Supply Chain Management Practices and SME Performance in Arua Municipality, Uganda.

Olema Hamiza

ICT University USA, Cameroon Campus, Cameroon

Tel: 256-772-303-466   E-mail: Olema.hamiza@ictuniversity.org

Alain Vilard Ndi Isoh

Ph.D, ICT University USA, Cameroon Campus, Cameroon

Tel: 237-7180-8232   E-mail: alainvilard.isoh@ictuniversity.org

Abstract

This study focused on the relationship between supply chain management practices and SME performance in Arua Municipality, Uganda. The research axiology is value free and the approach is deductive. Data were sourced using both structured and semi-structured questionnaire survey consisting of 140 SMEs registered with the Uganda Registration Services Bureau (URSB).

Research outcomes revealed that supply chain collaboration is a precursor of SME performance. Whereas, internal management, use of information communication technology and innovation were proven to be statistically insignificant predictors of SME performance.

The analysis of the study is deterministic and findings are hypothetical. The research design prohibits studying SME performance using exploratory views. In addition, data collection tool was standardized questionnaire design, and operationalised using quantitative procedures. Application of an in-depth interview could have given profound insights of the studied phenomenon.

The practical effects of this study are that: owners and/or Managers of SMEs should improve performance by engaging in collaborative approaches such as long term contracts and interdependence. Scholarly presentations on the effects of supply chain management practices on the performance of SMEs in Arua Municipality, Uganda have attracted little scholarly

attention in the past years. This study is therefore of momentous contribution in this area of research.

Keywords: Supply chain collaboration, internal management, Information technology, Innovation and creativity, performance, Uganda.

1. Introduction

Small and medium Enterprises (SMEs) are seen as a driving force for the promotion of economic development of any country (Abor et al., 2010). Like any other country, Uganda's private sector is dominated by SMEs which account for over 90% of total non-farming private sector workers (UIA, 2017). SMEs contribute 20% to gross domestic product and employ over 80% of the total workforce in the country. Importantly, there is no globally acceptable definition of SMEs. Many scholars and practioners have defined SMEs on the basis of both the number of people employed and the annual turnover of the enterprise. SME performance is an indicator which measures how well an enterprise achieves its objectives. According to Karimi and Rafiee (2014), SME performance is viewed from the perspectives of marketing performance, operational performance and financial performance, whereas, Tippins and Sohi (2010) proposed six parameters of measuring SME performance, they include sales growth, lead time, cost reduction, quality improvement, return on investment and customer satisfaction.

Significant studies have been concluded by indigenous scholars concerning determinants of SME performance. Such studies include: Sebikari (2014) who examined the impact of entrepreneurial performance on small business enterprises in Uganda. Olutayo et al., (2015) explored the influence of age on SME performance. Aketch (2014) studied effect of organizational culture on performance of SMEs, whereas Turyahebwa et al., (2013) investigated the effect of financial management practices on SME performance. Olutayo (2015) investigated gender and SME performance. Mutesigensi carried out a study on cash flow and survival of SMEs. It is however particularly relevant to observe that none of these studies specifically sought to examine the effect of supply chain management practices on SME performance.

1.1 Research Problem and Motivation

The performance and survival of small scale businesses in Arua Municipality in particular, and Uganda as whole has become under serious public and scholarly scrutiny given that their performance is characterized by stagnant and sometimes dwindling sales, long lead times and high cost of operation, pitiable quality of products and services and low profit margins. Many SMEs are struggling to grow with very disturbing survival rate. Fewer than half of all new SMEs usually remain in active operation only after five years of creation (UBOS, 2016). Furthermore, the Town Clerk of Arua Municipality wept in desperation that 2 in every 3 SME start-ups in the Municipality cannot live to celebrate their first anniversary. Thus, business performance and sustainability is a major problem among SMEs. This is unacceptable and cannot be tolerated; otherwise the private sector will become stagnant and slowly cease to

exist. Given this state of affairs, the need to establish factors affecting SME performance is a collective responsibility in Uganda.

The drive of this study is to establish the impact of the independent variable on SME performance in Arua Municipality, in Uganda. This study has both theoretical and practical contributions. Theoretically, scholars and academicians will find this study an invaluable source of reference material for future studies and subsequent discussions in the area. Practically, this study will be helpful to business owners and or SME Managers who can use the findings of the study to improve SME performance. The study also provides important insights that allow civil servants such as Town Clerks to better understand SME performance and survival related issues.

2. Literature Review and Development of Hypotheses

2.1 Theoretical Underpinning

Supply chain management has been grounded in many theories, some of them complementary and others are contradictory, but for the purposes of this study, the following theories are analyzed: The Transaction Cost theory (Williamson, 1981) stressed the need to shrink the rising cost of operations. Transaction cost theory is a common research framework for managing costs.

Grover and Malhotra (2003) carried out a vigorous study on the application of transaction cost theory in supply chain management consisting of 1000 purchasing managers. The study clinched that transaction cost theory applies to organizational supply chain management in four facets: effort, monitor, problem and advantage. The Relevance of transaction cost theory to this study is that according to proponents of the theory, if SMEs develop trustworthiness and engage in repeated transactions with a small set of suppliers, their costs will be low. However, critics argued that TCE neglected the role of differential capabilities in structuring economic organizations (Richardson, 1972); and power relations (Perrow, 1986).

