Supplier Alliances in Public Procurement Context of a Developing Country; Case Study of the National Agricultural Research Organization- NARO Uganda

Terry Ronny, Namuganyi Ateker, Alex Nduhura, John Paul Settumba, Benedict Mugerwa, Paul Wanume, Fred Ntambi

Uganda Management Institute

Abstract

This paper empirically investigates the implementation of Supplier Alliances in the public sector in developing countries using a case study of Uganda. Data were collected from experienced procurement practitioners in Uganda. Seventy-nine respondents participated in the study. Questionnaires and interview guides were administered to collect quantitative and qualitative data respectively. The results indicate that Supplier Alliances have been implemented in the public sector and private sector. This study reveals that the approaches for Supplier Alliances have had some similarities and differences. Advance payments, prompt payments, and training are key attributes of alliances in public sector procurement while joint specification development, mutual setting of costs and quality targets are rare despite being popular in the private sector. The findings of this study contribute to knowledge of the best practices of Supplier Alliances in the public sector. In addition, bidders and public entities would be informed of the appropriate measures to adopt when engaging in Supplier Alliances arrangements in any part of the world, whether in a developing or developed economy.

Keywords: **Supplier Alliances, organizational performance, public sector and private sector**

Introduction

There is a growing demand to deliver efficient and effective service delivery in the public sector context (Schedler & Proeller 2000; Lane,2002; O'Flynn, 2007; Reiter & Klenk,2019; Göçoğlu,2021). Public sector organizations are exploring implementing a range of initiatives to respond to citizens' demands. One of the approaches being adopted by some organizations is establishing alliances with suppliers. Alliances are viewed as an integral part of any organization that seeks to remain attractive to stakeholders and perhaps competitive in the market (Pratono, & Ratih,2019). The idea of the need to ally in the delivery of services either in the public, private, or third sector is motivated by the scarcity of resources and limitations in capabilities that organizations possess. Globally, alliances are viewed as a key goal that must be achieved in pursuit of a sustainable world. According to UN (2010), Sustainable Development Goal 17 (SDG 17) seeks to concentrate on partnerships (United Nations, 2010). Applied in procurement and supply, partnerships are exhibited in Supplier Alliances.

Defining Supplier Alliances is quite diverse. In this paper, we use the term Supplier Alliances as adopted in a procurement and supply context. Pyke and Johnson (2004) define Supplier Alliances as a relationship between two trading partners that entails multifunctional interaction – from engineering and marketing to production planning, inventory and quality management. This definition is reflected in the works of Wheelen and Hangar (2000) who define Supplier Alliances as an understanding forming an agreement by firms to execute multilateral business dealings. The agreement made may include equity swaps, longer tenure of contracts in exchange for a reliable source of supply, or exclusive guarantees of supplies.

Certainly, countries that have successfully implemented alliances with suppliers have benefited hugely in terms of cost, quality, and time (Sodhi & Tang,2020). Specifically, it is revealed that Supplier Alliances between the United States government and Venter Motors GM enabled quicker production of ventilators in response to the Covid 19 pandemic that hit the world from 2019 to date. While Supplier Alliances are usually part of an organization's long-term planning approach, contingent alliances like those reached during Covid-19 period are deemed temporary (Sodhi et al.,2019).

Existing strategies indicate that Supplier Alliances have been majorly in the automobile industry. The canonical studies have specifically suggested that Supplier Alliances are synonymous with Toyota's manufacturing philosophy (Nishiguchi & Beaudet, 1998). With historical dominance in Japan, Nishiguchi et al., (1998) opine that the concept of Supplier Alliances became an attractive management practice in the USA and other parts of the world.

