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Relationship between Service Blue Print Dimension and Customer Satisfaction in the Insurance Industry in Kenya

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Abstract: *The Insurance industry has lately been associated with financial steadiness, security of government programs, enhancing trade and overall growth of a national economy. The industry however continues to experience very low penetration. Kenya has a penetration rate of 2.3% compared to South Africa's rate of 7.6%. Insurance firms in Kenya are under considerable pressure from their customers and the regulator to invest in service blue print as a measure of analysing the impact of their service quality which is a result of their service innovations and enhanced processes or systems which are supposed to improve customer satisfaction and hence profitability. This study analysed the relationship between service blue print dimension and customer satisfaction in the insurance industry in Kenya. The study adopted a causal research design. The unit of analysis was 17 licensed composite insurance companies in Kenya with a unit of observation of 400 policy holders sourced from insurance company records. Primary data was collected using a semi-structured questionnaire which was self-administered. R-Gui was the main statistical software. The study applied the linear mixed-effect models of structural equation modelling (SEM) considering the multi-level structure of the data collected. A significant fixed effect coefficient estimate of 0.154 was established, implying that increasing the levels of service blue printing as perceived by a customer by one unit would result into an increase in the level of Customer Satisfaction by 0.154. The study concluded that a client who perceives efficient and effective service processes from his/ her insurer is bound to have higher satisfaction than a customer who does not perceive efficient and effective service processes from their insurer. Service blue printing however, does not significantly affect the variations of customer satisfaction between the insurance companies. The study recommends that insurance industry firms invest in service blue prints as a strategy of achieving maximum customer satisfaction. Service blue print will improve interactions between customers and service providers by acting as a service lens and they should be developed as a service innovation technique that may enable discovery of potential innovations that may have otherwise been overlooked. The insurance company can adopt service blue print as a benchmark for accreditation standards.*

Keywords: *Service blue print; customer satisfaction; service innovation.*

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1. Introduction

The environment of business today is characterized by very knowledgeable customers that expect quality service delivery. As a result of the numerous players in the insurance industry, there is increased pressure to improve the quality of service in order to achieve a competitive advantage. Osman, Mohamad & Khuzaimah (2015) showed that increasing levels of service quality leads to customer satisfaction and trust, hence enhances loyalty. They further posited that there is a connection between service quality and higher profits. In order for an institution to provide quality service effectively, they must have effective systems due to the intangible nature of services. One of the methods used to ensure clear and effective systems is service blue printing. Andreou (2017) proposed that service blue printing dimension to be adopted as a measure of service quality in the hotel industry, while Owino, Kibera, Munywoki & Wainaina (2014) adopted it as a measure of service quality in the higher education sector.

Njegomir and Demko Rihter (2015) observed that the advancement of the insurance industry would result to assembling domestic savings, robust management of diverse risks, new capital accrual, less business anxiety, loss mitigation and overall monetary stability. The global insurance industry has however not matured in growth and performance as a result of low penetration. The global insurance premium real term growth has been experiencing a downward spiral from 4.7% in 2015, 3% in 2017 [Insurance Regulatory Authority (IRA), 2017].

The insurance industry in Africa has similarly been experiencing a challenge in penetration with South Africa having the highest penetration rate of 7.6%. The Kenyan insurance industry that dates back to year 1963 has experienced tremendous growth that has led to intense competition among its numerous players. The industry players include 52 licensed insurance companies, 221 brokers, 9,348 agents and 31 medical insurance providers (IRA, 2018). The Insurance Regulatory Authority (2016) indicates that, only 16% of the population in Kenya has access to insurance. The biggest challenge of the insurance industry in Kenya is the low penetration rate of 2.3% and a low real term growth of 2.5% compared to the global real term growth of 3% (IRA, 2017).

A study by Klynveld Peat Marwick Goerdeler, (2016) revealed that 80% of insurance providers are not confident of the level of service quality delivery in the industry with 10% believing that their customer care is below average. They acknowledged that, satisfying customers is their biggest challenge. The insurance industry can therefore benefit from investing in service blue printing which acts as a guide to the major components of service delivery that influence customer satisfaction. This study analysed the influence of service blue print dimension on customer satisfaction in the insurance industry in Kenya.

2. Literature Review

This section discusses the theoretical and empirical literature about the research problem on service blue print dimension and its relationship with customer satisfaction. The script theory is described and how it guides service blue printing. The section ends with empirical literature and the knowledge gap.

2.1 The Script Theory

Script theory was proposed by Tomkins (1978) in an attempt to further develop his "affect theory". The theory was later developed by Schank (1983) to what is now described as the "Script theory". Script theory postulated that the behavior of human beings functions similarly to the way a script does by allotting a program for action. Script theory stipulates that customers have clear cut scripts in their minds for purchasing which lead them to explicit behavior during service encounters. The scripts guide the customers to interpret information given, develop expectations and to portray suitable behavior patterns. Service providers similarly have scripts that direct their behavior as they interact with the customers.

There are two types of scripts namely convergent scripts where customer and employee scripts do not collide hence customer satisfaction is achieved. The second type is the divergent scripts where customer and employee scripts collide indicating areas of unfulfilled customer expectations (Schank, 1983). A service blue print guides staff on how to provide services to customers. It specifies the service delivery process, roles of both customers and service providers to ensure their scripts converge in order to achieve customer satisfaction.

