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The Effect of Supplier-Buyer Relationship Practices on the Performance of Motor Vehicle Assembly Companies in Kenya

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Abstract

Purpose: The study investigated the effect of supplier –buyer relationship practices on the performance of motor vehicle assembly companies in Kenya.

Methodology: This study was guided by relational contracting supply chain theory. The study applied a cross-sectional exploratory descriptive conclusive survey research design with a mixed approach of qualitative and quantitative research. Primary data was derived using questionnaires, supported by secondary data as the main instrument for collecting data based on a five point Likert scale on 24 motor vehicle assembly companies in Kenya using non probability sampling. Exploratory factor analysis, analysis of mean, model summary, ANOVA, and hierarchical regression were applied in analyzing data.

Findings: The study established that supplier-buyer relationship practices have no significant effect on organizational performance of motor vehicle assembly companies in Kenya.

Recommendation: This established that supplier-buyer relationship practices of strategic alliances, partnering, contracts, collaborations, and capability insignificantly explain the performance of motor vehicle assembly companies in Kenya.

Keywords: *Supplier-buyer relationship practices, Organizational performance, Relational contracting supply chain, multi-sourcing, Motor vehicle assembly companies*

INTRODUCTION

Central to the discipline of supply chain management is supply chain resilience that is anchored on seamless production which exceeds inventory requirements that can be attained using multi-sourcing practices (Oshri, 2011; Bhattacharya et al., 2018; Singh et al., 2019). Recent developments in the field of supplier-buyer relationship practices have enabled organizations' design interest in developing collaborations, strategic alliances, partnering, contracts' and capabilities (Morsy, 2017; Sting et al., 2019). Over the past century, there has been a major decline in the use of single sourcing as opposed to multi-sourcing strategy where supplier-buyer relationship practices play a fundamental role in attaining agility and robustness (Oshri, 2011; Krancher & Stürmer, 2018). Conversely, despite intense knowledge by academicians' and practitioners, single sourcing is still prevalent among many assemblers in Kenya and across the world (Kotlarsky et al., 2011). The Kenyan motor vehicle industry has encountered several challenges such as high taxation, lack of homologation of vehicles notwithstanding, that have impacted negatively on local parts manufacturing in terms of perceived quality and market positioning (Black et al., 2017; Bomett et al., 2020). The subject of supplier-buyer relationship practices has recently grown in importance (Morsy, 2017). To date, relationship practices have taken centre stage both in academia and practice (Bhattacharya et al., 2018; Sting et al., 2019).

Objectives

The general objective was to ascertain how multi-sourcing practices influence organizational performance of motor vehicle assembly companies in Kenya. The specific objective of this study was to establish the effect of supplier-buyer relationship practices on organizational performance of motor vehicle assembly companies in Kenya.

LITERATURE REVIEW

This study is anchored on relational contracting supply chain theory of supplier-buyer relationships development (Morsy, 2017; Chae et al., 2017; Huo et al., 2019). The debate centering on relational contracting supply chain theory (Dyer et al., 2018; Selviaridis & Spring, 2018) helps understand different forms of contracts (Charterina et al., 2018; Liu et al., 2021) and power decisions (Lee & Woo, 2019; Huo et al., 2019) that are involved in structuring supply chain decisions (Paul et al., 2017; Swierczek, 2019). The parties involved in any relationship they have an underlying assumption to cooperate and participate in the association where all parties should mutually benefit (Morsy, 2017; Chicksand & Rehme, 2018). Numerous studies have argued that Buyer-supplier relationship should be streamlined to enable firms to organize their processes and collaborate with suppliers in improving product manufacturing capabilities (Gurcaylilar-Yenidogan, 2014; Chae et al., 2017; Singh et al., 2019).

This explains why many automotive manufacturers are forced to reorganize relationships with present suppliers by focusing on performance improvement to attain organizational resilience and agility (Tuan, 2016; Botes et al., 2017; Syah 2019). The research to date has tended to focus on the relationship development dimensions that drive the buyer-supplier relationship (Aitken & Paton, 2017; Rood et al., 2018; Tolmay, 2020). Conversely, many organizations today tend to evaluate supplier-buyer relationships using; reliability, quality, pricing, satisfaction, commitment, trust, and benevolence (Chopra & Meindl, 2016; Dal Ponte, 2017; Lee & Woo, 2019).

Data from several studies have identified the effect of supplier-buyer partnership and information integration on supply chain performance by elaborating on the development of trust and guanxi between suppliers and buyers for a better business environment in supply chains (Mocke et al., 2016; Morsy, 2017). The study established that trust and guanxi significantly influence quality information and real-time information between buyer-supplier partnership and information integration on supply performance (Şahin et al., 2017; Zhao & Ha-Brookshire, 2018). Other studies have considered the relationship between supply chain partnership on collaboration, collaboration on integration, integration on relationship commitment, and relationship commitment on supply chain performance of South African SMEs (Pfanelo, 2017). The study established that supply chain partnership has the most significant impact on integration than collaboration and relationship commitment respectively (Shin et al., 2019).