Another important theory is the Technology Acceptance theory of Fred Davis 1986. Davis (1986) used TAM to explain the general determinants of computer acceptance and behavior across a broad range of end-user computing technologies and user populations. The basic TAM model examined two specific beliefs viz-a-viz Perceived Usefulness and Perceived Ease of Use. According to Davis (1989) people tend to use or decline to use certain technology with the objective to improve performance at work – perceived use. However, even if this person understands that certain technology is useful, its use may be damaged if it is too complicated in a way that the effort is not worthwhile the use – perceived facility. According to Venkatesh et al., (2003) the technological innovations need to be accepted and actually used by the SMEs for extensive inter firm information sharing, which reduces asymmetric information and improve communication and productivity. The Relevance of Technology Acceptance Model to this study is its robust, powerful and parsimonious prediction of user acceptance of information technologies. However, the theory does not reflect diversity in user task environments and constraints that are prevalent in Ugandan

SMEs.

Another theory of relevance to this study is the componential theory of organizational creativity and innovation. This theory was introduced by Teresa Amabile in 1983. This theory is premised on the work environment's impact on creativity. The theory stipulates that creativity requires domain-relevant skills such as knowledge, expertise, technical skills, intelligence and talent in the particular domain where the problem-solver is working. Creativity-relevant processes include a cognitive style and personality characteristics that are conducive to independence, risk-taking, problem solving and skills in generating ideas. There are three major components contributing to individual or small team creativity: expertise, creative-thinking skill, and intrinsic motivation. The Relevance of componential theory of organizational creativity and innovation to this study is the conceptualization of employee motivation that triggers creativity and innovation in an organization. Therefore, SME managers can rely on tools and techniques developed from the theory to stimulate creativity and innovation within their organizations. However, the componential theory mainly focuses on factors within an organization.

Table 1. Summary of Theories on which the study is anchored

Theory	Author	Year	Gist of the theory	Relevancy	Limitation
TCT	Williamson	1981	Managing costs	Trustworthiness & repeated transactions Reduce costs.	Neglected differential organizational capabilities
TAM	Davis	1986	Determinants of IT acceptance	Predict user acceptance of IT in supply chain management	Does not reflect the variety of user task environments and constraints
CTOC	Amabile	1983	Work environments impact creativity & innovation	Conceptualization of what triggers creativity and innovation in firms	Failure to consider outside forces

2.2 Supply Chain Collaboration and Performance of SMEs

Whipple and Russell (2012) described collaboration as two or more companies working together to create a competitive advantage and higher profits than can be achieved by acting alone. Supply chain collaboration is very important in supply chain management, in that the flow of goods, information, and money from one part of the supply chain to the other requires a smooth interplay between and among the stakeholders of the supply chain. Efficiency and effectiveness of coordination of supply chain activities are needed to meet the customers' requirements on time and accurately. Fawcett et al., studied the practices and requirements for successful collaboration. They include: long-term contracts, interdependence, commitment,

information sharing and system integration, relationship management, rationalization and simplification. Effective collaboration depends on mutual trust between business partners as well as the readiness to share information that can benefit all within the supply chain. Anecdotal evidence has shown that firms that adopt supply chain collaboration gained several benefits in terms of improved product quality, cost reduction, better risk management, demand planning and increased sales (Sanders, 2014). Firms generally enter into supply chain collaboration with the objective of enhancing performance and competitive advantage.

Li et al., (2009) found that supply chain collaboration has a positive effect on organizational performance. Similarly, Wisner (2003), found a significant relationship between immediate and second-tier supply chain management strategies and firm performance. He argued that, to improve market share, competitiveness, product quality, and customer service; firms should assess and modify their immediate supplier and customer relationship capabilities. Nyaga & Whipple (2013), in an empirical study found that the quality of the relationship with key suppliers has a significant positive impact on the operational performance of the firm. Few studies support the positive relationship between engagement of SMEs in SCM and their performance, other studies provide controversial findings. Koh et al. (2011), found that two classes of SCM practices including: strategic collaboration and lean practices and outsourcing and multi-suppliers have a direct positive and significant impact on the operational performance of SMEs. Therefore, the following hypothesis is proposed:

H_1: Supply Chain Collaboration is positively and significantly related to SME performance.

2.3 Internal Management and SME Performance

The ever-changing business environment in emerging economies create a degree of uncertainty that causes problems for various organizations (Connie, 2015), especially for SMEs. Best management practices should be a target in all types of organizations because the techniques, methods, and actions carried out to control and reduce inefficiencies in processes and procedures is what ultimately will provide the organization with the desired performance. According to Ejiofor (1985), internal management is the science of working in an organization through directing and coordinating the activities of people to achieve common objectives. It includes: employee management, financial management, internal control, motivation among others.

Employee management refers to philosophy, politics, procedures and practices linked to management of employees in an organization. The survival of every enterprise is dependent on the effective management of human resources. According to Hendry (2011) employee management is achieved when practices related to the personnel are consistently communicated throughout the organization. Such consistency should be visible throughout all practices. MacDuffie (1995) posits that the philosophy of human resource management has three main focuses: employee efficiency, effectiveness and employee needs. High-performing organizations invest in employee development through training and retaining people through roles and responsibilities (Bhalla et al., 2011). Mathuva (2009) examined the influence of

working capital management components on corporate profitability by using a sample of 30 firms listed on the Nairobi Stock Exchange (NSE) for the periods 1993 to 2008. Findings exposed that there exists a highly significant positive relationship between the period taken to convert inventories into sales and profitability, and there exists a highly significant positive relationship between the time it takes the firm to pay its creditors and profitability. The same results are not at variance with Uyar (2009) whose results showed statistically significant between working capital and firm performance. Therefore, we hypothesize that:

H₂: Internal management significantly influences SME performance.