2.2 Service Blue Print Dimension and Customer Satisfaction

A service blueprint is referred to as road map that presents accurate service systems so that all those involved in its burgeoning are able to understand and deal with it objectively. A service blue print describes the entire process of service delivery, roles of both customers and service employees and the clear. It is a very significant guide to major components of service that lead to customer satisfaction. Service blueprinting enables service providers to scrutinize as well as modify services and to sometimes design completely new services according to customer specifications. It is a new shift in perspective that results to undiscovered service improvements and innovations. This shift stems from internal process views to external customer experience views, which help to highlight unfulfilled customer wants and needs as well as any organizational misalignment of goals and objectives (Bitner, Ostrom, & Morgan, 2007).

Shahin (2010) studied service blue printing and its effectiveness in targeting critical service processes in the hotel industry. He found that service blue print enables service providers to compare different service processes and helps to target the most critical ones, enabling the service providers to design effective quality service. Ostrom, Bitner and Burkhard (2011) conducted a study on how to leverage service blue printing to rethink the higher education. They concluded that service blue print can be used to identify the best practices and develop service processes that can improve customer experience. They recommended service blue print as a service lens tool as well as a technique that can enable discovery of potential innovations that may have otherwise been overlooked.

Giannis, Spiras, & Achilles (2012) proposed that all service providers should have service blue prints in their organizations. They argued that service blue prints would fail if customer preferences were not incorporated in the blue prints. This would therefore encourage the service providers to become market oriented hence improving quality service and ultimately customer satisfaction. Rajeswari & Marzooth (2016) carried out a study of service blue print and its effect on customer satisfaction in the transport industry in Tamil Nadu. They found that service blue print helped to determine service gaps in the industry, hence enabling the service providers to seal the gaps and improve service quality eventually leading to customer satisfaction.

Owino et al. (2014) found service blue print to have a great predictive power on customer satisfaction in Kenyan Universities. It was rated second highest influencer of customer satisfaction next to reliability. Service blue print captures the customer service experience from the customer's point of view (Bitner et al., 2007). The customer today is knowledgeable regarding the significance of experience and will pay any price for experiences and service blue printing helps to achieve customer insight so as to change the service and better satisfy customer needs (Haugen, 2013). None of the above studies have studied service blue printing in the insurance industry in Kenya. This study sought to fill this knowledge gap by analysing how service blue print dimension influences customer satisfaction in the insurance industry in Kenya.

3. Methodology

The objective of this study was to analyse the relationship between service blue print dimensions and customer satisfaction. Primary data was collected from the policy holders of 17 insurance companies using a semi-structured questionnaire. A Likert scale was used to determine how strongly the respondents agreed or disagreed with statements. A Likert scale helps to measure respondents' attitudes by enquiring the extent to which they agree or disagree with particular questions or statements (Derrick & White, 2017).

The study had two variables that is, service blue print (X) as independent variable and customer satisfaction (Y) as dependent variable. Causal research design was used so as to help discern the magnitude and nature of cause and effect relationship that existed among the variables. The study applied the linear mixed effect models of structural equation modelling considering the multi-level structure of the data collected. The following hypothesis was tested;

$H0_{1:}$ *Service blue print dimension does not have a significant relationship with Customer satisfaction in the insurance industry in Kenya.*

3.1 Research Philosophy

The epistemological research philosophy guided by positivist paradigm was adopted for the study. Epistemology explains what comprises acceptable knowledge in a subject of study (Saunders, Lewis & Thornhill, 2009). The positivist approach is instituted on the belief of theory before research followed by statistical justification of the conclusions from testable hypothesis (Cooper & Schindler, 2011). The study adopted the epistemological positivist paradigm because it enabled for reporting of findings as discovered and interpretation of the new knowledge discovered.

3.2 Target Population

The target population comprised of insurance customers (policy holders) from insurance companies in Kenya that offer both Life and Non-Life policies otherwise referred to as composite insurance companies. The study population was therefore considered to form a multi-level structure with 2 units of analysis. The primary unit of analysis was that of policy holders who are nested (clustered) within the secondary unit of analysis (insurance companies). There were 17 licensed composite insurance companies in Kenya as at December, 2017 that all together had a total of 1,695,312 policy holders (IRA, 2018).

3.3 Sampling Design

Considering the multi-level structure of the population studied, multi-stage sampling which is a random sampling technique was adopted. Multistage sampling is preferred in practice in cases where units of observations (the primary units) are geographically or organizationally grouped (Snijders & Bosker, 2011). Multistage sampling was designed to randomly sample level-2 units (insurance companies) followed by randomly sampling level-1 units (policy holders) from the selected level-2 units. However, in this study, the level-2 units were based on a census thus considering all the 17 composite insurance companies as the group size. The sample size of the respondents (level-1 units) to include in the study was determined using the sampling formula $n = \mathrm{N}/1 + N\ (e)^2$ proposed by Israel (2009) where n is the sample size, N the population size which was 1,695,312 and *e* the permissible error which was taken as 0.05. The calculation resulted to a sample size of 400 policy holders across the 17 insurance companies. The 400 respondents sampled were distributed across the 17 entities based on the probability proportional to the size of the population of each company.

3.4 Data Collection

Primary data was obtained from policy holders of the composite insurance companies. Secondary data was sourced from books, research journal articles, and electronically stored information (internet). Primary data was obtained by use of a semi-structured self-administered questionnaire which also had a five point Likert scale.