Other studies have considered the relationship between buyers and suppliers in supply chains in aligning their performance objectives and incentives through contracting (Selviaridis & Spring, 2018). The study established that improved buyer-supplier relationships enable alignment, complement, and contracting learning contributes to supply chain alignment (Lumineau, 2017; Scuotto et al., 2017). Other studies were on the impact of supply chain dynamic capabilities on operational performance in Hungarian manufacturing companies (Mohanad & Harsha, 2020). The study established that supply chain dynamic capabilities

namely; collaboration, capability, agility, capability, and responsiveness capability significantly and positively contributed to operational performance (Charterina et al., 2018) Liu et al. (2021) explored how formal contracts affect alliance innovation performance.

The study established that formal contracts positively affect relationship learning and relationship learning mediates the relationship between formal contracts and alliance innovation performance (Mesquita et al., 2017; Kahiya & Butler, 2021). The first systematic study of supplier-buyer relationship practices was reported by Wilson and Möller in 1991, who reviewed a number of models of buyer-supplier relationships, such as industrial marketing and purchasing (IMP) work, channel perspectives and buyer and seller perspectives (Kotler & Armstrong, 2018; Soonhong et al., 2019). Further Cox and Bensau redesigned supplier-buyer relationship practices into power matrix and models (Lüttgens & Kathleen, 2016; (Morsy, 2017; Sting et al., 2019). These relationships were categorized into captive buyer, captive supplier, market exchange, and strategic partnership (GurcaylilarYenidogan, 2014; Morsy, 2017). Most studies on supplier-buyer relationship practices have been carried out in many fields including telecommunication and automotive sector (Weihong, 2004). Until now, this method has only been applied in sourcing of information technology but not to sourcing of components in the auto assembly firms in Kenya (Samadi & Kassou, 2016; Bhattacharya et al., 2018; Bomett et al., 2020).

Conceptual Framework

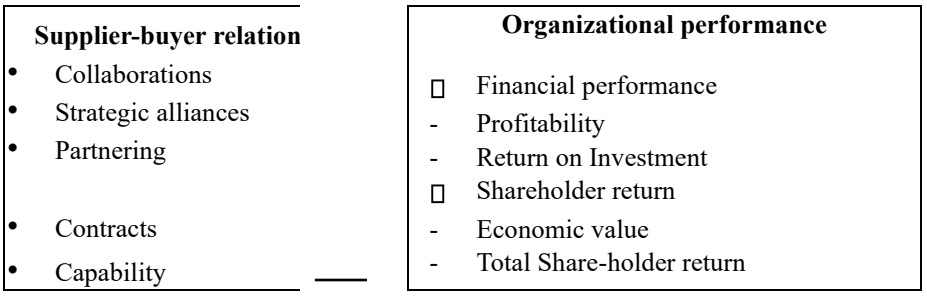

Figure 1: Conceptual framework

METHODOLOGY

This study used a mixed methods approach that was anchored on Positivism and Interpretivism epistemological orientations in collecting, analyzing and interpreting final findings using various statistical tools that were pragmatically assigned (Ryan, 2018; Tabachnick & Fidell, 2019). The moral philosophy (axiological) framework for this study was attained by attaining linearity, independence, and homoscedasticity of final data besides having a honest, candid filling of questionnaires notwithstanding (Ayiro, 2021).

Research Design

This study applied a cross-sectional descriptive exploratory research design with a mixed approach of qualitative and quantitative research in the motor vehicle assembly companies in Kenya (Creswell & Clark, 2017). A cross-sectional survey method was used to obtain the empirical data to determine the linkages between variables by allowing triangulation to take place (Saunders et al., 2016).

Population of Study

The study used 24 companies for motor vehicle assembly and franchisers as the target population (Bomett et al., 2020).

Table 1: Target population

Stratum	Population	Percentage
Assembly companies	42	100
Franchisers companies	68	100
Total	**110**	**100**

Source: Bomett et al. (2020)

Sampling Frame

Ayiro (2021) postulate that a sampling frame is a list of elements from the sample that is actually drawn and closely related to the population. A survey of 24 firms that consisted of 4 motor vehicle assemblies and 20 franchisers was utilized (Creswell & Clark, 2017). The respondents in the study were located mainly in Nairobi, Thika, and Mombasa respectively. The study targeted 1 professional from each of the listed sectional heads in the motor assembly companies of; assembly/research and design/planning, procurement, engineering/electrical, finance, quality standards, and paints departments that work in these plants. On the other hand, franchisers only have procurement/finance and engineering/electrical/paints sections.

Sample Size and Sampling Technique

The sample size for this study was obtained using (Maskey et al., 2018) formula for the finite population as follows;

$$n = \frac{N}{1 + Ne^2}$$

Where, n = sample size N = population size

e = error term at 95% confidence interval

$$n = \frac{110}{1 + 110 \times 0.05^2} = 87$$

This study used 87 respondents making the census technique appropriate in the study as shown in Table 2 (Beauducel & Hilger, 2019). These were further distributed using the law of proportions between assemblers and franchisers. This study employed a non-probability sampling technique using judgemental design as derived by MacCallum et al., in 1999 (Creswell & Clark, 2017; Maskey et al., 2018).