Earlier studies indicate that the intensity of Supplier Alliances has been dominant in the manufacturing industry (Lazzarini, Claro & Mesquita, 2008). The forms in which Supplier Alliances have been implemented have been diverse. According to Stuart & McCutcheon (1996) outsourcing has been a major avenue through which Supplier Alliances are implemented. Through outsourcing, arrangement organizations identify non-core activities, where they lack expertise, and choose to contract out the operations of such activities with specialist third-party providers. This creates a hybrid network structure within which products that are consumed by customers are produced. Vollman and Cordon (1998) suggest that Supplier Alliances have been largely implemented to achieve benefits from the synergy that would not have been achieved when organizations operate independently. Bouncken, Ratzmann, Barwinski, and Covin (2020) further note that Supplier Alliances have been adopted to develop synergy but specifically for new product development. Studies by Lazzarini, Claro, and Mesquita (2008) further indicate that Supplier Alliances nurture learning and exchange efficiencies.

A recent empirical study of 279 firms in Europe by Bouncken et al., (2020) confirms mutual knowledge in the co-development of specifications for new results in the development of superior products. Such studies and more prompt the need to explore the implementation and likely benefits that organizations in the public sector can secure from the design and implementation of Supplier Alliances. While the Supplier Alliances have been researched independently, this paper seeks to anchor alliances on category management as a basis for the determination of types of suppliers, and their characteristics that later inform the choice of the appropriate vendor to engage in a Supplier Alliances relationship.

Although scholars have increasingly recognized the importance and implementation of Supplier Alliances, most studies have been focused on the private sector and not the public sector. This paper provides a discussion of the application of Supplier Alliances, detailing the challenges of implementation and recommendations for managing Supplier Alliances in a public sector context.

Additionally, the motivation for Supplier Alliances has been the need to cut costs and improve quality, delivery performance and agility for new product development (Pyke et al.,2004; Carmeli, Markman, Zivan & Gomes, 2021). In earlier studies, Stafford (1994) views Supplier Alliances as a cooperative arrangement between firms and suppliers aimed at procuring critical resources, developing new products and technologies and tapping new markets. From a general management perspective, Helms (2021) views Supplier Alliances as arrangements among companies to cooperate for supply purposes (Helms,2021:384). In this context, it is opined that organizations enter joint Supplier relationships in several forms including mergers and acquisitions to subdue extreme competition and a rapid pace of change that may not be managed in a silo. In essence, Supplier Alliances are adopted by organizations that come together to build synergies to cause some form of stability in their operations and environment.

It is noted that as firms engage in international complex environments, success is achieved through Supplier Alliances (Helms, 2021). Supplier Alliances have also grown from outsourcing to now public-private-public partnerships which are a strategic procurement method that is adopted for the procurement of complex infrastructure and services (Nduhura, 2019). Supplier Alliances may take several forms including design collaboration, product, joint marketing and selling, new product development, and research and development contracts among others (Coopers and Lybrand,1997). Accordingly, this scope of collaboration might explain the revelation by Elmuti and Kathwala (2001) of the none ownership of factories by leading global brands like Nike, an athletic shoe maker, and Gallo, perceived to be the world's largest winery brand.

Theoretical orientation

The study adopts a network theory. In the theory, a network is viewed to consist of a set of actors or nodes and a set of ties of a specified type such as friendship, that link them. Network theory refers to the "mechanisms and processes that interrelate with network structures to yield certain outcomes for individuals and groups (Brass ,2002). It has been argued that much of the theoretical wealth of network analysis consists of characterizing network structures (for example small-worldness) and node positions (Sparrowe, Liden, Wayne, Kraimer,2001; Borgati and Halgin,2011). Borgati et al., (2011) assert that the network theory is rooted in social sciences and is becoming popular in life sciences such as physics, epidemiology, and biology (Borgati et al.,2011). In other sectors, networks have been viewed with diversity. In management consulting, networks are used as a basis for analyzing client organizations' problems and opportunities (Bargoti et al,2011) hence networks have become standard diagnostic and prescriptive methods (Anklam,2007). Elsewhere for instance in management studies, networks are adopted to explain performance matters among organizations in terms of job performance, turnover, innovation, and new product development (Brass,1999).

While the organizational behavior and development context, networks have been adopted in understanding unethical behavior in organizational activities(Brass,1999).

