Cronbach's alpha

Again, the researchers ascertained the internal consistency to draw validity conclusions for the data using AVE and factor loadings. The AVE values fell between 0.67 and 0.78, exceeding the acceptable stipulated limits of 0.5 (Fornell & Larcker, 1981; Hair et al., 2016). The factor loadings ranged from 0.72 to 0.92 (see Figure 2), which exceeded the acceptable limit of 0.6, showing a strong reliability status of the items (Hair et al., 2016).

## Results of Structural Model

The structural model assesses the connection between latent constructs (Hair, Sarstedt, Ringle, & Gudergan, 2017). The structural model was assessed through the regression weights, t-values, and p-values for significance of t-statistics (Ringle et al., 2015). From Figure 2, the path estimates show that SI has significant and positive effect OP, ES and EP with a correlation of 0.179, 0.825 and 0.352 respectively. It means that, service innovation influence more on employee satisfaction (82.5%), followed by employee productivity (35.2% and organisational performance (17.9%) in that order. EP also had a positive effect on OP 0.040 i.e. 40%. Also, employee productivity had a positive influence on organisational performance 0.631. Employee satisfaction also had a positive effect on employee productivity (0.550). This means that employee satisfaction influence employee productivity by about 55% (see Figure 2).

Figure 2. Structural modeling on employee job performance



## Hypothesis Test

Table 3 shows the findings of the path co-efficient. The structural model assesses the association between latent constructs (Hair et al., 2017). To analyze the significance of the path estimates, bootstrapping (5000 subsample two tail test) was utilized. The finding of the path analysis shows the direct effect of service innovation capability on employee productivity and employee satisfaction (see Table 3). In the first model, service innovation, employee satisfaction and employee productivity were regressed on service innovation. The test shows that H1, H2 and H3 were supported ( $p < 0.05$ ). Service innovation had a significant effect on organisational performance ( $H1$ ;  $\beta = 0.179$ ;  $t = 2.285$ ;  $p < 0.05$ ) and this led to the acceptance of H1. The Beta score (0.179) means that when service innovation increases by 1%, organisational performance increases by about 18%.

The second hypothesis was also supported ( $H2$ ;  $p < 0.001$ ). Service innovation had a significant effect on employee job satisfaction ( $H2$ ;  $\beta = 0.825$ ;  $t = 39.37$ ;  $p < 0.001$ ) and this led to the acceptance of H2. This means that service innovation impacts employee job satisfaction significantly. This is because, service innovation would reduce the task needed to be performed by employees as well



as make work pleasurable and exciting leading to employee satisfaction with their level of work engagement. It is like giving employees task to do and also giving them the needed tools and resources to accomplish the task easily.

**Table 3. Results of hypothesis test**

Hypothesis	Path	Beta	SD	t-value	p-value	Action
H1	SI -> OP	0.179	0.078	2.285	0.022	Accepted
H2	SI -> ESAT	0.825	0.021	39.365	0.000	Accepted
H3	SI -> EP	0.352	0.070	5.055	0.000	Accepted
H4	ESAT -> EP	0.550	0.069	7.912	0.000	Accepted
H5	ESAT -> OP	0.040	0.083	0.482	0.630	Not Accepted
H6	EP -> OP	0.631	0.087	7.293	0.000	Accepted

Note: \* significant at 0.05, \*\* significant at 0.01, \*\*\* significant at 0.001; ESAT – Employee satisfaction, – SI—Service innovation, EP – Employee productivity/performance, OP – Organisational performance.

Also, service innovation had a positive and significant influence on employee productivity (H2;  $\beta = 0.352$ ;  $t = 5.06$ ;  $p < 0.001$ ) and this led to the acceptance of H3. This means that when banks introduce innovation in their services it would improve the performance of their staff. The Beta score means that, when service innovation increases by 1%, employee productivity would improve by about 35%. Employees would be able to complete their assigned duties and tasks easily and timely due to the effect of innovation which would require little manpower to operate. For instance, using the computer would make it much easier to compute figures than computing it manually.

Again, employee satisfaction also had a positive and significant relationship with employee productivity (H3;  $\beta = 0.550$ ;  $t = 7.91$ ;  $p < 0.001$ ); and this also led to the acceptance of the fourth hypothesis H4. This means that, employee satisfaction would influence the performance and productivity of bank employees. Satisfied employee would be more productive than employees who is not satisfied. The level of satisfaction would thus influence whether the employee would exert more strength to finish his/her assigned task or would deliberately slow down the rate of work.