Table 2: Sample size

Stratum	Population	Sample size
Assembly companies	42	30
Franchiser companies	68	57
Total	**110**	**87**

Data Processing and Analysis

This study used both qualitative and quantitative means by coining views from respondents and analyzed quantitative data using the EFA technique, where complex patterns were exposed by exploring data sets with predictions established (Tabachnick & Fidell, 2019). The following econometric equation model was derived to explain the relationship between supplier-buyer relationship practices and organizational performance (Schumacker & Lomax, 2015) as indicated by $Y= \alpha +\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+ \beta_5X_5+\mu$

RESULTS Response Rate

Questionnaires were distributed to 87 employees of assembly and franchiser companies. Only 82 questionnaires were reasonably and adequately completed representing a 94% response rate as indicated in Table 3 (Morgan et al., 2016).

Table 3: The response rate for questionnaires

Response	No.	Percentage
Administered Questionnaire	87	100
Returned	82	94
Un-returned	05	06

Reliability Analysis Table 4: Summary of Cronbach's alpha reliability co-efficients on actual data

Scale	No. Items	Cronbach's Alpha	Conclusion
Supplier-buyer relationship Practices	23	.754	Reliable

The Cronbach alpha test for supplier-buyer relationship practices is 0.754 indicating its reliable (Watkins, 2018).

Validity Test

The study tested the internal validity of constructs using Kaiser-Meyer-Olkin (KMO Index) and Bartlett's test of sphericity, as a prerequisite condition for factor analysis (Braeken & Van, 2017).

Table 5: Test for sample adequacy for factor analysis (KMO and Bartletts Test)

Sub-scale	Kaiser-Meyer-Olkin	Bartlett's Test of Sphericity

	(KMO Index)	Approx. Chi -Square	Df	Sig.
Supplier-buyer relationship practices	.799	1007.631	253	.000

The results of Kaiser-Meyer-Olkin (KMO Index) and Bartlett's Test of Sphericity for Supplier-buyer relationship practices is 0.799 (Tabachnick & Fidell, 2019). This finding indicates that the variable has an identity matrix as its p-value is less than ($p<0.001$ and sample size is adequate for factor analysis (Goretzko et al., 2019). On the other hand, content validity was solved by discussing the questionnaire content with the researcher's cohort experts in supply chain management from COHRED (JKUAT). Further construct validity was assessed using factor analysis to observe how well individual measures reflected their constructs (Loehlin & Beaujin, 2017).

Normality/Linearity Test

The results in Table 6 and Appendix A indicates normality/linearity of data as it falls within the acceptable range of these tests (1.5 and 2.5) and (< 3 and < 10) respectively (Braeken & Van Assen, 2017; Tabachnick & Fidell, 2019). This indicates that the variable is linear and independent of error terms.

Table 6: Durbin-Watson test statistic

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.411[a]	.169	.1152	.97561	1.963

a. Predictors: (constant), Supplier evaluation practices, Inter-supplier rivalry practices, Supplier-buyer relationship practices, Logistics practices, Procurement planning practices b. Dependent variable: Organizational performance

Heteroscedasticity/Homoscedasticity Test

Results in appendix B display a pattern of data points spread moving to the right end, indicating mild heteroscedasticity (Hardle & Simar, 2015; Lelissa, 2018). This indicates that the assumption of homoscedasticity was not significantly violated (Gujarati et al., 2017).

Multicollinearity and Singularity Test

The results indicate that multicollinearity did not exist as Tolerance and VIF values were more than 0.1 and less than 10 respectively as shown in Table 7 (Kim, 2019).

Table 7: Test for multi-collinearity

Model		Collinearity statistics	
		Tolerance	VIF
1	Supplier-buyer relationship practices	.245	4.087

Dependent variable: Organizational performance

The singularity test results in appendix C have a determinant of 0.040> 0.00001, fulfilling the rule of thumb, that the data is normal and all questions correlated well (Warne & Larsen, 2014; Koyuncu & Kılıç, 2019).

Descriptive statistics for supplier-buyer relationship practices

Respondents were presented with twenty-three (23) opinion statements as indicators for measuring the variable as presented in Table 8 on a five-point Likert scale. These responses were converted to a continuous scale by computing percentages (Ayiro, 2021).