The basis for the adoption of network theory in the study of Supplier Alliances and procurement performance is justified by Krackhardt and Porter (1985), Kilduff and Krackhardt (1994), Burt (2002), Obstfeld (2005) and Borgati et al., (2011) who link networks to measures of organizational performance which is aligned with the measure of procurement performance namely, creativity and innovation. Partially, the study recognizes works on networks by Helms (2021) who notes that as the business environment becomes complex, organizations must define and engage in networks or form alliances that can support creation of stability in their work environment. We conceptualize networks as suppliers that possess unique competencies, information, talent, and resources that would be mutually beneficial to the buying organizations. We further conceptualize the buying organization as an alliance partner and exhibit opportunities such as brand name, strong cash flows, ethical business practices and guarantee of business opportunities for potential suppliers that wish to form Supplier Alliances. We are cognizant that while Supplier Alliances provide advantages, they at the same time expose alliance partners to risks. To turn the risks into advantages, the paper assumes that alliance partners design approaches and focus on a range of issues to curtail potential demerits.

Study Objectives

The study aimed at:

a) Establishing the scope of Supplier Alliances in the public sector

b) Establishing the role of Supplier Alliances in improving procurement performance

c) Identifying critical success factors for Supplier Alliances

Literature review

Nature of Supplier Alliances in procurement and supply context

Supplier Alliances are enabled by the effective collaboration of which Monczka, Trent, and Handfield (1998) perceive collaboration as the process by which partners adopt a high level of purposeful cooperation to maintain a trading relationship over time. The relationship is bilateral; both parties have the power to shape their nature and future direction over time. Mutual commitment to the future and a balanced power relationship are essential to the process (Gallear, Ghobadian, He, Kumar & Hitt (2021). Muthusamy & Dass (2021) take a more supplier synthesis by advocating for horizontal relationships arguing that cooperation can deliver superior performance for organizations that collaborate rather than compete or operate and remain rivals in supply chains.

The supply chain members may coordinate by joint consideration of the system-wide costs, sharing cost and price information, synchronizing order processing time and networked inventory management information systems which may result in reduction of ordering cost, holding cost, procurement cost, supply chain system-wide costs and

improvement in customer service level, product availability and product variety (Barron, 2007; Piplani and Fu, 2005). Similarly, Huttinger, Schiele, and Schroer (2014) examined the factors that influence a supplier's choice to treat selected customers more preferentially than others and found that the growth opportunities for suppliers and customers' operative excellence, reliability and relational behavior are factors that induce to award preferential customer treatment. In contrast, innovation potential for suppliers, customers' support of suppliers, supplier involvement and contact accessibility do not show a significant effect on suppliers' behavioral intentions toward preferential customer treatment.

Risks associated with Supplier Alliances

Literature has largely focused on benefits, critical success factors, and the formation of Supplier Alliances. In this paper, we recognize that while Supplier Alliances can provide benefits to alliance partners, such relationships may also have associated shortfalls and risks. Pyke et al., (2004) indicate that when power is not balanced, one party may benefit more than the other thus risking withdrawal. Elimuti et al (2011) cite several challenges and risks that parties to a Supplier Alliances are prone to. It is asserted that a mismatch of culture, arising due to different personality traits of frontline alliances tends to frustrate the growth of alliances.

Similarly, it is asserted that a relational partner may turn into a competitor. This arises due to a temptation to share information with a partner that may at times be confidential. It is also suggested that way into the relationship a partner may withdraw from the alliance on perceiving the other partner as a competitor leading to loss of resources invested in establishing the relationship, exposing the organization to unnecessary switching costs and risks such as retendering costs in search of an alternative partner, meeting learning costs and risks when a new partner is identified and introducing reputational risk associated with failure of the alliance (Elimuti et al,2011). Earlier, Das and Teng (1999) argued that issues related to the environment may result in performance risks and negatively affect the strides in procurement performance achieved by the buying organization.

Das and Teng (1999) indicated that factors such as government regulations, lack of competence in some scope, competition, bad luck, and strikes may affect the performance of alliance partners. Additionally, unforeseen emergencies such as the advent of COVID-19 pandemic may affect suppliers across the world due to national and international restrictions that complicate movement and access to clients. Recent literature on risks in PPPs procurement a method of Supplier Alliances in procurement and supply points to the information asymmetry risk. The risk occurs when an alliance partner is more knowledgeable about the object of the alliance. This results in unfair negotiations where one party loses at the expense of another party winning simply because they have more information than the other party to influence the negotiation outcome (Jamali, 2004; Nduhura, 2019; Dolla and Laishram, 2020).