4. Data Presentation and Analysis

R-Gui was employed in undertaking three types of statistical analysis, that is, descriptive analysis, factor analysis and hierarchical regression. Pilot data was collected and used to assess instrument reliability based on the internal consistency test using Cronbach alpha and to assess construct validity based on the tests for convergent validity and discriminant validity. Factor analysis results formed the basis for testing for convergent and discriminant validity using the Average variances extracted (AVEs) and squared multiple correlations for the tests respectively.

Considering the multi-level structure of the data collected, the study used Multi level Structural Equation Modelling (SEM) as the basis for testing the study hypothesis. Multi-level SEM was based on restricted maximum likelihood estimation (REML) for linear mixed effect modelling. Collapsing heterogonous grouped (multilevel) data in order to be analysed as though collected from one homogenous population at the group level may lead to erroneous conclusions referred to as the Simpson's Paradox (Lindley & Novick, 1981). The SEM models fitted were tested for fitness by computation of fit indices. As proposed by McDonald and Ho (2002), for absolute fitness, the Chi-Squared test, Root mean square error of approximation (RMSEA), Goodness of fit index (GFI) were used to assess how well the priori models (proposed theoretical models) fit the sample data. For incremental fit indices, the normed fit index (NFI), comparative fit index CFI and the Tucker Lewis index (TLI) were also generated to assess the fitness of the priori model against a baseline model (null model). Model assumptions of normality, heteroscedasticity and autocorrelation, multicollinearity and common method bias (CMB) were tested. Maximum likelihood estimation holds the assumption that residuals of the model fitted follow a normal distribution.

4.1 Measurement Model of Service Blue Print

Service blue print was found to only have a significant level-1 measurement model. Figure 1 shows the retained manifest variables at level-1 epresented by the squares were retained in both levels with path coefficients represented by the standardised factor loading. There is no path coefficient of the between model thus only 1 circle to indicate the leatent variable service blue prints in the within (fixed effect).

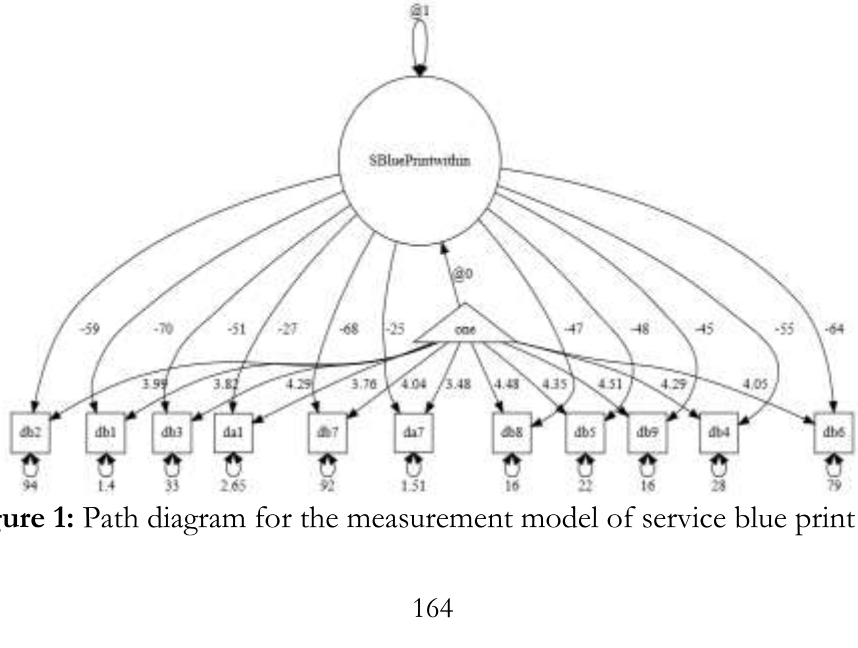

Figure 1: Path diagram for the measurement model of service blue print

Service blue print was found to have no significant level-2 measurement model thus none of the manifest variables had significant variance contribution to the latent variable across the entities. At level-1, the indicators were however found to significantly load the latent variable service blue print. The fit indices of the service blue prints measurement model are shown in table 1 which shows that the model met all the required cut-offs of both absolute and incremental fit indices.

Table 1: Model fit indices for Service Blue Print

	Chi-square						
	χ^2	Sig.	CFI	NFI	TLI	GFI	RMSEA
Statistic	570.301	0.000	0.927	0.919	0.976	0.915	0.061
Cut-off	P-value <0.05		≥0.9	≥0.9	≥0.95	≥0.9	≤0.08

4.2. Diagnosis of assumptions of the model of Service blue print on Customer Satisfaction

Diagnosis was also carried out on the model fitted to assess the effect of Service blue print on customer satisfaction. Figure 2 show a normal q-q plot of the level-1 residuals for this model. The Q-Q plots where used to assess the assumption of normality by comparing the distribution from the data to the theoretical normal distribution represented by the line shows that the residuals for this model generally follow a normal distribution. However a deviation from the line was noted from the line by low values. This implied possibility of a deviation from normality.