2.4 IT integration in SCM and performance of SMEs

Technological developments have changed the way business is conducted today. Thus, application of basic internet services as well as the use of business management systems in the supply chain such as Electronic Data Interchange (EDI), Global System for Mobile communications (GSM) a packet oriented mobile data service on the 3G and 4G cellular communication systems, Enterprise Resource Planning (ERP), Intranets and extranets count a lot today in business (Lai, 2016). In the current digital era, it is unlikely for any business to thrive without better use of information technology (IT). Businesses, particularly SMEs, cannot grow faster unless they embrace technology (Kozak, (2011). Today, all businesses regardless of their size, are faced with several competitive challenges. To cope with this phenomenon, managers are adopting e-commerce in their respective organizations in order to grow and remain competitive (Poorangi, Khin, Nikoonejad & Kardevani, 2013). SMEs in particular need to embrace innovative e-commerce strategies in order to stay competitive, profitable and successful in local and global markets (Awiagah, Kang and Lim, 2016). Indeed, e-commerce adoption has been earmarked as one of the innovations that could help SMEs to grow and survive. Increased use of the Internet provides potential benefits to SMEs, such as cost reduction and enhanced business growth (Standing, Standing and Love, 2010). Certainly, e-commerce makes communication within an organization faster and facilitates efficient management of the resources (Ahmad, Baker, Faziharudean, & Zaki, 2015).

While the Internet-based e-commerce offers considerable prospects for SMEs to increase their customer base (Wanjau, Macharia & Ayodo, 2012), the growth of e-commerce use by businesses is largely driven by large companies. In contrast with larger businesses, the adoption rate of e-commerce by SMEs is fairly low (Govindaraju, Wiratmadja, & Rivana, 2015). SMEs, particularly in Uganda, have generally been slow in adopting such initiatives. They could be unaware of the potential of IT to enhance their business operations and growth. Although many studies have been conducted regarding e-commerce adoption, the majority were mainly carried out in developed countries (Kurnia, Choudrie, Mahbubur & Alzougool, 2015), and only a few focused on SMEs in developing countries (Ahmad et al., 2015). Hence, we hypothesize that:

H₃: IT integration in SCM is positively and significantly related to SME performance

2.5 Innovative SCM practices and performance of SMEs

Supply chain innovation is the system by which companies reconfigure and integrate their internal and external structures/processes and infrastructure/humanware with the aim of sensing and seizing new opportunities that facilitate information management, sourcing, Production, and delivery of products in a responsive, cost efficient and timely manner to the end-consumer (Singhry et al., 2014). Innovative supply chain management practices include technological, organizational, marketing, process, and product. Innovation in supply chain leads to cost reduction, customer responsiveness, bullwhip effects and competitive advantage (Stank, Dittmann, & Autry, 2011). Ageron et al., (2013) argue that operational processes, information system/information technology, and managerial processes improve organizational performance.

Furthermore, Lee and Schniederjans (2010) concluded that supply chain innovation reduces operational cost, lead time, create superior operational strategies, enhance quality, and provide visibility and flexibility for dealing with rapid changes in customer demand. Caria and Guerini (2007) indicates that to achieve product development in an uncertain environment, communications and coordination between members of the supply chain has to be intensive. Indeed, relationships that companies develop with their suppliers and customers can ultimately be considered as competitive tools which contribute to improved organizational performance. Consequently, we posit that:

H4: Innovative SCM positively and significantly correlates with performance of SMEs.

Table 2. Summary of the findings from the literature

Author(s)	Methodology	Contribution	Gap
Koh et al., 2011	Qualitative	The authors ably defined SCM practices	Ignored theoretical propositions
Li et al., 2006	Quantitative	Studied collaboration and firm performance	Lack of theoretical foundation
Whipple and Rusell, 2012	Content analysis	Description of collaboration	Conceptual
Anbanandan et al., 2014	Mixed	Defined the latent constructs of supply chain collaboration	Lacked empirical data
Wisner, 2003	Qualitative	Identification of Supply chain management strategies	Ignored the 3rd tier suppliers
Connie, 2015	Quantitative	Established the impact of dynamic environment on SME performance	Conceptual
Ejiofor,1985	Qualitative	Definition internal management	Conceptual
Seljdin, 2013	Qualitative	Value of HRMs in a firm	Lack of specificity in defining the firm size
Garcia et al., 2007	Quantitative	Effect of working K on SME performance	Restricted to working capital

Nikoonejad 2013	Qualitative	Usefulness of IT to SMEs	Weak theoretical lens
Ageron et al, 2013	Content analysis	Importance of innovation to SMEs	No theoretical foundation

Conceptual Model

The conceptual framework looks relates supply chain management practices to SME performance. The dependent variable is performance of SMEs, while independent variables are supply chain collaboration, internal management, IT integration, and innovation and creativity as depicted in figure 1 below:

INDEPENDENT VARIABLE   DEPENDENT VARIABLE
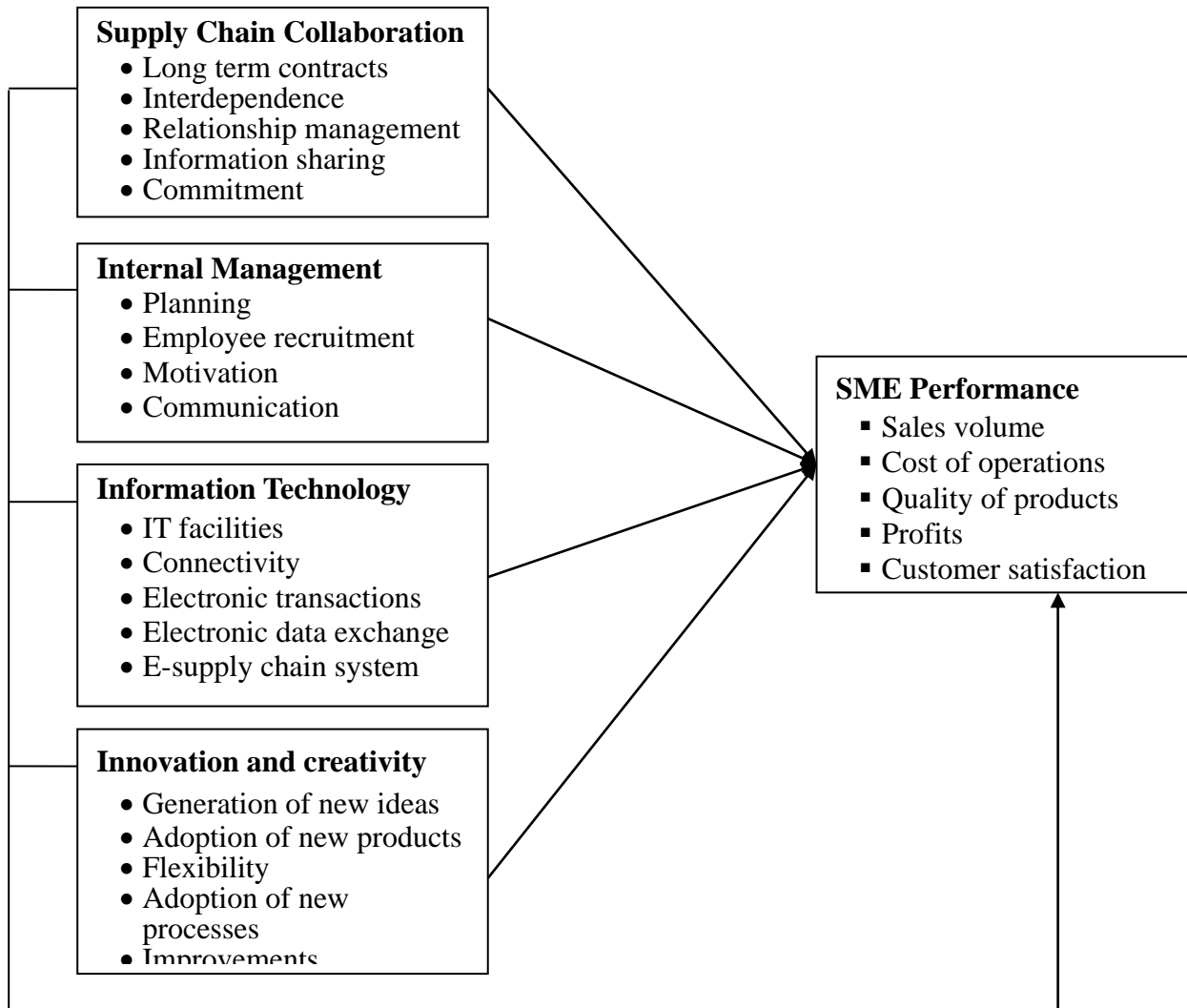
Supply Chain Management Practices

Figure 1. Effect of Supply Chain Management Practices on SME performance

Source: Adopted and modified from Bayraktar et al (2010); Kinyua (2014) Koh et al. (2011); Kauremaa and Ala-Risku (2009), Lavastre and Spalanzani, 2011 and Singhry et al., (2014).

3. Methodology

This study used a descriptive research design. The target population was 220 SMEs registered with the Uganda Registration Services Bureau (URSB). The SMEs were categorized into manufacturing, construction, hotels and restaurants, education, wholesale and retail trade. The survey covered a sample of 140 SMEs based on Krejicie and Morgan (1970) table for determining sample size. The respondents included Directors/Managers, Procurement/purchasing officers, warehouse/store Managers, Logistics officers, sales and marketing Managers who are responsible for acquisition of materials and management of enterprises and have knowledge in the subject matter.

The study used stratified simple random sampling technique in coming up with the sample of the study. Primary data was collected for the purpose of investigating the effect of supply chain management practices on performance of small and medium enterprises. Data was collected using a five-point Likert scale questionnaire ranging from strongly disagree to strongly agree with close-ended questions. Data was analyzed using descriptive and inferential statistics.

4. Analysis and Results

4.1 Descriptive Statistics

Findings revealed that most of the businesses were owned by individuals (64%), family owned were (19%), followed by businesses owned by partners (16%), and 3% belonged to community based associations. In relation to type of business, retail businesses were the highest (59%), followed by wholesale (13%), hotel and catering (11%), manufacturing (7%), education (4%), construction (4%), and health had the lowest number (2%). Majority of the firms (64%) had 5-9 employees. The (19%) employed between 10-14 workers, 12% had between 15 -19 employees and only 5% employed more than 20 workers. In regard to the amount of capital invested, (54%) invested less than 10 million Uganda shillings, (23%) invested from 10-19 million Ugandan shillings, (14%) invested between 20-49 million Ugandan shillings and only 9% invested more than 50 million Ugandan shillings.