Critical success factors for Supplier Alliances

Rashed, Azeem, and Halim (2010) examined the combined consequence of information and knowledge sharing on supplier's operational performance through a supplier-buyer relationship and found that information sharing during joint planning is a prerequisite for knowledge sharing and the close supplier-buyer relationship is a vital factor for escalating the supplier's operational performance. Perez, Whitelock, and Florin (2013) equally examined

alliance outcomes and found that alliance inception, joint- learning, specialization, and discovery constitute sequences of increasing understanding, cooperation, and higher-order learning between the partners; evolving from an exchange of existing knowledge to the joint development of new knowledge.

In the context of business-to-business relationships, the study recommends that Supplier Alliances should involve learning about customers, interacting with customers, instituting customer-specific investments, and co- developing breakthrough innovations. In complement, Hill and Omar (2006) indicate that coordination among supply chain members jointly minimizes the operating costs arising from shared benefits after jointly planning the production and scheduling policies. Arshinder (2008a) equally supports the role of joint planning and collaboration in the supply chain and proposes that supply chain coordination is a vehicle to redesign decision rights, workflow, and resources between chain members to leverage better performance such as higher profit margins, improved customer service performance, and faster response time.

Arshinder et.al., (2011b) support the importance of Supplier Alliances and opines that benefits such as elimination of excess inventory, reduction of lead times, increased sales, improved customer service, efficient product developments efforts, low manufacturing costs, increased flexibility to cope with high demand uncertainty, increased customer retention and revenue enhancements may accrue from the use of joint planning with key suppliers. Some case studies have been carried out to establish how Supplier Alliances can contribute to procurement performance. In concert with practice, Sheth and Sharma (1997) note that allying with suppliers enables organizations to safeguard sources of supply and enhance competitive positions, citing examples or organizations like Xerox, General Motors, Niemen Marcus, and Black & Decker. For this reason, such organizations have been argued to have shifted from transactional relationships to closer relationships where suppliers are viewed as partners rather than providers of input.

Larson (1994) had earlier noted that establishing long-term relationships with key suppliers can lead to an improved firm's financial performance yet procurement coordination of the firm's activities with key suppliers can impact total costs. Dawes (2008) equally describes a continuum of different types of buyer-supplier relationships and reports that the Japanese auto firms cultivate their suppliers through investments, sharing of knowledge, and joint problem-solving. Filho et al. (2008) analyzed the extent of supplier alignment in the Brazilian automotive chain by examining the strategies adopted by the procurement function to manage relationships with suppliers.

Concerning supplier development research, Krause, Handfield, Scannell, (1998a) and Wagner and Krause(2009b) suggest support from top management and proactive procurement management are key factors in the success of these supplier development programs. The findings by Giannakis (2008) concluded that there is a significant positive relationship between supplier development strength and procurement performance. The implication was that a long-term partnership was found to be a significant predictor of performance improvement. Rhodes and Carter (2006) identify some pitfalls in supplier development that need to be avoided such as lack of supplier commitment, insufficient supplier resources, lack of trust, poor alignment of

organizational cultures, insufficient inducements to the supplier as well as unsupportive managers.

Methodology

A cross-sectional design was adopted because the issues of Supplier Alliances and procurement performance were to be studied then (Amin, 2005). The choice of the qualitative approach is justified by Amin (2005). The design is adopted since it provides in-depth explanations of Supplier Alliances and procurement performance while quantitative methods provided the numeric data needed to meet the study objectives and to test the hypotheses using analytical techniques.