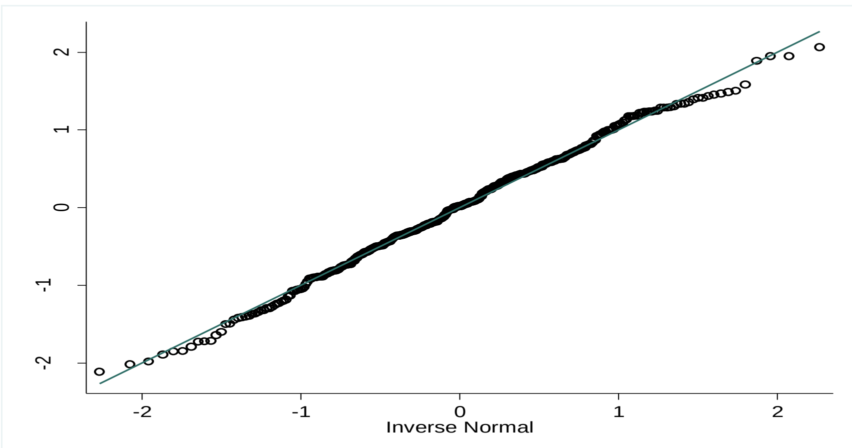

Figure 2: Q-Q plot for level-1 residuals

Figure 3 shows a hanging rootograms with confidence intervals (CI) were also generated to assess and confirm whether the residuals were deviating from normality or not. Some of the hanging roots of the level-1 residuals have confidence intervals within the zero mean. However, 5 of the last hanging roots show residuals that are significantly greater or less than from zero based on the 95% confidence intervals below or above zero implying. This shows that the level-1 residuals for this model significantly violated the normality assumption.

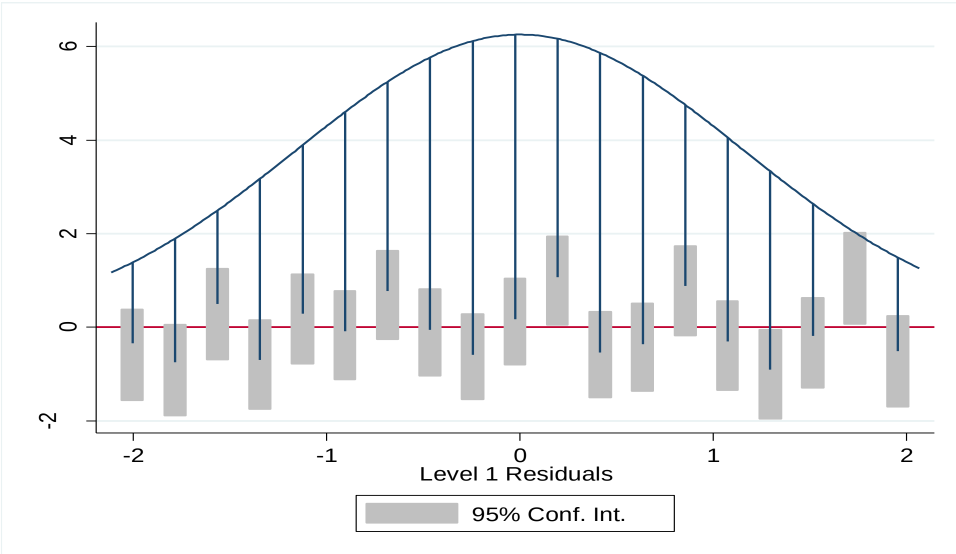

Figure 3: Rootogram for level-1 residuals; Service Blue Print against Customer Satisfaction Model

To further explore the nature of the distribution of level-1 residuals within each insurance company, q-q plots were fitted for each group (insurer) and presented as a line-up of q-q plots (figure 4). In comparison with the overall q-q plot of all the cases, the decomposed plots by group showed some elements of deviations from the theoretical normal distribution in in some panels such as insurer 2, 9 and 13. The plots were well aligned along the theoretical distribution line in each graph. While level-1 residuals of this model showed from the entire sample showed a significant deviation from normality.

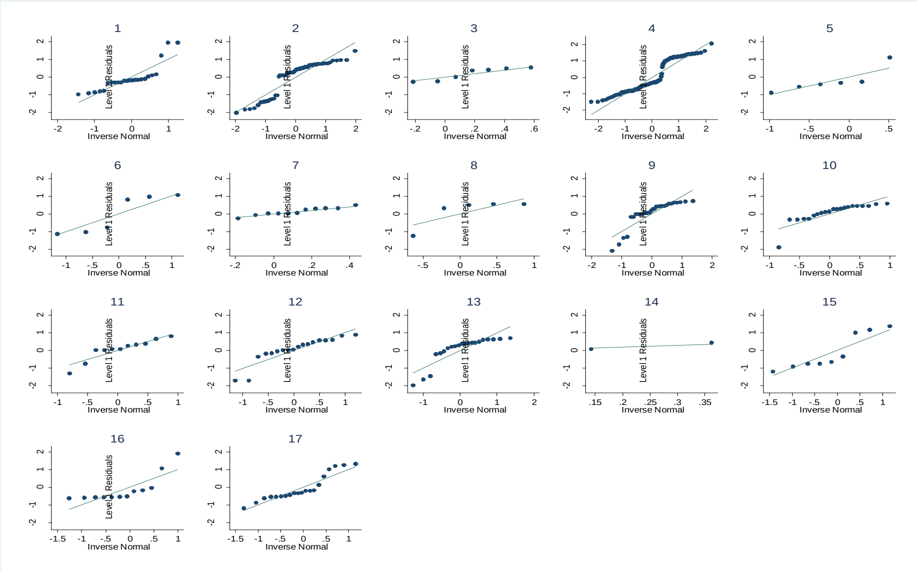

Figure 4: Q-Q plots line-up for level-1 residuals

Hanging rootograms were further used to explore the normality in the level-2 residuals of this model (figure 5). From the residuals due to the random intercepts, only 2 of the hanging roots have the 95% confidence interval below the theoretical distribution (zero). This confirms that the BLUPs (Best Linear Unbiased Predictions) of the random intercepts significantly deviate from normality. However for the residuals due to Service blue print as a covariate, none of the hanging roots were significantly lower or higher than of the theoretical normal distribution line (Zero). The results confirm that the level-2 residuals (random slope BLUPs) follow a normal distribution.