4.2 Reliability and Validity Tests

We tested for reliability of the questionnaire using Cronbach's α coefficient. Cronbach (1951) requires a Cronbach's α coefficient of at least 0.7 and above and Cronbach's α values for this study were all above 0.7 and thus the instrument was reliable.

Table 3. Reliability results

Variables	Cronbach results	Decision
Supply Chain Mgt Practices	.780	Approved
SME performance	.761	Approved

Source: Field data, 2019

Kaiser–Meyer–Olkin (KMO) and Bartlett was used test to affirm the suitability of the instrument for factorization. The results show that $\chi^2 = 476.373$, df = 66 and p < 0.000 was obtained. Middling KMO Index = 0.647 was obtained suggesting that the variable was good for factorial analysis.

Table 4. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.647
Bartlett's Test of Sphericity	Approx. Chi-Square	476.373
	df	66
	Sig.	.000

Source: Field data, 2019

Table 5. Total Variance Explained (Eigenvalues)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6.142	20.473	20.473	6.142	20.473	20.473	5.594
2	4.183	13.943	34.416	4.183	13.943	34.416	3.671
3	2.046	6.820	41.236	2.046	6.820	41.236	2.510
4	1.804	6.014	47.250	1.804	6.014	47.250	2.159
5	1.594	5.315	52.565	1.594	5.315	52.565	1.835
6	1.544	5.147	57.712				
7	1.281	4.271	61.983				
8	1.172	3.908	65.890				
9	1.044	3.481	69.371				
10	.992	3.307	72.678				
11	.911	3.038	75.716				
12	.760	2.533	78.249				
13	.716	2.388	80.637				
14	.652	2.175	82.812				
15	.562	1.875	84.686				

16	.559	1.863	86.550				
17	.481	1.604	88.153				
18	.443	1.478	89.631				
19	.407	1.357	90.988				
20	.396	1.320	92.308				
21	.361	1.203	93.511				
22	.325	1.084	94.595				
23	.305	1.015	95.610				
24	.264	.878	96.488				
25	.240	.801	97.289				

In total 52.6% of the variance is explained by the five factors extracted. The Eigenvalue 1 and above was considered for the factors to be extracted. The rotated component matrix based on varimax rotation was obtained.

Table 6. Rotated Component Matrix[a]

Factors	Component				
	1 SCC	2 IMG	3 IT	4 INN	5 PF
Interdependence	.772				
Long Term Contracts	.707				
Commitment	.619				
Motivation		.812			
Planning		.791			
Communication		.776			
Electronic Transactions			.873		
Electronic Data Exchange			.749		
Electronic Supply Chain Systems			.568		
Generation of New Ideas				.785	
Adaptation of New products				.672	
Adaptation of New processes				.552	
Sales growth					.652
Quality products					.591
Reduction in costs					.571

Accordingly, a total of 10 items were rejected: Under Supply Chain Collaboration (SCC); SCC4 and SCC5. Under Internal Management (IMG); IMG1and IMG2. Under Use of Information Technology (IT); IT1, and IT2. Under Innovation (INN); INN4 and INN4. Under SME performance (PF) PF1 and PF2. While a total of 15 items were retained and they included SCC1, SCC2 and SCC3; IMG3, IMG4 and IMG5; UIT3 UIT4 and UIT5; INN1, INN2 and INN3; PF3, PF4 and PF5 respectively as shown in table 6 above.

4.3 Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) is a diagnostic tool used for the development and refinement of measurement instruments, assessment of construct validity and identifying methods effects (Brown, 2006).
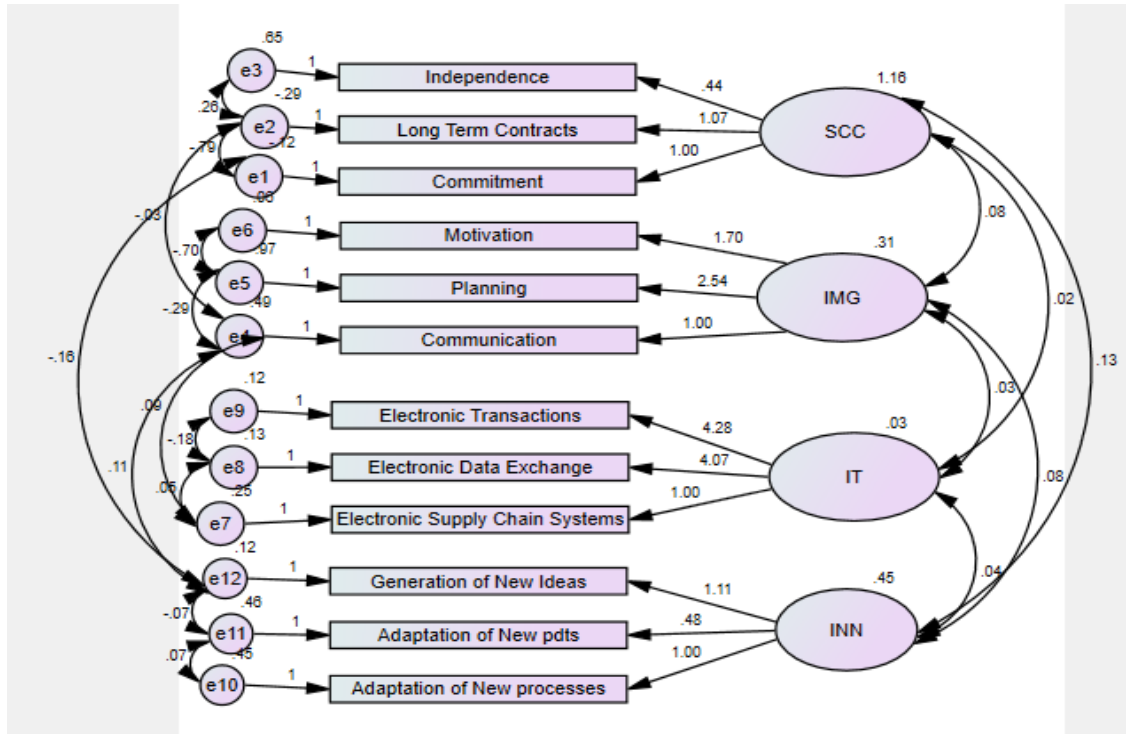

