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EXAMINING THE IMPACT RECORDS KEEPING, INFORMATION SHARING AND PARTNER RELATIONS ON PROCUREMENT PERFORMANCE IN FIRMS

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ABSTRACT

This study examines the extent to which information sharing, records keeping and partner relations influence firm performance via the creation of an efficient procurement system. A survey of 142 firms in the Ashanti region of Ghana, selected using the convenience sampling technique is used in the study. The study adopted a quantitative approach, with a structured questionnaire as the primary data collection instrument. An examination of the relationship among the variables reveal that procurement efficiency partially mediates the relationship between each of the three procurement related practices and firm performance. The implication of these findings for practice is that a focus on collaboration, not competition must be the aim of procurement. In modern times, firms must move beyond adversarial relations and focus on creative collaborative, long term relationship with selected suppliers. The study proposes that records keeping and audit of the process must be accorded as much importance as tender evaluation and contract management. The findings further imply that Suppliers are an extension of the focal firm and must be viewed as such. Excessive use of power leaves the weaker party aggrieved and willing to resort to unethical practices, which may include supply of low quality materials or creation of artificial shortages.

Contribution/Originality: The study extends procurement literature beyond the sourcing process and advances scholarly knowledge on the interaction between these processes and procurement performance. It demonstrates the relevance of streamlining the procurement process via a close monitoring and evaluation of all auxiliary functions to the sourcing process.

1. BACKGROUND TO THE STUDY

Intense competition in the market place is a strong driver for streamlining organisational processes to ensure survival. In the current market, firms are expected to be cost efficient, eliminating all possibilities of excessiveness whiles also delivering superior value to their clients. The procurement process is one that contributes significantly to the streamlining process and is often targeted as a means of enhancing the organisation's product or service offering. A firm's procurement process is a source of competitive advantage, with a direct impact on the firm's short-term and long-term success (Patra *et al.*, 2019).

This is because the results of procurement transactions impact on the firm's internal operations and subsequent offerings to the customer. Efficiency in the procurement process has significant contributions to the performance of the firm in terms of quality receipts from suppliers which eliminate waste in the production process, and cost reduction which provides value for the organisation's spending (Tawfik *et al.*, 2014; Bals and Turkulainen, 2017;

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Flynn, 2018). In a competitive environment, the task on the procurement team is to make a contribution by procuring high quality materials at lowest possible prices. Thus, procurement contributes to firm performance operationally by making right quality materials available to support internal operations, and purchasing at right cost to reduce cost of operations and increase financial performance.

In practice, procurement is a complex activity that requires the consideration of several trade-offs to provide best value for the organisation. Achieving an efficient procurement system is an onerous task that requires careful analysis and planning. It has often been argued that the best results are obtained if procurement is added to the strategic objectives of the organization (Tang *et al.*, 2019). This ensures that the necessary time and resources are spent on developing the right competences for the procurement system. Procurement decisions impacts on other parts of the organisation in different directions and magnitude. Careful considerations must be made of all decisions to ensure that hidden costs are analysed before sourcing. For instance, whiles bulk purchases may attract quantity discounts, it may increase stock of goods held which increases risks of damage and obsolescence for end users. The idea of an efficient procurement system will need to consider these trade-offs vis a vis the organisation's objective.

Most often, discussions on procurement is focused on the sourcing process (Namukasa, 2017). This consideration is inadequate as several factors, before and after the sourcing process aid in creating a working procurement system. Sourcing in this regard refers to the process from needs identification, through vender evaluation and selection to contract awarding and signing. There is no doubt that the efficiency of the system is impacted by this process. However, several auxiliary factors also determine how the system performs in most cases.

Record keeping is an important aspect of the procurement process like the actual sourcing. This enables proper traceability of procurement practices and makes information available for future assessment of procurement performance. Record keeping also allows proper benchmarking of pervious procurement contracts for future use. Procurement records are critical for the effective execution of the procurement process and can be a useful tool for measuring compliance of the procurement department to the organisation's procurement policies (Tumuhairwe and Ahimbisibwe, 2015). Entities, both public and private, need records of their procurement dealings to support future decision making. Lack of compliance with procurement record keeping creates avenue for malpractices in the procurement system. Also, poor record keeping systems manifests in big losses arising from "legal non-compliance, costly escalation, unnecessary exposure to liabilities" (Tumuhairwe and Ahimbisibwe, 2015). Procurement and contract records are the basis for internal and external audits and are needed to determine compliance with the procurement legal and institutional framework (Namukasa, 2017).

Information sharing is important for the procurement entity and the supplier to properly obtain the required services from each other. Information sharing refers to good-quality information flow between an enterprise and its partners (e.g. suppliers, the same tier manufactures and channel members) in the supply chain (Chang *et al.*, 2013). Information sharing builds better partnerships and promotes integration between suppliers and manufacturers in the supply chain, leading to better performance (Kim and Chai, 2017).

This study presents an assessment of the records keeping, information sharing and partner relations as procurement management practices and how they impact on firm performance via the creation of an efficient procurement system. The study seeks to extend procurement research beyond the actual sourcing process and examines the role of auxiliary practices in the procurement system.