Also, in the third model, we tested two hypotheses, i.e. H5 and H6. The fifth hypothesis revealed a positive but insignificant relationship between employee satisfaction and organizational performance ( $\beta = 0.040$ ;  $t = 0.482$ ;  $p > 0.05$ ); H5 was therefore not accepted. Again, the third model shows a significant and positive relationship between employee productivity and organizational performance ( $\beta = 0.631$ ;  $t = 7.29$ ;  $p < 0.001$ ). Thus, this led to the acceptance of hypothesis 6. The Beta score for H6 (0.631) means that when employee productivity increases by 1%, organizational performance increase by about 63%.

### **Test of Mediation**

To establish the meditation effects, all significant parameters were tested using guidelines from Baron and Kenny (1986) for partial and full mediation conditions. A number of regression equations were estimated. In this study, first, EP (mediator) was regressed on service innovation (independent variable) and it showed a significant effect (service innovation  $\rightarrow$  EP,  $\beta=0.59$ ,  $p=0.000$ ). Second, OP (dependent variable) was regressed on service innovation (independent variable) and this showed a negative but significant effect (service innovation  $\rightarrow$  OP,  $\beta=-0.10$ ,  $p=0.002$ ). Third, OP (dependent variable) was regressed on the service innovation (independent variable) and EP (mediator) and the effect was not significant (service innovation  $\rightarrow$  EP  $\rightarrow$  OP,  $\beta=-0.08$ ,  $p=0.079$  was recorded for the first path,  $\beta=-0.04$ ,  $p=0.349$  was recorded for the second path). The results of the regressions

are presented in Table 4. The assumption was that if all the three relationships are significant, then mediation testing would be possible. From Table 4, only two out of the four relationships tested were significant.

In the second mediation test, first ES (mediator) was regressed on service innovation (independent variable) and it showed a significant effect (service innovation  $\rightarrow$  ES,  $\beta=-0.005$ ,  $p=0.932$ ). Second, OP (dependent variable) was regressed on service innovation (independent variable) and this showed a negative but significant effect (service innovation  $\rightarrow$  OP,  $\beta=-0.102$ ,  $p=0.002$ ). Third, OP (dependent variable) was regressed on the service innovation (independent variable) and ES (mediator) and the effect was significant (service innovation  $\rightarrow$  ES  $\rightarrow$  OP,  $\beta=-0.10$ ,  $p=0.002$  was recorded for the first path,  $\beta=0.07$ ,  $p=0.038$  was recorded for the second path). Three out of the four relationships tested in the second mediation test were significant (see Table 5).

**Table 4. Mediation Possibility Test (EP as Mediator)**

Model	Unstandardized regression path	$\beta$ estimate	t-value	p-value
1	Service innovation $\rightarrow$ Productivity	0.590	13.26	***
2	Service innovation $\rightarrow$ Performance	-0.102	-3.10	0.002
3	Service innovation $\rightarrow$ Performance	-0.076	-1.76	0.079
4	Productivity $\rightarrow$ Performance	-0.044	-0.94	0.349

Notes: p-values of \*\*\*Represent 0.000 significance level

**Table 5. Mediation Possibility Test (ES as Mediator)**

Model	Unstandardized regression path	$\beta$ estimate	t-value	p-value
1	Service innovation $\rightarrow$ Satisfaction	-0.005	-0.09	0.932
2	Service innovation $\rightarrow$ Performance	-0.102	-3.10	0.002
3	Service innovation $\rightarrow$ Performance	-0.102	-3.11	0.002
4	Satisfaction $\rightarrow$ Performance	0.072	2.08	0.038

Notes: p-values of \*\*\*Represent 0.000 significance level

Now, determining the type of relationship, in the first mediation test, if SI on OP is less in the third model than in the second model, then the mediation is said to be partial. Full mediation holds if the service innovation has no effect when the EP is controlled. The t-value in the third model (1.76) is less than the t-value in the second model (13.10). Also, the significant level for the third model ( $p$ -value = 0.079) is less than the significant level for the second model ( $p$ -value = 0.002). This indicates a partial mediation.

For the second mediation test, the t-value in the second model (I3.10) is less than the t-value in the third model (I3.11). This shows that the mediator variable (ES) when controlled does not influence the relationship between the predictor variable (SI) and the outcome variable (OP). This means the effect of the mediator on the relationship between SI and OP is zero. We can therefore conclude that there is full mediation possibility. Also, the significant levels for the sixth and seventh models are the same ( $p\text{-value} = 0.002$ ).