Figure 2. The Measurement Models for Independent Variable (Supply Chain Mgt Practices)

χ^2 = 29.811, *df* = 36, *p* = 0.000, GFI = .954, AGFI = .900, NFI = .900, TLI =. 1.02 CFI = 1.00, RMSEA = .000

From Figure 2, it can be concluded that there was strong convergent validity since the NFI = .940, a significant result was obtained with χ^2 = 29.811, *df* = 36, *p* = 0.000 < .005. However, the RMSEA = .000 indicated a good fit (MacCallum, et.al, 1996) since the conventional rule is that a RMSEA below .08 be obtained (MacCallum, et.al, 1996). The results further indicate that a GFI = .954 > .90 was obtained implying that the co-variances and the variances accounted for by the model was closely replicating the observed covariance matrix (Diamantopoulos and Siguaw, 2000). This was further supported by AGFI = .900 indicating good fit of the model (Hooper, Coughlan and Mullen, 2008). The study also indicates that the comparative fit indices NFI = .940, TLI = 1.026, CFI = 1.00 for the measurement model were suitable and demonstrated a good fit for acceptance since the values were greater than .90 as recommended by (Bentler and Bonnet, 1980; Hu and Bentler,1999).

4.4 Correlation Analysis

We used Pearson correlation coefficient to establish relationships between the study variables as hypothesized from literature review.

Table 7. Relationship between supply chain management practices and SME performance

	Mean	Std. Deviation	SCC	IMGT	UIT	INV	GSCMP	SME Perf.
SCC	3.19	.605	1					
IMGT	3.26	.608	.646**	1				
UIT	2.69	.451	.265**	.404**	1			
INV	2.73	.545	.265**	.221*	.153	1		
GSCMP	2.97	.393	.802**	.827**	.598**	.578**	1	
SME Performance	3.40	.916	.482**	.412**	-.070	.108	.362**	1

Results in Table 7 revealed a strong positive and significant relationship between supply chain management practices and SME performance. Specifically, the results denote solid association of supply chain collaboration with SME performance (r= .482**), internal management practices and performance of SMEs (r= .412**), innovative practices and SME performance (r= .108). The findings, however, have shown a negative relationship between use of information technology in supply chain management and SME performance (r= 0.-070).

4.5 Regression Analysis

Structural Equation Modeling was conducted using AMOS software in order to establish the predictive power of the independent variable on the dependent variable.
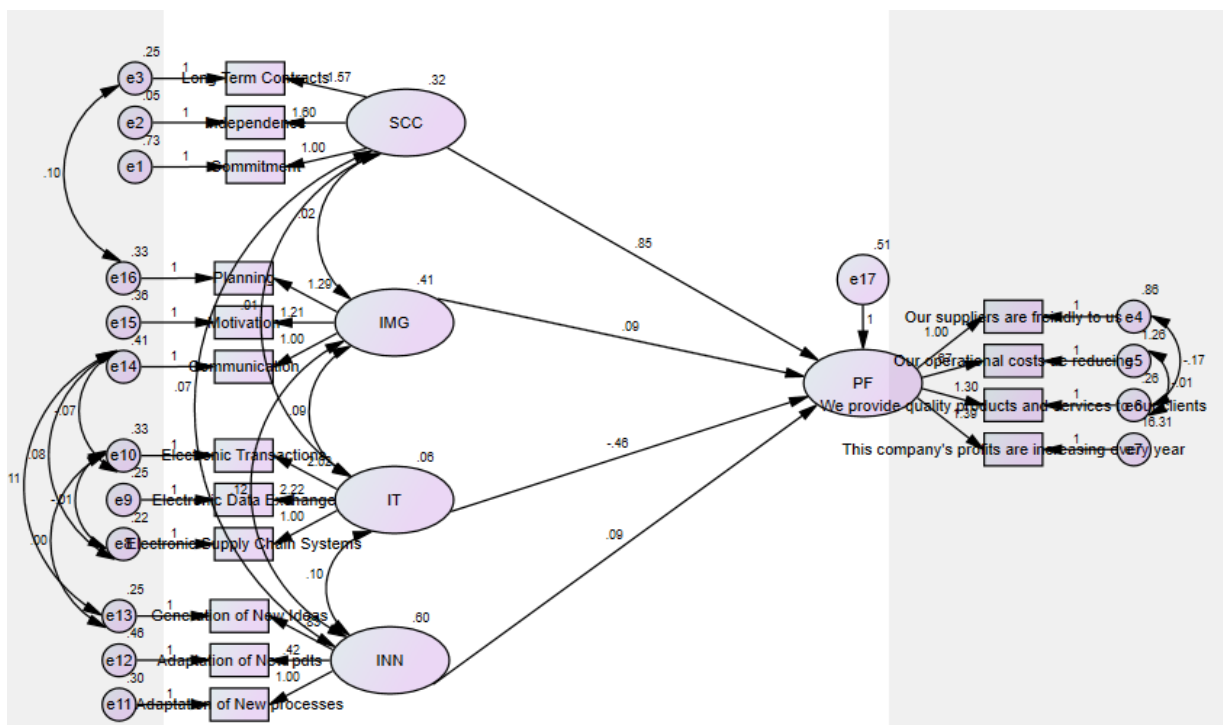