Table 8: Descriptive statistics for supplier-buyer relationship practices

Opinion statement	SD (%)	DA (%)	UD (%)	A (%)	SA (%)
Our organization has a determined managerial promise of sustaining collaborative relationships with suppliers	7.3	6.1	8.5	28.0	50.0
Our organization base collaboration on trust to determine supplier relationships	6.1	1.2	8.5	35.4	48.8
Our organization collaborates by sharing risks and rewards with other partners	8.5	17.1	6.1	20.7	47.6
Our organization ensures that all suppliers are committed to managing strategic alliances	14.6	9.8	12.2	19.5	43.9
Our organization demands quality from our suppliers of parts	6.1	3.7	9.8	24.4	56.1
Our organization contracts other suppliers to improve on our delivery lead times	11.0	11.0	12.2	15.9	50.0

N=82

Fifty-six point one percent (56.1%) of respondents strongly agreed that their organizations demand quality from suppliers of parts. This finding is consistent with Schiavo et al. (2018) that customers lately demand quality in their needs whenever they procure. Fifty percent (50.0%) of employees strongly agreed with the statement that their organization had a determined managerial promise of sustaining collaborative relationships with their suppliers and contracts suppliers to improve on delivery lead times respectively (Tolmay & Badenhorst-Weiss, 2018). This coincides with Lumineau (2017) that contract with higher trust influence buyer-supplier relationships through collaborations.

Factor Analysis for Supplier-Buyer Relationship Practices

Twenty-three (23) items describing supplier-buyer relationship practices were subjected to factor analysis as presented in Table 9 (Kılıç & Uysal, 2019; Beauducel & Hilger, 2019).

(i) Communalities for supplier-buyer relationship practices Table

9: Communalities for supplier-buyer relationship practices

Description	Initial	Extraction

Our organization has dedicated a lot of investments to build our suppliers capability	1.000	.855
Our organization has a determined managerial promise of sustaining collaborative relationships with suppliers	1.000	.759
Our organization allows our suppliers to use other tiers to supply parts jointly	1.000	.496
Our organization collaborates by sharing information on risks and rewards with suppliers	1.000	.748
Our organization collaborates as a means of preventing conflicts	1.000	.697
Our organization collaborates with other partners to derive quality suppliers	1.000	.685
Our organization sets clear goals and objectives with suppliers in managing our strategic alliances	1.000	.741
Our organization sets clear guidelines on how performance and relational risk criteria's relates to strategic alliances with suppliers	1.000	.783
Our organization co-operates with suppliers in managing strategic alliances	1.000	.810
Our organization develops alliances with other suppliers to develop new products	1.000	.644
Our organization shares information with parts suppliers on all contracts signed	1.000	.487
Our organization has a wider supplier base for suppliers for our components parts	1.000	.618
Our organization controls searching and switching costs for our components parts suppliers	1.000	.691
Our organization partners with suppliers to develop new products	1.000	.716
Our organization understands the attitudes of firms of our buying firms	1.000	.443
Our organization contracts other suppliers to improve on our delivery lead times	1.000	.635

Extraction Method: Principal Component Analysis.

The results indicate that sixteen (16) factors explain common variation (Koyuncu & Kılıç, 2019). These findings for instance demonstrate that 44.3% of the variance in "understanding attitudes of our buying firms" is accounted for. On the other hand 85.5% of the variance in "dedicating a lot of investments in building our suppliers capability" is accounted for (Warne & Larsen, 2014; Joshi et al., 2018). The common variance is coined into five factors as shown in Table 10.

(ii) Total variance explained Table 10: Total variance explained for supplier-buyer relationship practices

Component	Initial Eigen values			Extraction of squared loadings			Rotation sums of squared loadings[a]		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1.	5.644	35.27	35.275	5.644	35.275	35.275	2.651	16.566	16.566
2	1.742	10.887	46.162	1.742	10.887	46.162	2.257	14.109	30.675
3	1.279	7.992	54.154	1.279	7.992	54.154	2.213	13.829	44.504
4	1.140	7.127	61.281	1.140	7.127	61.281	1.901	11.884	56.388
5	1.003	6.268	67.549	1.003	6.268	67.549	1.786	11.161	67.549
6	1.171		1.069	100.000					

Extraction method: Principal component analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Twenty-three (23) measures on supplier-buyer relationship practices were subjected to factor analysis and five loadings were retained for further analysis as presented in Table 10. These factors had a total variance accumulation of 67.549% (Pituch & Stevens, 2016). The factor accumulation consisted of; factor one 35.275%, factor two 10.887%, factor three 7.992%, factor four 7.127%, and factor five 6.268% of the variance respectively (Tabachnick & Fidell, 2019). The components were rotated as indicated in Table 11.

(iii) Rotated Component Matrix

Tables 11 present the results of the rotated component matrix.