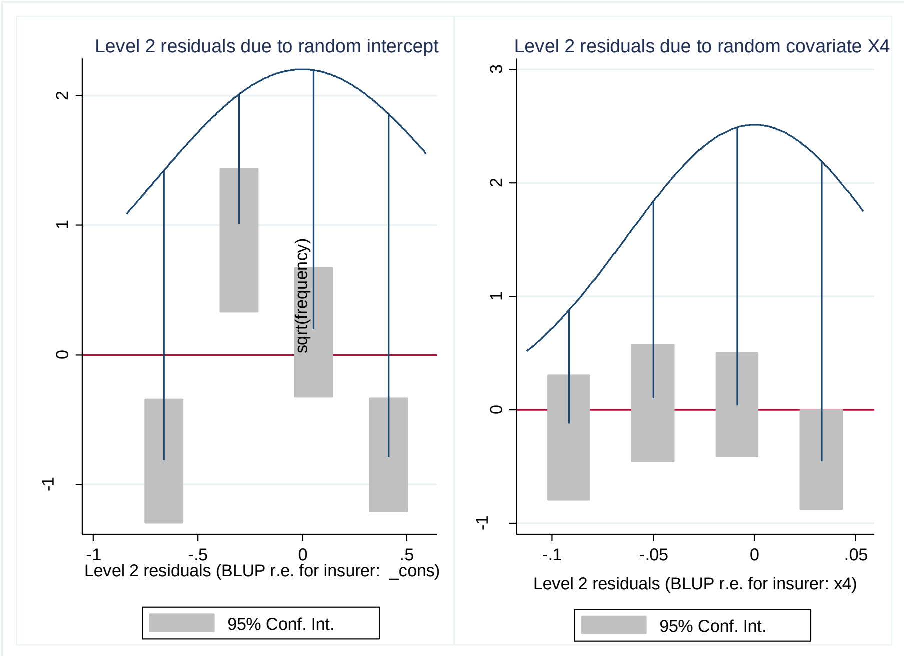

Figure 5: Rootograms for level-2 residuals

Table 2 shows the normality test for both level 1 and level 2 residuals. The results show that level 1 residuals significantly deviates from normality. The p-value of the probability of skewness and that of the probability of Kurtosis not equal to 3 are both less than 0.05. The Jaque-Bera chi-square statistic of deviation from normality also has a p-value of 0.001 which is less than 0.05 implying significantly non-normal data at the client level. The level-2 residuals have p-values greater than 0.05 implying normality at level 2.

Table2: Jaque-Bera normality test

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
Level-1 residuals	364	0.0004	0.0016	18.74	0.0001
Level-2 random slopes	17	0.3788	0.3792	1.74	0.4187

Further to the exploratory assessment of the normality assumption, homoscedasticity was assessed using scatter plots of the residuals against the predicted values. Homoscedasticity of the residuals is referred to as constant variance of the residuals. Heteroscedasticity is the opposite of homoscedasticity and is attributed to non-random patterns in the scatter plots. As shown in figure 6, the scatter plots on level-1 residuals displayed decreasing patterns implying heteroscedasticity and deviation from the homoscedasticity assumption. The level 2 residuals which were BLUPs of random intercept predictions when fitted against the predicted values of customer satisfaction also exhibited heteroscedasticity with an increasing pattern of higher predictions (figure 7). Level-2 residuals from the BLUPs of random covariate (Service blue print) predictions against the predicted values of customer satisfaction were randomly distributed about zero with no increasing or decreasing patterns to imply homogeneity of variance.

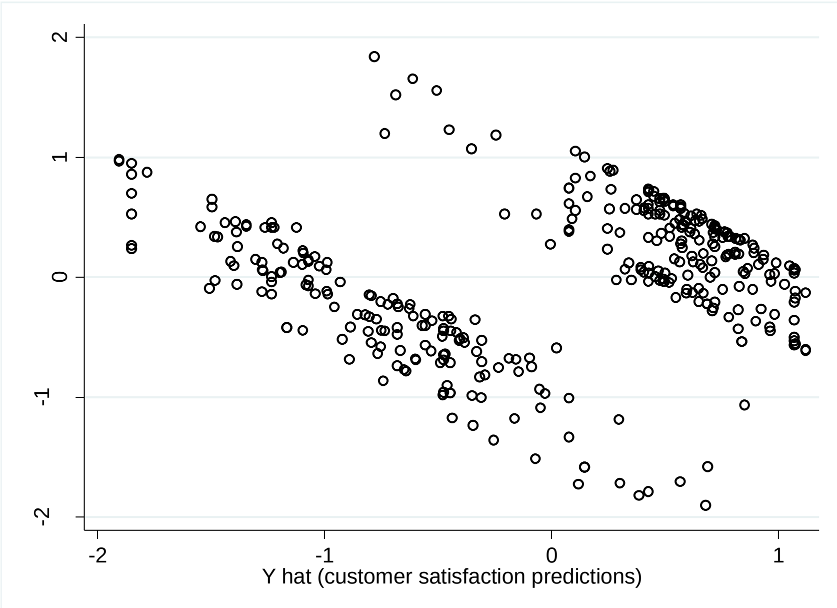

Figure 6: Scatter plot of residuals against predicted values for level-1 residuals