Figure 3. The Predictive Power of Supply Chain Management Variables on SME Performance

Table 8. Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P
PF	<---	SCC	.849	.243	3.489	***
PF	<---	IMG	.086	.197	.436	.663
PF	<---	IT	-.456	.681	-.669	.504
PF	<---	INN	.085	.153	.556	.578
COT	<---	SCC	1.000			
IDP	<---	SCC	1.599	.265	6.032	***
LTC	<---	SCC	1.566	.259	6.052	***
PF2	<---	PF	1.000			
PF3	<---	PF	.668	.249	2.686	.007
PF4	<---	PF	1.296	.286	4.532	***
PF5	<---	PF	1.390	.642	2.164	.030
ESC	<---	IT	1.000			
EDI	<---	IT	2.223	.634	3.509	***
ETS	<---	IT	2.018	.557	3.620	***
NPR	<---	INN	1.000			
ANP	<---	INN	.420	.109	3.839	***
GNI	<---	INN	.835	.153	5.444	***
CMN	<---	IMG	1.000			
MTV	<---	IMG	1.210	.175	6.919	***
PLN	<---	IMG	1.285	.183	7.041	***

The regression results indicated that supply chain collaboration was a significant predictor of SME performance. Specifically, both long term contracts and interdependence have a significant effect on SME performance (P=0.000<0.05). However, the results show that internal management (P=0.663>0.05), use of information technology (P=0.504>0.05), and innovation (P=0.578>0.05) are not significant predictors of SME performance.

Table 9. Decisions on the hypotheses

Label	Hypothesis	P-Value	Decision
H1	Supply chain collaboration is positively and significantly related to SME performance.	P=0.000<0.05	Accept
H2	There is a significant positive relationship between internal management and performance of SMEs.	P=0.663>0.05	Reject
H3	IT integration in SCM is positively and significantly related to SME performance.	P=0.504>0.05	Reject
H4	There is a significant positive relationship between Innovative SCM and performance of SMEs.	P=0.578>0.05	Reject

5. Discussion of Results

The results revealed a strong positive and significant relationship between supply chain management practices and SME performance. Specifically, the results denote solid association of supply chain collaboration with SME performance (r= .482**). This means that engaging supply chain participants in collaborative practices such as interdependence and long term contracts influences SMEs performance. This also implies that a unit change in supply chain collaboration leads to a unit change in SME performance. The results further designated significant relationship between internal management practices and performance of SMEs (r= .412**). This suggests that good internal management practices are highly associated with high SME performance. Similarly, a positive correlation between innovative practices and SME performance (r= .108). This shows a modest relationship between innovative practices and performance of SMEs. This implies that good innovative practices are associated with good performance levels. The findings however, have shown a negative relationship between use of information technology in supply chain management and SME performance (r= 0.-070). This shows that integration of IT in SCM is not associated with SME performance, and a unit change in IT use results into a negative change in SME performance.

In relation to the predictive power of the study variables, results have shown that supply chain collaboration (Table 8), is a significant predictor of SME performance (P=0.000<0.05), unlike internal management (P=0.663>0.05), use of information technology (P=0.504>0.05), and innovation (P=0.578>0.05) that are not a significant precursors of SME performance. This finding is consistent with Sanders (2014) who contents that firms that adopt supply chain collaboration stand to gain several benefits in terms of improved product quality, cost reduction, better risk management, demand planning and increased sales. Furthermore, the findings corroborate with Koh et al. (2011) who found that two classes of SCM practices (strategic collaboration and lean practices and outsourcing and multi-suppliers) have a direct positive and significant impact on the operational performance of SMEs. In respect of H1, which states that supply chain collaboration is positively and significantly related to SME performance, the study accepted the hypothesis and rejected H2, H3 and H4 respectively (Table 9). The study supports the transaction cost theory (Williamson, 1981) in explaining the need to reduce ever increasing costs by SMEs so as to better business performance.

6. Conclusion

This study sought to establish whether SME performance is influenced by supply chain management practices. Results have shown that supply chain management practices have an effect on SME performance. Specifically, the findings have indicated that supply chain collaboration as a construct of supply chain management practices is a significant predictor of SME performance at 85%. Therefore, owners and or managers of SMEs should embrace supply chain collaboration in order to improve their performance and survive in the contemporary business world.

The results from this study should be viewed as a contribution to the knowledge of supply chain management practices (SCMP) on the performance of small and medium enterprises (SMEs). SME owners and/or managers should develop a positive attitude towards supply chain management practices such as supply chain collaboration through interdependence and long term contracts so as to achieve desired SME performance since SMEs are great contributors to the Ugandan economy.

References

Abor, J., & Quartey, P. (2010). Issues in SME development in Ghana and South Africa. *International research journal of finance and economics*, *39*(6), 215-228.