Table 11: Rotated component matrix for supplier-buyer relationship practices items

Description	1	2	3	4	5
Our organization collaborates as a means of preventing conflicts	.186	.034	.779	.117	.201
Our organization collaborates with other partners to derive quality suppliers	**.775**	.204	.160	.003	.130
Our organization collaborates by sharing information on risks and rewards with suppliers	**.764**	.276	-.031	.258	.143
Our organization allows our suppliers to use other tiers to supply parts jointly	**.572**	.033	.284	.065	.288
Our organization sets clear guidelines on how performance and relational risk criteria's relates to strategic alliances with suppliers	.129	**.854**	.086	.145	.090
Our organization sets clear goals and objectives with suppliers in managing our strategic alliances	.154	**.751**	.250	.024	.300

Our organization co-operates with suppliers in managing strategic alliances	.377	**.723**	.280	.237	-.097
Our organization partners with suppliers to develop new products	.197	.193	**.779**	.035	.183
Our organization has a wider supplier base for suppliers of our components parts	.024	.123	**.744**	.204	-.087
Our organization develops alliances with other suppliers to develop new products	.376	.079	**.629**	.313	.052
Our organization understands the attitudes of firms of our buying firms	.176	.265	**.475**	.335	-.058
Our organization controls searching and switching costs for our components parts suppliers	.044	.147	.177	**.798**	-.002
Our organization contracts other suppliers to improve our delivery lead times	to .157	-.061	.274	**.707**	.181
Our organization shares information with component parts suppliers on all contracts signed	.227	.334	.069	**.562**	.053
Our organization has dedicated a lot of investments to build our suppliers' capability	.124	.027	.121	.060	**.906**
Our organization has a determined managerial promise of sustaining collaborative relationships with suppliers	.211	.204	-.101	.096	**.808**

Extraction method: Principal component analysis.

Rotation method: Varimax with Kaiser Normalization. a.

Rotation converged in 6 iterations.

The rotation technique indicated positive loadings and retained five (5) components of; collaborations, strategic alliances, partnering, contracts, and capability (Watkins, 2018; Joshi et al., 2018; Syah, 2019). The main loadings on component one (1) were items from subconcepts on collaborations. Component one (1) was named collaborations. The main loadings on component two (2) were items from sub-concepts on strategic alliances. Component two (2) was named strategic alliances. The main loadings on component three (3) were items from sub-concepts on partnering. Component three (3) was named partnering. The main loadings on component four (4) were items from sub-concepts on contracts. Component four (4) was named contracts. The main loadings on component five (5) were items from sub-concepts on capability. Component five (5) was named capability. Descriptive analyses of these factors were identified by estimating mean scales (Lorenzo-Seva & Van, 2016). These factors were checked using multivariate descriptive on a scale of 1.0 to 5.0 (Pituch & Stevens, 2016).

(iv) Analysis of the mean for supplier-buyer relationship practices

Table 12 presents the results of the mean analysis for for supplier-buyer relationship practices.

Table 12: Analysis of the mean for supplier-buyer relationship practices

Definition	Mean	SD	Cronbach's- Alpha

Collaborations	3.6524	1.17376	.800
Strategic alliances	3.2033	1.26984	.825
Partnering	3.1311	1.20328	.744
Contracts	3.7398	1.07857	.632
Capability	3.9207	1.13982	.773

Key: 1.00-1.80=Strongly Disagree; 1.81-2.60=Disagree; 2.61-3.40=Undecided; 3.41-4.20=Agree; 4.21-5=Strongly Agree

Results in Table 12 indicate that collaborations had a mean score of 3.6524, equivalent to Agree on the ranking scale. This finding coincides with Tolmay & Badenhorst-Weiss (2018) that collaboration can only be successful if trust between supply chain partners exists (Morsy, 2017). This implies that many Kenyan motor vehicle assembly firms find collaboration, a key strategic position for enabling supplier-buyer relationships (Pfanelo, 2017; Jääskeläinen & Thitz, 2018). Partnering had a mean score of 3.1311, equivalent to Undecided on the ranking scale, which had the least influence. This finding contradicts Weihong (2004) that OEMs can gain access to the latest equipment, process knowledge, and manufacturing expertise without making substantial capital investments. This indicates that Kenyan motor vehicle assembly firms do hardly partner with similar firms in sourcing for critical supplies (Shin et al., 2019; Syah, 2019).

Strategic alliances had a mean score of 3.2033, equivalent to Undecided on the ranking scale. This contradicts the findings that networks in the form of alliances create a competitive advantage that can be achieved through social network resources (Mesquita et al., 2017; Talebi et al., 2017). This implies that many motor vehicle assembly firms in Kenya are reluctant to develop strategic alliances with other partners (Dal Ponte et al., 2017).

Contracts had a mean score of 3.7398, equivalent to Agree on the ranking scale. This finding coincides with that contracts involving a higher volume of trade, dedicated assets represent the seller's specific investments in each transaction that comprises more than one product likely to be renewed (Cabral et al., 2020; Liu et al., 2021). This implies that many motor vehicle assembly firms in Kenya are eager to enter into contracts with suppliers of components/parts/accessories (Ghadge et al., 2017; Cabral et al., 2020**)**. Capability had a mean score of 3.9207, equivalent to Agree on the ranking scale that had the highest influence on supplier-buyer relationship practices. This indicates that that trust and contract use reinforces product-innovation capability which is based on buyer-supplier interactions (Morsy, 2017; Tolmay, 2019; Mohanad & Harsha, 2020). This decision implies that motor vehicle assembly firms in Kenya are capable of entering into relationships with players involved in the manufacture and distribution of components/parts/accessories (Charterina et al. (2018**)**.