Sampling

The study was carried out in the National Research and Agricultural Organization (NARO) Secretariat among staff in its National Agricultural Research Institutes (NARIs) and Zonal Agricultural Research and Development Institutes (ZARDIs) with a target population of 79 respondents. These included Accounting Officers, Contracts committee, subcontracts committees, Procurement and Disposal Unit (PDU) and heads of NARIs and ZARDIs. This population was considered because they are responsible at the supplier, operational and tactical levels and were thus considered knowledgeable about the contribution of Supplier Alliances and procurement performance in the entity. Out of the 86 participants,79 participants were selected to participate in this study guided by a framework for sampling developed by Krejcie and Morgan (1970) and as per the description provided in Table 1 below.

Table 1: Study population and sample size

Population category	Total Population	Sample size	Sampling Techniques
Accounting officer	1	1	Purposive
Contracts committee	5	5	Purposive
Sub Contracts Committees	55	48	Simple random
for 11 sub-stations.			
PDU	3	3	Purposive
User departments Head	7	7	Purposive
NARIs	6	6	Purposive
ZARDIs	9	9	Purposive
Total	**86**	**79**	

Source: Authors (2020)

Both purposive and random sampling techniques were used to select study participants. Simple random sampling was used to select participants from the populations in such a way that samples of the same size have equal chances of being selected (Amin, 2005). In using simple random sampling, the lottery approach was applied. Names of members in each category were written on the tag and one picked at a time until the required number was reached and adopted. Purposive sampling was used to select the rest of the

participants due to specific and unique information they access, alongside specific roles and responsibilities performed in public procurement in such a public agency. In addition, purposively selected participants were chosen to participate in the study due to their elevated judgement regarding respondents' possession of managerial and operational information on Supplier Alliances and procurement performance. The purposive sampling technique was used to select the remaining categories of respondents who possess managerial and operational knowledge of Supplier Alliances (SA) in the NARO.

Data Collection

Questionnaire

A questionnaire approach was utilized because it is less expensive for data collection (Amin, 2005) and can collect vast amounts of data in a short period. The use of a self-administered questionnaire according to Sekaran (2003) is appropriate because it enables the respondents to the answer with ease, protected from the likely influence of the researcher. The questionnaire was used to collect primary data from the selected respondents by the researcher personally delivering them to the respondents' offices. The questionnaire was issued to 79 respondents in their different categories. The respondents recorded their answers within closely defined alternatives.

Interview guide

Under the interview method, the interview guide was used to obtain in-depth information from the targeted interviewees by way of face-to-face conversations and probing to obtain deeper information about Supplier Alliances (SA) and procurement performance as suggested by Amin (2005). The study specifically interviewed the procurement and disposal unit (PDU) team. The choice of this stratum of respondents is informed by their involvement in supplier development and organizational partnerships.

Data Analysis

Quantitative data was entered, coded and statistics generated with the aid of the Statistical Package for Social Scientists (SPSS) Version 24 (SPSS Inc. Chicago, Illinois, USA). We derived results that are presented in tables in both percentages and numbers. The relationships between variables are determined by the use of a chi-squares test with a p-value < 0.05 as a representative of statistically significant relationship among variables. Qualitative data was analyzed using the content analysis technique. Using this approach, we organized narrative statements and responses to generate useful conclusions and interpretations on Supplier Alliances and procurement performance. This involved coding data, and identifying categories and patterns that emerge in the responses on Supplier Alliances and procurement performance. The further qualitative analysis involved comparing the qualitative data with the quantitative data for commonalities or differences. The outcome of qualitative analysis is compared with quantitative data to form our opinions.

Results and discussion

As described in the summary of findings below, Supplier Alliances exist in the public sector but have not been documented. What will be shown is that the implementation of Supplier Alliances in the public sector quite differs from existing private sector practices but some similarities exist not only in the execution practices but also in the benefits and challenges faced.

Scope and implementation of Supplier Alliances

The first objective of the study was to establish the scope of Supplier Alliances in the public sector.

Table 2 presents analysis of data collected from questionnaires and interviews.