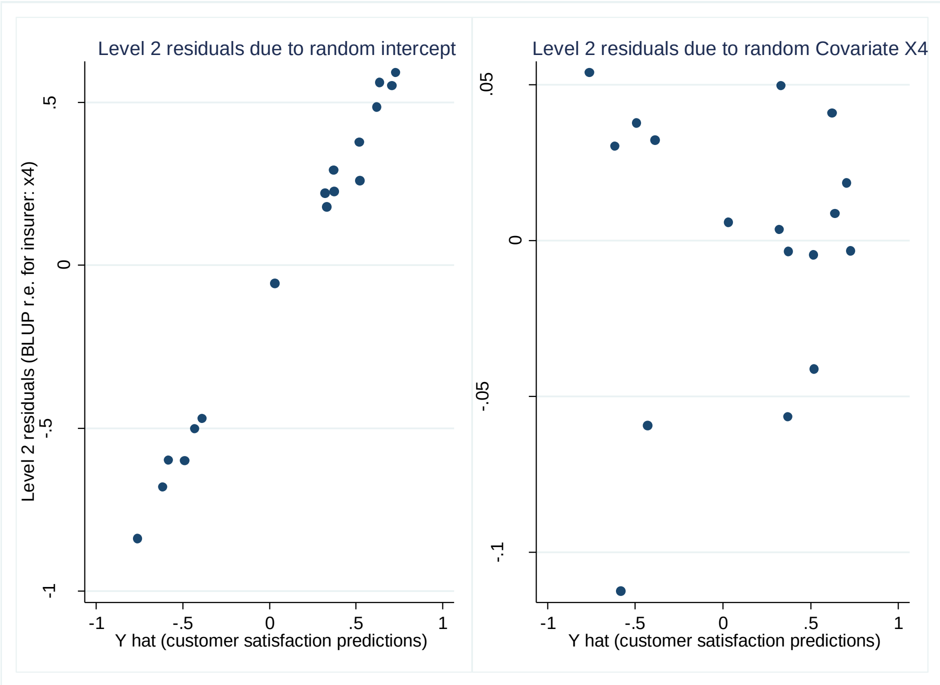

Figure 7: Scatter plot of residuals against predicted values for level-2 residuals

4.3 Structural Equation Model for Service Blue Print and Customer Satisfaction

To assess the effect of service blue prints on customer satisfaction, a structural equation model was fitted for the effect of the retained indicators of both variables with the between and within effect factor loadings and the effect of the latent variable service blue prints on the latent variable customer satisfaction. The control variables were not included as the respondent invariant variables were found to have no significant effects on customer satisfaction. From the Structural equation model, Service blue prints was found to only have a significant fixed effect as a level 1 independent variable with not a significant level 2 random covariate. Table 3 shows the summarised structural equation model for the influence of service blue prints on customer satisfaction. The diagnostics tests revealed violation of the normality assumption and homoscedasticity of residuals.

Table 3: Influence of Service blue prints on customer satisfaction

Level	**Path**		**Estimate**	**Std.Error**	**A**
Level 1 – client	customer satisfaction within	S.BluePrint within	-2.300	0.061	-37.705

Figure 8 is the path diagram for the structural model on the influence of service blue prints on customer satisfaction. In level-2, the figure only displays the measurement model of customer satisfaction which was the only significant model in the entity level. Service blue print was found to have no significant measurement model from the manifests to the latent variable. Level-2 however shows the significant measurements of both service blue-prints and customer satisfaction based on their retained indicators and the significant path coefficient of the within effect of service blue prints on customer satisfaction.