(v) Model summary test results for supplier-buyer relationship practices and organizational performance

To estimate the effect of supplier-buyer relationship practices on the performance of motor vehicle assembly companies in Kenya, a coefficient of determination was computed using regression analysis as presented in Table 13.

Table 13: Model summary test results for supplier-buyer relationship practices and organizational performance

Model	R	R-square	Adjusted R-square	Std. Error of the Estimate	Durbin-Watson
1	.281[a]	.079	.0191	.03479	1.905

a. Predictors: (Constant), Strategic alliances, Partnering, Contracts, Collaborations, Capability

b. Dependent variable: Organizational performance

2	.323[a]	.104	.0451	.04366	1.905

a. Predictors: (Constant), Strategic alliances, Partnering, Contracts, Collaborations, Capability

b. Dependent variable: Organizational performance

The results from Table 13 in model 1 indicate the coefficient of determination (R^2= 0.079) and coefficient of correlation (R-value=0.281) at a 95% significance level respectively. The coefficient of determination indicates that 7.9% of the variation in organizational performance is influenced by supplier-buyer relationship practices of; Strategic alliances, Partnering, Contracts, Collaborations, and Capability factors strongly influence the performance of motor vehicle assembly companies in Kenya, whereas 28.1% explains the relationship between the organizational performance of motor vehicle assembly companies in Kenya. In model 2, (R^2=.104) and (R-value=0.323) respectively.

Therefore coefficient of determination is 10.4% and the coefficient of correlation is 32.3% respectively. Therefore, 10.4% of supplier-buyer relationship practices of; Strategic alliances, Partnering, Contracts, Collaborations, and Capability factors strongly influence the performance of motor vehicle assembly companies in Kenya, whereas 32.3% explains the relationship between supplier-buyer relationship practices and organizational of motor vehicle assembly companies in Kenya.

(vi) ANOVA test for supplier-buyer relationship practices and organizational performance Table 14 presents the test results of Anova for supplier-buyer relationship practices and Organizational performance Table 14: ANOVA test results for supplier-buyer relationship practices and organizational performance

Model		Sum of square	Df	Mean square	F	Sig
1	Regression	6.997	5	1.399	1.307	.270[a]
	Residual	81.381	76	1.071		
	Total	88.378	81			

a. Predictors: (Constant), Strategic alliances, Partnering, Contracts, Collaborations and Capability

b. Dependent variable: Component 1, Organizational performance

2	Regression	9.621	5	1.924	1.767	.130[a]
	Residual	82.782	76	1.089		

	Total	92.402	81			

a. Predictors: (Constant), Strategic alliances, Partnering, Contracts, Collaborations, and Capability

b. Dependent variable: Component 2, Organizational performance

The model results are {F (5, 76) =1.307, p>.05)} and {F (5, 76)=1.767, p>.05)} respectively lower. This is lower than its critical value of 2.34 and F-Test rule of thumb (Pituch & Stevens, 2016; Kissell & Poserina, 2017).

(vii) Regression test between supplier-buyer relationship practices and organizational performance

Table 15 presents the results of regression coefficients test results for supplier-buyer relationship practices and Organizational performance

Table 15: Regression coefficients test results for supplier-buyer relationship practices and organizational performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.160	.536		5.890	.000
	Collaborations	.032	.126	.035	.250	.803
	Strategic alliances	.115	.114	.140	1.016	.313
	Partnering	.006	.124	.007	.050	.960
	Contracts	.165	.131	.170	1.255	.213
	Capability	-.022	.109	-.024	-.199	.843
a. Dependent variable: co		**ıponent 1, Organizational p**		**erforman e**		
2	(Constant)	2.403	.541		4.440	.000
	Collaborations	-.003	.127	-.003	-.023	.982
	Strategic alliances	.149	.115	.178	1.304	.196
	Partnering	.102	.125	.115	.812	.419
	Contracts	-.147	.132	-.148	-1.108	.271
	Capability	.197	.110	.211	1.789	.078

a. Dependent variable: component 2, Organizational performance

The model presents the econometric equations for two models as follows: $Y=3.160+.032X_1+.115X_2+.006X_3+.165X_4-.022X_5$ for model one and $Y=2.403.003X_1+.149X_2+.102X_3-.147X_4+.197X_5$ for model two (Gujarati et al., 2017). Y: Organizational performance, X_1: Collaborations, X_2: Strategic alliances, X_3: Partnering, X_4: Contracts and X_5: Capability.

DISCUSSION

The Anova test results indicate that {F (5, 76) =1.307, p>.05)} and {F (5, 76)=1.767, p>.05)} respectively lower than its critical value of 2.34 and F-Test rule of thumb (Pituch & Stevens, 2016;Kissell & Poserina, 2017). These results indicate that supplier-buyer relationship practices of strategic alliances, partnering, contracts, collaborations, and capability do not significantly explain the variance on the level of performance of motor vehicle assembly companies in Kenya as indicated by the F-values of 1.767 and 1.307 respectively (Jääskeläinen & Thitz, 2018). This finding contradicts Morsy (2017) that supplier-buyer relationship practices explained a significant amount of the variance in the level of performance of motor vehicle assembly companies in Kenya.