Ageron, B., Lavastre, O., & Spalanzani, A. (2013). Innovative supply chain practices: the state of French companies. *Supply Chain Management: An International Journal*, *18*(3), 265-276. https://doi.org/10.1108/SCM-03-2012-0082.

Amabile, T. M. (1983). Social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology, 45*, 997-1013.

Bayraktar, E., Gunasekaran, A., Koh, S.C.L., & Tatoglu, E. (2010). An efficiency comparison of supply chain management and information systems practices: a study of Turkish and Bulgarian small- and medium-sized enterprises in food products and beverages. *International Journal of Production Research, 48*(2), 425-451.

Calia, R. C., & Guerini, F.B. (2007). Innovation networks: from technological development to business model reconfiguration. *Technovation, 27*(8), 426-432.

Cao, M., & Zhang, Q. (2011). Supply chain collaboration: impact on collaborative advantage and firm performance, *Journal of Operations Management*, *29*(3), 163-180. https://doi.org/10.1007/978-1-4471-4591-2_2

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.

Gitman, L. (2011). *Principles of Managerial Finance.* 10th Ed., Addison, Wesley Publishing, 2003, ISBN 0-201-78479-3.

Golgeci, I., & Ponomarov, S. Y. (2013). Does firm innovativeness enable effective responses to supply chain disruptions？ *An empirical study, 6(August),* 604–617. https://doi.org/10.1108/SCM-10-2012-0331.

Karimi, E., & Rafiee, M. (2014). Analyzing the Impact of Supply Chain Management Practices on Organizational Performance through Competitive Priorities (Case Study: Iran Pumps Company). *International Journal of Academic Research in Accounting, Finance and Management Science*, *4*(1), 1-15.

Koh, S., Demirbag, M., Bayraktar, E., Tatoglu, E., & Zaim, S. (2007). The impact of supply chain management practices on performance of SMEs. *Industrial Management & Data*

Systems, *107*(1), 103. https://doi.org/10.1108/02635570710719089

Lai, P. C., & Zainal, A. A. (2015). Perceived Risk as an Extension to TAM Model: Consumers' Intention to Use a Single Platform E-Payment. *Australia Journal Basic and Applied Science*, *9*(2), 323-330. https://doi.org/10.4301/S1807-1775217000100002

Lee, S. M., Lee, D., & Schniederjans, M. J. (2011). Supply chain innovation and organizational performance in the healthcare industry. *International Journal of Operations & Production Management, 13*(11), 1193–1214.

Ministry of Finance, Planning and Economic Development. (2015). Enhancing the Competitiveness of Micro, Small and Medium Enterprise (MSMEs) in Uganda.

Mugenda, A.G. (2008). *Social Science Research.* Nairobi: Acts Press.

Mutesigensi et al. (2017). Cash flow and survival of SMEs in Arua district, west Nile region, Uganda: *international journal of small business and entrepreneurship research,* 5(5), 9-18.

Nguyen, K. M. (2001). Financial Management Practices and Profitability of Small and Medium Enterprises. Australia.

Olutayo et al., (2015). Growth and internationalization of small enterprises in Kampala District, Uganda. *World Journal of Social Sciences*, *2*(7), 211-221.

Quayle, M. (2003). A study of supply chain management practice in UK industrial SMEs. *Supply Chain Management: An International Journal*, 8(1), 79-86.

Sanders, N. R. (2014). Pattern of information technology use: the impact of buyer-supplier coordination and performance. *Journal of Operations Management*, *26*(3), 349-67.

Schotanus, F., Telgen, J., & de Boer, L. (2010). Critical success factors for managing purchasing groups. *Journal of purchasing and supply management*, *16*(1), 51-60.

Sebikari, K. V. (2014a). Critical Analysis of the obstacles to business creativity among Small and Medium Enterprises in Rwanda. *Journal of Developing Country Studies, 4*(10), 49-54.

Shalley, C. E., & Zhou, J. (2010). Organizational creativity research: A historical overview. In C. E. Lawrence Erlbaum.

Singhry, H. B., Abd Rahman, A., & Imm, N. S. (2014). The Potential Moderating Role of Supply Chain Capabilities on the Relationship between Supply Chain Technology and Concurrent Engineering in Product Design. *Int. J Sup. Chain. Mgt, 3*(2), 132–139.

Stank, P., Emmelhainz, A., & Daugherty, J. (2006). The impact of information on supplier performance. *Journal of Marketing Theory & Practice*, *4*(4), 94-105.

Tippins, M. J., & Sohi, R. S. (2003). IT competency and firm performance: is organizational learning a missing link?. *Strategic management journal*, *24*(8), 745-761.

Turyahebwa, A., & Ssekajugo, D. (2013). Financial management practices and business

performance of small and medium enterprises in western Uganda: *African Journal of Business Management, 7*(38), 3875-3885. https://doi.org/10.5897/AJBM2013.6899

Uganda Bureau of Statistics (UBOS) (2016). Business Register Update.

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management science*, *46*(2), 186-204.

Whipple, J. M., & Russell, D. (2007). Building supply chain collaboration: a typology of collaborative approaches. *The International Journal of Logistics Management*, *18*(2), 174-196.

Williamson, O. E. (1996). The Mechanisms of Governance. Oxford: Oxford University Press.

Wisner, J. D. (2003). A structural equation model of supply chain management strategies and firm performance. *Journal of Business Logistics*, *24*(1), 1-26.

Copyright