## DISCUSSION

This study explored the effect of service innovation on employee productivity and satisfaction as well as the effect of these variables on organizational performance. Findings from this study revealed that employee satisfaction and service innovation have no influence or effect on employee productivity. Service innovation was found to have a positive but insignificant effect on employee productivity. This suggests that the introduction of service operations with innovative solutions by the banks may not in fact influence employees' productivity. There could be other factors aside service innovations that could lead employees to be productive. This finding however is contrary to Mutuku and Nyaribo (2015) view that service innovation would increase employees output by making them more productive. This finding is therefore inconclusive as the adoption of these innovative service solutions in the banking sector like the ATM, internet banking, telephone banking etc. are supposed to ease the process of banking and make employees more productive.

Again, employee job satisfaction was found to have a negative and insignificant relationship with employee productivity. This means that irrespective of employees' satisfaction with their jobs, their job performance or productivity are not influenced in any way. It should be noted however, that, the relationship between these two variables is bi-dimensional. That is, each of the two variables is expected to influence the other. As Kermani (2013) stated, employees' satisfaction is impacted by employees' perceptions of their job performance. Meaning, employee job satisfaction is also dependent on employee productivity or job performance. That is, when an employee is able to complete his or her schedule task successfully, he or she would get satisfied with the performance.

Additionally, this study revealed a positive and significant relationship between service innovation and employee job satisfaction. This finding suggests that, bank employees would be satisfied with their job performance once the bank successfully implements some form of innovation in the way work is done which reduces time spent in accomplishing tasks and also simplifying the work processes. In the view of Aziri (2011), factors such as the nature of work, salary or remuneration, opportunity advancement, management, work group and teams, and conditions of work influence employee job satisfaction. So, in effect, the adoption and implementation of innovative services and processes by banks is geared towards enhancing and improving the nature of work.

Furthermore, findings with respect to the fourth hypothesis also show a negative but significant relationship between employee productivity and organizational performance. This shows that, the more productive employees are the better the chances of the firm in enhancing its performance. Employee productivity means that employees are able to increase their output at a given input with all the necessary tools and support. As noted by Singh and Kamlesh (2013), to attain or obtain a sustained and continuous performance, banks must be committed to increasing the knowledge and skills sets of their employees since employee productivity depends on how efficient employees are (Yadav & Garima, 2015; Kaur & Bhatia, 2016).

Finally, the study with regards to the fifth hypothesis also revealed a significant and positive relationship between employee job satisfaction and organizational performance. Employee job satisfaction according to this finding has a strong influence on organizational performance. It shows that, once employees are satisfied with their jobs, it trickles down to the organization by way of enhancing the performance of the firm. Thus, employee who feel more satisfied with their work would commit more to the organization thereby increasing their output and enhancing the fortunes of the firm.

For the mediation effect, the researchers followed the suggestion of Baron and Kenny (1986). From the study, employee productivity and job satisfaction were found to have a mediating effect on the relationship between service innovation and organizational performance. Concerning the type of mediation, the results of the study showed that EP partially and significantly mediates the relationship between service innovation and OP ( $p < 0.01$ ). Additionally, the second mediation indicates that ES fully mediates the relationship between service innovation and organizational performance. What this means is that, to employee satisfaction plays an important role in the relationship between service innovation and organizational performance. This indicates that engaging in service innovation would enhance the productivity of employees and thereby enhancing organizational performance. Also, organizations that adopt innovation are likely to enhance employee job satisfaction and by extension lead to increased performance and growth for the firm.

## **CONCLUSION AND MANAGERIAL IMPLICATIONS**

From the results of the study, it was revealed that firms are better positioned to achieve sustained growth and increase performance if they adopt service innovation as a strategy in their quest to provide better services. Adoption of innovative business solutions not only lead to better provision of services to customers but also ensure employee job satisfaction and increase productivity for the firm. This suggests that service firms must invest wisely and co-ordinate their service innovation activities well, so as to ensure outstanding service delivery and provide innovative solutions to customers. This will enable companies to gain consumers' top of the mind consideration to build and enhance loyalty.

Service companies should also be aware that employee satisfaction is very important to the realization of the objectives of the firm. This is because dissatisfied employees would not have the zeal or inspiration to carry out their assigned tasks effectively. On the other hand, employees who are satisfied with their work would be more willing to provide better services which would result in efficiency and effectiveness. One of the factors that can contribute to employee job satisfaction is the nature of work itself. That is, how the work is structured and the availability of the needed tools to carry out work. As such, it behooves on management to ensure that work activities are smooth and easy to carry out by employing new methods and technologies that would simplify work methods and activities to be more comfortable and convenient.

## **THEORETICAL CONTRIBUTION**

The findings of this study add to empirical studies on innovation management in the service industry and its effect on employee job satisfaction and organizational performance. Also, this study supports the findings of previous studies that employee job satisfaction influences employee performance as well as organizational performance. Innovating service delivery processes could significantly enhance work output of employees which would also enhance employee satisfaction and organisational performance significantly.

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