Table 2: Supplier Alliances and procurement performance in a public sector context

	Strategic alliance	MEAN	S.D
Joint	*Planning*		
1.	NARO engages its strategic suppliers in identifying its annual strategic	2.38	1.258
	procurement requirements		
2.	NARO engages its strategic suppliers in the development of	2.41	1.225
	procurement specifications		
3.	NARO engages its strategic suppliers in scheduling annual strategic	3.97	.772
	procurement requirements		
4.	NARO engages its strategic suppliers in identifying distribution/	3.88	.783
	delivery centers		
5.	NARO engages its strategic suppliers in identifying procurement	3.65	1.182
	support services required to meet procurement objectives		
Supplier development			
6.	NARO undertakes to increase the technical capabilities of its strategic	2.37	1.292
	supplies partners to meet its supply needs		
7.	NARO undertakes to increase the quality capabilities of its strategic	2.29	1.210
	supplies partners to meet its supply needs		
8.	NARO undertakes to increase the delivery capabilities of its strategic	3.88	1.100
	supplies partners to meet its supply needs		
9.	NARO undertakes to increase the cost management capabilities of its	2.10	.883
	strategic supplies partners to meet its supply needs		
10.	Supplier development has helped develop long-term mutual	3.62	1.008
	relationships between national agricultural research organizations and		
	its strategic partners		

Source: Authors (2020)

Table 2 highlights the constructs associated with the earlier conceptualization of Supplier Alliances. The table indicates that two major indicators of joint planning and supplier development were measured using 10 items scored on a five-point Likert scale ranging from (5) = Strongly Agreed, (4) = Agree, (3) = Not Sure, (2) = Disagree, (1) = Strongly Disagree and the findings are presented in Table 3 which uses descriptive statistics of mean and standard deviation. The findings indicate that the respondents disagreed with the involvement of supplier tires in; identifying annual supplier procurement requirements (mean = 2.38) and development of procurement specifications (mean = 2.41). The respondents however agreed that engagement of supplier tires in scheduling annual requirements (mean 3.97), distribution/ delivery centers (mean = 3.88), and procurement support services like transport logistics (mean = 3.65). These findings revealed there exists limited joint planning in the identification and development of specifications between NARO and its Supplier tires.

NARO only involved its supplier tires in supply scheduling, delivery centers, and procurement support services to meet the objectives of the procurement. Table 3 indicates that whereas the respondents agreed with NARO support to Supplier tires in increasing delivery capacity (mean = 3.88) and development of long-term mutual relationships (mean 3.62), they disagreed with the development of supplier technical (mean 2.37), quality (mean 2.29), and cost management capabilities (mean = 2.10). These findings revealed a low level of supplier development as NARO did not engage in the development of the supplier's technical, quality, and cost management capabilities. NARO only undertook to increase the delivery capabilities and development of long-term mutual capabilities. This contradicts earlier studies on Supplier Alliances that promoted both joint planning and supplier development as key constructs of supplier development practices in the private sector (Toyota Motor Corporation,2005; Wilhelm and Kohlbacher, 2011; Kumar, Banerjee, Meena, and Ganguly, 2017a);2017b; Munyimi and Chari,2018; de Man and Luvison, 2019).

Challenges faced in implementing Supplier Alliances

Asked about the challenges in using Supplier Alliances with suppliers, the head PDU noted:

> *NARO at a minimal level engages in supplier development for key inputs like equipment, reagents, and material for conducting scientific research which is highly specialized. In a few cases, we also engage our technology distributors like AT-Uganda and Victoria seeds to ensure the diffusion of agriculture technology. The challenge however is that the partner's budgets are not so huge that we cannot support them and we always advise them on the technical aspects in the event of defects detected in the technology being diffused in the communities. The law also demands that we engage in supplier development at a very minimal level and only if economic conditions demand that we advance them some payments at the initiation of the procurement.*

The statement implies that the major challenge faced in Supplier Alliances is the limited funds to support suppliers in areas of finance. This view is contrary to challenges faced in the private sector where firms have invested millions of dollars in suppliers.

Shrestha et al (1998) mention cross-cultural values as part of the challenges. Citing long-term benefits versus short-term benefit orientation from supplier relationships, it is opined that

while the buying organizations may focus on long-term benefits, suppliers tend to focus on short-term gains which complicate the motivation for Supplier Alliances.