On the other hand on the overall model of $Y=2.403-.003X_1+.149X_2+.102X_3-.147X_4+.197X_5$, motor vehicle assembler companies in Kenya insignificantly performed by 2.403 even without having supplier-buyer relationship practices in place**,** whereby collaborations contributed negative 3%, strategic alliances 14.9%, partnering 10.2%, contracts -14.7%, and capability 19.7% towards supplier-buyer relationship practices (Awan et al.,2018). This finding contradicts findings by Mesquita et al. (2017) that networks in the form of contracts or alliances create a competitive advantage that are be achieved through social network resources (Zhao & Ha-Brookshire, 2018;Cabral et al., 2020).

This finding contradicts Dal Ponte et al. (2017) that partnering with suppliers and customers is problematic as well as difficult in managing procurement cycles (Xie et al., 2016; Boyce et al., 2016). Further Huang et al. (2020) affirm that very few studies have focused on factors influencing collaboration on performance and the recent wave of consolidation can no longer be made without considering the complexities induced by diverse ownership structures and a plethora of international collaborations (Shin et al., 2019; Huang et al., 2020; Kwon et al., 2020). These findings contradict relational contracting supply chain theory which helps understand different forms of contracts (Ghadge et al., 2017; Huo et al., 2019) and power decisions involved in structuring supply chain decisions (Paul et al., 2017; Prasad et al., 2019).

CONCLUSION

This study investigated the effect of supplier-buyer relationship practices on the performance of motor vehicle assembly companies in Kenya; the null hypothesis were that supplier-buyer relationship practices have no significant effect on the organizational performance of motor vehicle assembly companies in Kenya.

This study established that supplier-buyer relationship practices of strategic alliances, partnering, contracts, collaborations, and capability do not significantly explain the variance on the level of performance of motor vehicle assembly companies in Kenya. This contradicts findings by Morsy (2017) that supplier-buyer relationship practices significantly explain the amount of variation in the level of performance of motor vehicle assembly companies in Kenya. On the other hand on the overall model, motor vehicle assembler companies in Kenya insignificantly perform by 2.403 even without having supplier-buyer relationship practices in place. Even if indications of performance is available**,** contributions per construct is insignificant as demonstrated; collaborations contributed negative 3%, strategic alliances 14.9%, partnering 10.2%, contracts -14.7%, and capability 19.7% towards supplier-buyer relationship practices (Awan et al.,2018).

This finding contradicts findings by Mesquita et al. (2017) that networks in the form of contracts or alliances create a competitive advantage that are be achieved through social network resources (Zhao & Ha-Brookshire, 2018;Cabral et al., 2020). This finding contradicts relational contracting supply chain theory as it does not apply in Kenyan motor vehicle assembly dyads. This study plays a fundamental in understanding various supplierbuyer practices that exist in supply chain management by outlining power models influencing sourcing of critical components of assembly firms. The study recommends that future research should be on antecedents of dyadic relationships on tier sourcing in the motor vehicle assembly industry in Kenya.

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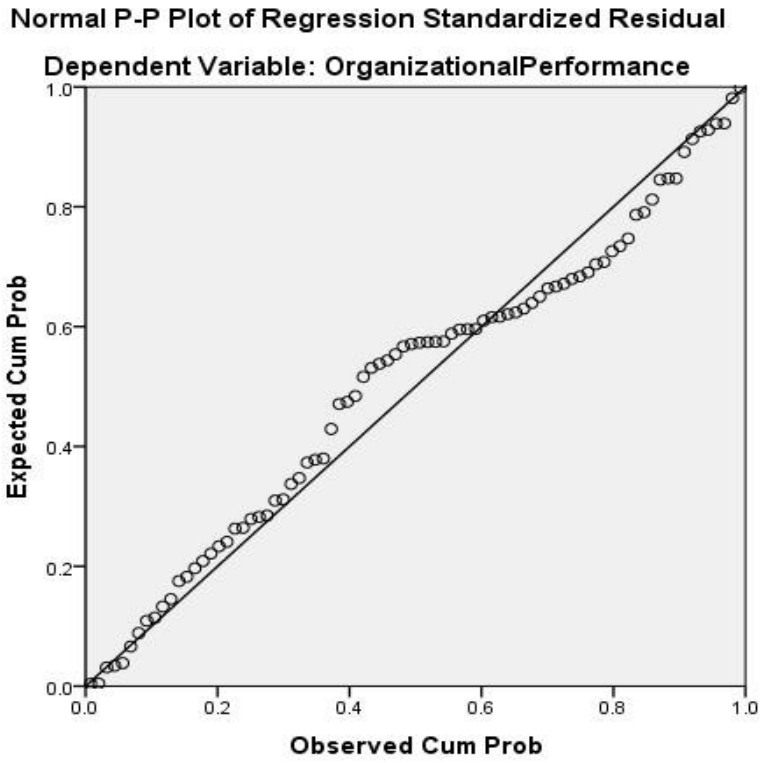
APPENDICES Appendix A: Normality/Linearity test