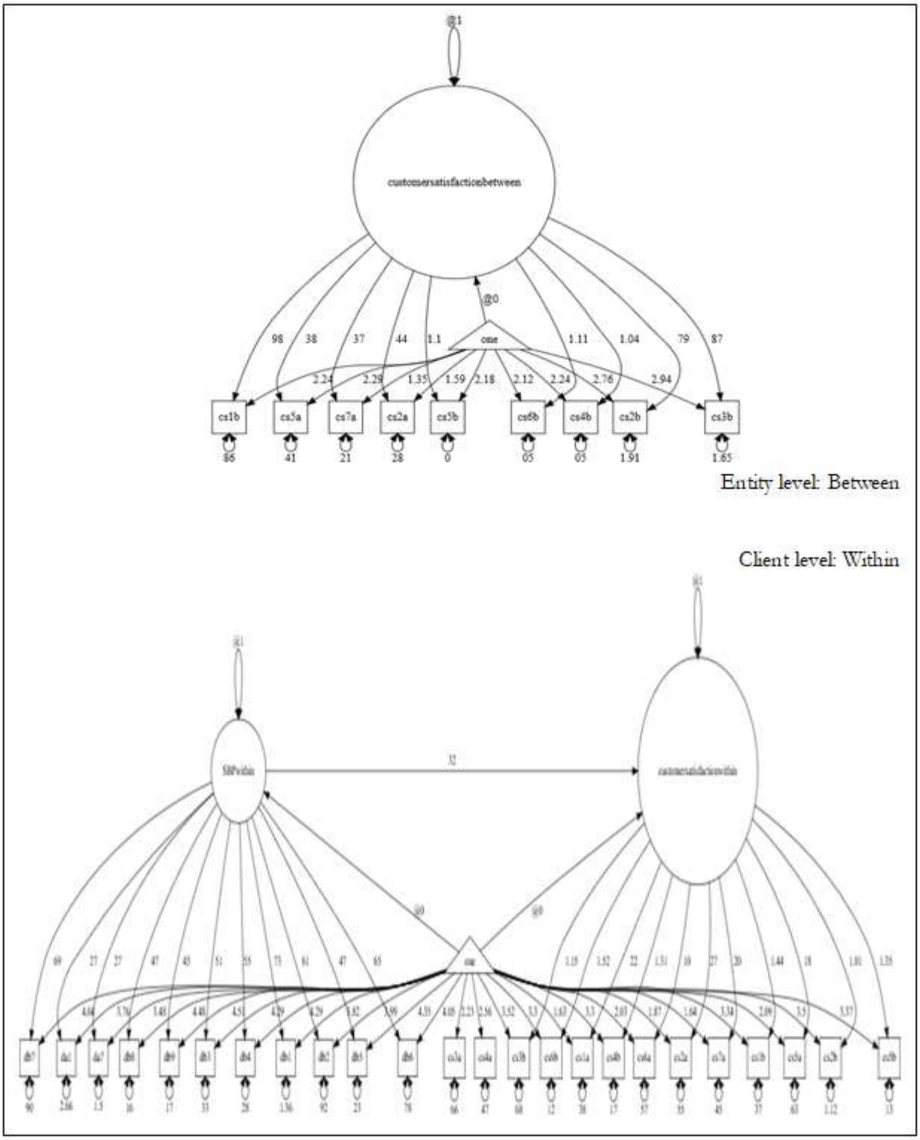

Figure 8: Path diagram of the influence of Service Blue Print Dimension on Customer Satisfaction

From the measurement model of service blue print, factor scores were generated and used as latent variables to assess the influence of service blue print on customer satisfaction using the REML mixed effect models. According to the analysis in table 4, service blue print has a significant coefficient estimate (β =-0.173, Z= -4.040, p-value = 0.000) as a level 1 variable in the fixed effect components. The random effect component of that considered the level 2 (entity level) was also found to be significant with random intercepts only without including the random slope (random covariate service blue print). The intra-class correlation (ICC) due entities (insurance companies) is 28.3%. The LR statistic is 73.39 with a p-value less than 0.05 implying significant random intercept effects in the model.

Table 4: Influence of Service Blue Print: Fixed Effect with Random Intercept

Mixed-effects GLM		Number of obs	=	364
Group variable: insurer		Number of groups	=	17
	Obs per group:	Min	=	2
		Avg	=	21.4
		Max	=	108
		Wald chi2(1)	=	16.36
Log restricted-likelihood = -469.5157		Prob > chi2		=0.0001

Customer satisfaction (fac1_1_y)	**Coef.**	**Std. Err.**	**z**	**P>z**	**[95% Conf.**	**Interval]**
X4	-0.173	0.043	-4.040	0.000	-0.256	-0.089
_cons	0.108	0.142	0.760	0.449	-0.171	0.387

Random-effects Parameters	**Estimate**	**Std. Err.**	**[95% Conf.**	**Interval]**
Insurer				
var(_cons)	0.279	0.116	0.124	0.629
var(Residual)	0.706	0.054	0.609	0.820

LR test vs. linear regression: chibar2 (01) = 73.39Prob >= chibar2 = 0.000

Level	ICC	Std. Err.	[95% Conf.	Interval]
Insurer	0.283	0.086	0.147	0.476

To assess the level 2 effect of service blue print on customer satisfaction, service blue print was included in the random effect component of the model as a random covariate. The results of the analysis are shown in table 5. The variance attributed service blue print covariate at level-2 is 0.007implying almost the entire variation between insurance companies is due to the random intercept. The random component is however still significant as shown by the LR statistic which has a p-value less than 0.05 and an intra-class correlation of 28.7%.

Table 5: Influence of Service Blue Print Dimension: Fixed Effect with Random Slopes

Mixed-effects GLM		Number of obs	= 364
Group variable: insurer		Number of groups	= 17
	Obs per group:	Min	= 2
		Avg	= 21.4
		Max	= 108
		Wald chi2(1)	= 9.02
Log restricted-likelihood = -233.30916		Prob > chi2	=0.0027

Customer satisfaction (fac1_1_y)	**Coef.**	**Std. Err.**	**z**	**P>z**	**[95% Conf.**	**Interval]**
X4	-0.162	0.054	-3.000	0.003	-0.268	-0.056
_cons	0.110	0.143	0.770	0.442	-0.170	0.390