In other studies, (McShea, 1999), it is opined that Supplier Alliances are highly regulated by competition acts that define the extent the intensity of the alliance. Findings from the study indicate that in developing countries, laws and regulations may not be a hindrance but rather remain a hindrance in the developed world and in specific countries such as the United Kingdom, Canada, and the USA (McShea, 1999).

Studies by Simpson and Power (2005), Wilding, Wagner, and Gimenez (2012) have indicated that suppliers are developed for greening supply chains. At NARO, we find that the focus of alliances has been majorly on joint planning and supplier development on matters of boosting technical capacity rather than building sustainability in the supply chain.

Role of Supplier Alliances in improving procurement performance

To test if there was a relationship between Supplier Alliances and procurement performance in NARO, a correlation analysis was conducted using Pearson's correlation coefficient and significance statistics, and the findings are presented in Table 3.

Table 3: Correlation Results between Supplier Alliances and Procurement Performance

		Strategic alliance	Procurement
			Performance
Strategic alliance	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	89	
ProcurementPerformance	Pearson Correlation	.309*	1
	Sig. (2-tailed)	.010	
	N	68	68

**. Correlation is significant at the 0.01 level (2-tailed). P ≤ 0.05

Source: Authors (2020)

Table 3, shows the Pearson's correlation coefficient r = 0.309* between Supplier Alliances and procurement performance suggesting that the two variables had a positive significant relationship. The r = 0.309* and significance p = 0.010 between Supplier Alliances and procurement performance suggests that there was a moderate positive significant relationship between Supplier Alliances and procurement performance. The managerial implication was that the attainment of procurement agility, value for money, and internal customer satisfaction with the procurement function significantly depends on joint planning and supplier development. The failure to engage in joint planning and supplier development considerations of SA adversely affects procurement performance in NARO.

Table 4: Multiple regression results

	Model Summary						
		Square	Square	the Estimate			
1	.779a	.607	.589	.49559			
			Unstandardized		Standardized		
			Coefficients		Coefficients		
			B	Std. Error	Beta(P)		
1	(Constant)		.960	.511		1.878	.065
	Strategic Alliances		.266	.122	.235	2.188	.032
	Communication management		.565	.145	.363	3.885	.000

a. Predictors: (Constant), Performance management, Communication, Strategic Alliances

b. Dependent Variable: Procurement Performance $P \leq 0.05$

Source: Primary data

Table 4 above shows adjusted R2 of 0.589 or 60% which was the variance in procurement performance explained by Performance management, communication and Supplier Alliances putting into consideration all the variables and the sample size of the study. The remaining variance of 40% was explained by other factors other than SA dimensions of Supplier Alliances, communication, and performance management. The standardized coefficient statistics revealed that supplier performance management was the most significant predictor of the variance in procurement performance (β=0.638, t = 6.099, p =0.000) followed by communication (β= 0.363, t = 3.885, p=0.000). Supplier Alliances was the least significant predictor of the variance in procurement performance in the entity (β=0.235, t = 2.188, p= 0.032). The implication was that priority should be given to supplier performance management considerations of setting performance indicators, monitoring and evaluating supplier performance. The second priority should go to strengthening formal and informal communication while the third priority should be strengthening Supplier Alliances through joint planning and supplier development.

Our initial hypothesis was that there is a significant relationship between Supplier Alliances and procurement performance at NARO. Based on the standardized coefficient statistics, the Supplier Alliances yielded a standardized β value of 0.235 and t value of 2.188 with a significance of 0.032, suggesting that the Supplier Alliances was a significant predictor of the variance in procurement performance at NARO. The hypothesis that there is a significant positive relationship between Supplier Alliances and procurement performance in NARO is upheld.

There was a moderately significant relationship between Supplier Alliances and procurement performance in NARO implying that failure to engage in joint planning and supplier development considerations of Supplier Alliances adversely affects procurement performance in NARO. NARO needed to undertake to engage in joint planning and supplier development for enhanced procurement performance. This study's findings relate to Williamson (1979) TCE theory which contends that firms enter alliances to minimize the sum of transaction costs and production costs.