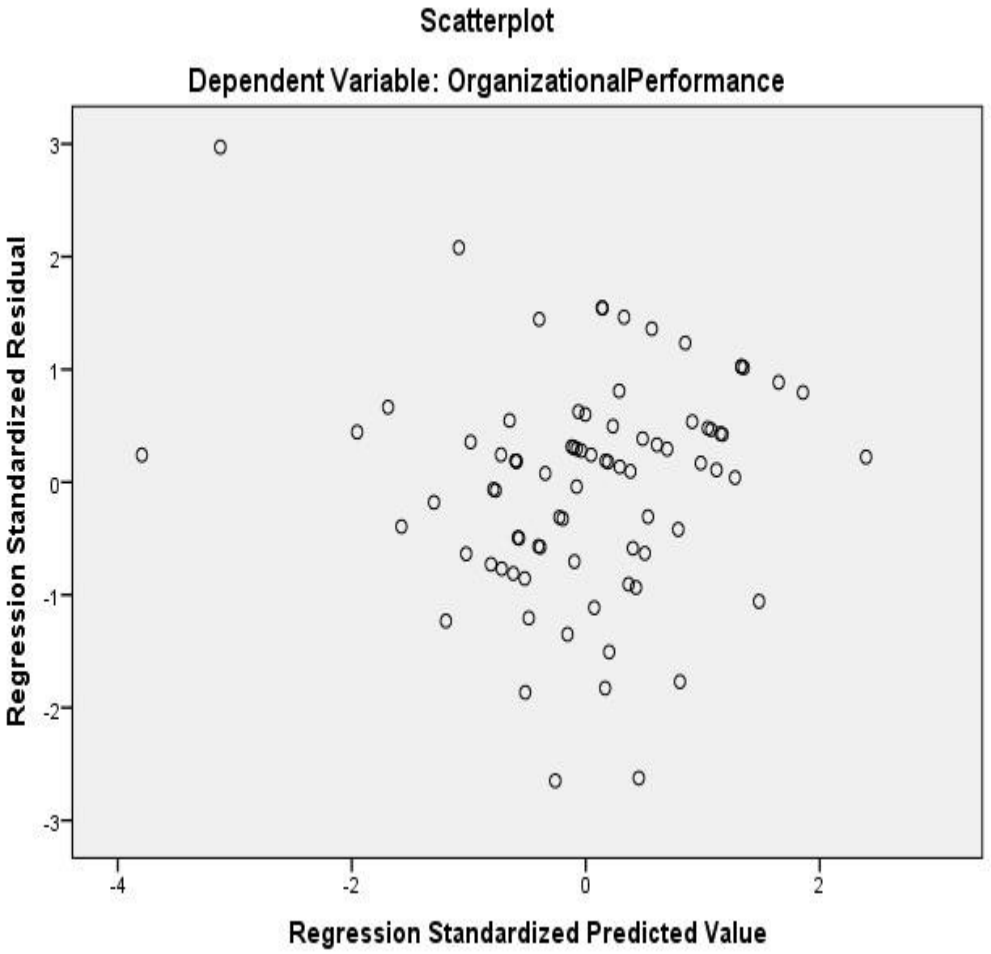
Normality Test using Skewness/Kurtosis

Scale No		Skewness		Kurtosis
Supplier evaluation practices	-.232	-.272	82	
Inter-supplier rivalry practice	-.712	1.975	82	
Supplier-buyer relationship practices	-.724	1.097	82	
Logistics practices	-.426	.392	82	
Procurement planning practices	-1.121	2.577	82	
Organisational performance	.226	-.464	82	

a. Test distribution is Normal.

b. Calculated from data.

Appendix B: Heterscedasticity/Homoscedasticity test



Appendix C: Test for singularity correlation matrix

	Supplier evaluation practices	Inter-supplier rivalry practices	Supplier-buyer relationship practices	Logistics practices	Procurement planning practices	Organizational performance
Supplier evaluation practices	1.000	.612	.621	.472	.555	.241
Inter-supplier rivalry practices	.555	.619	.642	.510	1.000	.380
Supplier-buyer relationship practices	.621	.821	1.000	.713	.642	.321
Logistics practices	.472	.649	.713	1.000	.510	.224
Procurement planning practices	.612	1.000	.821	.649	.619	.224
Organizational performance	.241	.224	.321	.224	.380	1.000
Supplier evaluation practices	.000	.000	.000	.000	.000	0.15
Inter-supplier rivalry practices	.000	.000	.000	.000	.000	.000

Supplier-buyer relationship practices	.000	.000		.000	.000	0.002
Logistics practices	.000	.000	.000		.000	.021
Procurement planning practices	000		000	000	.000	.021
Organizational performance	+	.021	.002	.021	000	.021