Random-effects Parameters	**Estimate**	**Std. Err.**	**[95% Conf.**	**Interval]**
Insurer				
var(_x4)	0.007	0.013	0.000	0.349
var(_cons)	0.282	0.117	0.125	0.635
var(Residual)	0.699	0.054	0.601	0.814
LR test vs. linear regression: chibar2(01) =		13.36 Prob >= chibar2 = 0.0001		
Level	ICC	Std. Err.	[95% Conf.	Interval]
Insurer	0.287	0.087	0.149	0.481

To confirm whether the level-2 variation due to the independent variable service blue print was significant, a likelihood ratio test was carried out to assess the change in the random component of the model due to addition of service blue print as a level-2 covariate. Table 6 shows the LR test where model M1 is with no random slope is nested in model M2 which has the random slope due to service blue print. The results show a significant improvement to the model as due to addition of the level-2 service blue print covariate. The addition reflects a 0.42 change in the LR chi-square statistic with a p-value of 0.517 which is greater than 0.05. Further the Bayesian information criterion (BIC) of model M1 is less than that of model M2 implying that model M1 is a better model thus no significant random slope due to service blue print. This confirms that service blue print has a significant fixed effect on customer satisfaction at level 1 but has no random effect across the entities.

Table 6: LR test on the influence of Service Blue Print as level-2 random covariate

Likelihood-ratio test	LR chi2(2)	=	0.42
(Assumption: M1 nested in M2)	Prob > chi2	=	0.5172

Akaike's information criterion and Bayesian information criterion

Model	**Obs**	**ll(null)**	**ll(model)**	**df**	**AIC**	**BIC**
M1 – me no random slopes	364	.	-469.516	4	947.031	962.620
M2 – me random slopes	364	.	-469.306	5	948.612	968.098

The fixed effects of service blue prints within each entity are reflected in figure 6 by the parallel lines with equal slopes. The random intercepts is reflected by the shift of the line from one entity to the other depending on the entity effect. The resulting equation from the model with fixed effects of service blue prints within and random intercepts across the insurance companies is given by;

$$Y_{ij} = \gamma_{0j} - 0.173X_{ij} + \varepsilon_{ij}$$
$$\gamma_{0j} = 0.279 + \mu_{0j}$$

5. Results, Conclusion and Recommendations

From the bivariate analysis results between Service blue print (SBP) and customer satisfaction, the second study hypothesis was tested and a conclusion drawn on the objective, that is;

H_{04}: *Service blue print dimension does not have a significant relationship with Customer Satisfaction in the insurance industry in Kenya.*

5.1 Results

From analysis, the p-value of the fixed effect coefficient of SBP was found to be 0.000 which is less than 0.05 thus the null hypothesis was rejected. A conclusion was then drawn that SBP has a significant relationship with Customer Satisfaction in the insurance industry in Kenya. The results show that a unit increase in the levels of the SBP as perceived by a customer result into an increase in the customer's level of Satisfaction by 0.173. The model results however showed no significant random covariance between SBP and customer satisfaction across the clusters of customers (insurance companies) thus the variation and levels of customer satisfaction across the insurance companies is not explained by the variation in SBP across entities.

The study findings confirmed that, there is a significant relationship between service blue print dimension and customer satisfaction in the insurance industry in Kenya. This is a justification that insurance service providers who invest in service blue print are assured of customer retention since their customers are satisfied. This means that, their service systems or processes are enabling them to provide quality service with minimal complain. Service blue print enables the firms to measure the success rate of service innovations and systems. Service quality gaps identified serve as an opportunity for improvement (OFI) hence leading to cost cutting measures that will enable the firms to invest in service innovations and systems that will contribute to increase in profitability. Through service blue print, interactions between customers and the service employees are easy to achieve. When proper systems and processes are implemented, customers derive satisfaction. Service blue print models are relative. Customer experiences also vary hence affecting customer satisfaction rates amongst Kenyan insurance firms.

5.2 Conclusion

The study concluded that service blue print has a significant relationship with Customer Satisfaction in the insurance industry in Kenya. This was based on the hypothesis test carried out which was rejected to draw the conclusion of a significant fixed effect of service blue print on customer satisfaction in all the studied insurance companies. The influence of service blue print was found to be fully explained to be fixed in all the entities as implied by the insignificant random slopes due to service blue print. However, the study also found that the fixed effect of service print does not fully explain customer satisfaction as implied by the significant random intercept to imply that customer satisfaction is heterogeneous and differs across the insurance companies but is not due to the differences in service blue print across the entities.

5.3 Recommendations

The study recommends that, insurance firm managers should from a practical perspective should use the results generated by their service blue print models and use them to assist in evaluating and improving the existing service processes. Service blue prints will assist them to identify and address the existing challenges facing the industry today and bring transformation. Identifying and satisfying customer needs improves services and separates the industry from others hence developing a competitive advantage.

The insurance firm managers should incorporate service blue print models in their company policy discussions as a key measure of their service innovations and systems/processes. Service blue printing has the potential to align and coordinate insurance service processes hence making it an important policy tool to help improve quality and reduce costs. This will enable everyone in the service loop to understand their critical roles on the blue print along with the necessary logical improvements or changes. Further, customer input should be incorporated to improve the core services.

The study also recommends that, the Insurance Regulatory Authority should consider including service blue printing as a benchmark for accreditation standards that evaluate how customers respond to existing service processes and innovations including measures of customer satisfaction. This will help to improve public perception towards insurance and create trust hence increasing penetration rates which are currently still very low in Kenya.

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