Blomqvist, Kyläheiko, and Virolainen (2002) building on TCE, note that partnering firms need to effectively manage the relationships with their partners if they are to enjoy cost reduction and meet the objectives of partnering. Partnering according to Pfeffer and Salancik (1978a) indicates that in SA, firms share resources possessed by other organizations thereby gaining a competitive advantage.

Existing empirical studies confirm the impact of Supplier Alliances and positive outcomes. Rashed, et al (2010) found that information sharing during joint planning is a prerequisite for knowledge sharing and the close supplier-buyer relationship is a vital factor for escalating the supplier's operational performance. Perez et al., (2013) equally found that alliance inception, joint- learning, specialization, and discovery constitute sequences of increasing understanding, cooperation, and higher supply chain performance. The study affirms that any efforts directed at strengthening Supplier Alliances through joint planning and supplier development will enhance procurement performance in NARO.

Generally, the study found limited joint planning in the identification and development of specifications between NARO and its supplier. This is contrary to studies of supplier development practices in the private sector, where buyers and suppliers are usually involved in the co-development of specifications, especially for new or complex project requirements. Certainly, organizations that have developed specifications for complex procurement have reduced the potential for quality defects. While NARO may not have faced quality defects, it remains vulnerable to quality risks when it does not involve suppliers in joint specification development for complex first-time procurements.

Additionally, the study further reveals that NARO involved suppliers in scheduling, determining location delivery centers, and procurement support services to meet the objectives of the procurement.

Statements such as; "by involving suppliers in scheduling, where able to ensure timely deliveries as out time schedules synchronized with supplier schedules" were popular. This indicates that to ensure the accurate setting of delivery schedules, suppliers' input is vital. This is important since part of what NARO procures are seedlings that are planted based on seasons. Any delay to supply may imply that seeds provided to farmers may become obsolete if time schedules are not synchronized.

There was a low level of supplier development as NARO did not engage in the development of the supplier's technical, quality, and cost management capabilities. NARO only undertook to increase the delivery capabilities and development of long-term mutual capabilities. While NARO has been able to achieve some performance, existing studies indicate that engaging suppliers in cost reduction, and quality initiatives organizations can improve quality and deliver cost savings. This implies that NARO could be missing quality and cost optimization benefits that would be derived from the engagement of suppliers in quality and cost initiatives.

There was a moderately significant relationship between Supplier Alliances and procurement performance in NARO ($r = 0.309^*$ and significance $p = 0.010$) and it was the least significant predictor of the variance in procurement performance at NARO ($\beta = 0.235$, $t = 2.188$. sig. $= 0.032$).

Therefore, the hypothesis that there is a significant positive relationship between Supplier Alliances and procurement performance in NARO was upheld.

Conclusion

The findings demonstrate that Supplier Alliances are applicable to the public sector context. However, some variants exist in the application of Supplier Alliances when compared to their application in the private sector. Approaches to Supplier Alliances such as joint planning and supplier development were absent and not utilized yet the same are applied in the private sector context. The explanation for variants could be the limitations in legal and regulatory frameworks for public procurement and disposal of assets.

While the public procurement frameworks may not explicitly prohibit joint planning, they do not provide a guide either in modalities of choice and operationalization of procurement methods or standard bidding documents for public procurement. In the private sector, joint planning, and supplier development have proven benefits such as the production of synergies for the attainment of new product development, agility, value for money, and internal customer satisfaction. This study concludes by confirming the potential for missed benefits due to the absence of joint planning and supplier development.

Recommendations

To achieve joint planning, this study recommends that public sector actors adopt use of pre-bid meetings as an avenue for joint planning other than a mere offer of clarifications to bidders. While some Supplier Alliances have been implemented, the process and benefits are not adequately captured by scholarly literature to inform and guide replication. The public sector should encourage scholars to document through research, the ease of advance payments, prompt payments and forums for sharing best practices associated with Supplier Alliances.

We recommend that public sector actors design and implement standard bidding documents to improve specifications or terms of reference as applied in the context of procuring services through public-private partnerships (PPPs).

Practitioners of procurement should embrace joint planning through joint identification and development of specifications for supplier's technical, quality, and cost management standards.

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