2. STUDY CONTEXT

Procurement is an importance part of organisational development. Procurement is responsible for ensuring the availability of materials at the right time and quality, as well as the control of acquisition costs. Most often, the procurement process is fraught with inefficiencies that cause firms to outrun their budgets, as well as acquire less than standard items for use. Aside the sourcing, several other factors impact on the procurement process and these must be given as much consideration as the sourcing process itself. Too much focus on the sourcing process and

neglecting the subsidiary activities can have as much negative impacts on the performance as the sourcing itself. Improper record keeping can pose serious challenges to contract and service traceability. This can also lead to inconsistencies in the procurement procedures used. Tumuhairwe and Ahimbisibwe (2015) argue that one of the key ways in which organizations are held accountable for their actions is through evidence of business transactions in the form of records. Thus, a poor record keeping does not only is a significant barrier to performance measurement and process analysis for future improvement. As noted by Namukasa (2017) Procurement and contract records are the basis for internal and external audits and are needed to determine compliance with the procurement legal and institutional framework Also, this can be an enabler of corruption practices in the procurement process as it is difficult for proper auditing to be conducted without accurate records. In Africa, lack of awareness of modern records management is widespread in many public and private sector organizations. There are inadequate policies, standards and guidelines, as well as inefficiency and lack of management continuity (Namukasa, 2017). Lack of proper relationship management structures can strain the relationship between the procurement entity and the supplier, leading to poor performance especially in long term contracts. After the selection of the vendor, there is the need for continuous monitoring of performance to ensure the buying firm obtains the expected value from the association. The consideration of these factors must take centre stage in the development of a procurement policy. There is the need for clearly defined objectives and performance metrics to check the progress of performance.

This study delves attempts to establish the relevance of the various auxiliary processes in the procurement setup and how they impact on the performance of the firm via the creation of an efficient procurement system.

3. RESEARCH OBJECTIVES

This study seeks to measure the impact of procurement practices on procurement efficiency and firm performance. Specifically, the study seeks to

1. Examine the impact of information sharing on procurement efficiency and firm performance.
2. Examine the impact of partner relations on procurement efficiency and firm performance.
3. Examine the impact of records keeping on procurement efficiency and firm performance.

4. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

This section presents the relationships among the variables in the study.

4.1. Records Keeping and Procurement Efficiency

Compliance to records keeping requires that document on procurement transactions are duly created, filled and maintained for a specific period of time. Performance in the management of records creation, storage, retrieval, access and the preservation of vital records. One of the key ways in which organizations are held accountable for their actions is through evidence of business transactions in the form of records (Tumuhairwe and Ahimbisibwe, 2015).

This provides comprehensive information on all procurement dealings of a firm to enhance traceability in the future. The existence of accurate records provides a benchmark for decision making on future purchases. Without such a system, there is disorder and inefficiency (Tumuhairwe and Ahimbisibwe, 2015). Procurement records compliance also allows for an evaluation and audit of the procurement systems to improve on its efficiency. Poorly managed records mean that an organization does not have ready access to authoritative information to support sound decision-making and delivery of programs and services (Namukasa, 2017).

With the existence of proper records, the tendency for sub optimal decision making on future procurement is reduced.

Poor records management affects procurement performance, especially in contract management and disposal process areas (Namukasa, 2017). When required to keep comprehensive records for procurement practices, the

tendency for malpractices is reduced since actors become aware of potential examination of past records in the future. Essentially, compliance to records keeping practices enhances the transparency in procurement practices and helps minimise the potential for waste and corruption in the system. As businesses become more competitive, it becomes paramount that organizations follow best practices for records management. Organizations need to demonstrate intentions to follow best practices consistently and accurately for effective management of records (Tumuhairwe and Ahimbisibwe, 2015). Procurement records are critical in promoting the principles of transparency and accountability, and weaknesses in this area have implications for the efficiency and effectiveness of the public procurement system (Namukasa, 2017). It is therefore hypothesized that:

H1: Record keeping compliance has a positive, significant influence on procurement efficiency.

4.2. Information Sharing and Procurement Efficiency

The speed and quality of flow of information between the contracting authority and the vendor is key to the realisation of procurement objectives. It is imperative that a seamless communication channel is established among all stakeholders of the procurement system to ensure that right information is passed on to the expected channels at all times. Through good-quality information flow, mutual trust between enterprises can be established (Chang *et al.,* 2013). In the sourcing process, adequate information sharing between the contracting party and the potential vendors eliminates information asymmetry among the vendors and ensures that with the same level of information available to them, the contracting firm is able to create a fair competition among the potential vendors. The fair competition enables the buying firm obtain value. Information sharing eliminates redundant practices in the procurement system and reduces the potential for errors and duplicated efforts. It is therefore hypothesized that:

H2: information sharing has a positive, significant effect on procurement efficiency.

4.3. Partner Relationships and Procurement Efficiency

Continued business transactions create a network of interrelationships among businesses and their supply partners. The term partner relationships refer to mutually committed relationships between enterprises and their partners (e.g. suppliers, the same tier manufactures and channel members) in the supply chain (Chang *et al.,* 2013).

The award of a procurement contract creates an agency relationship between the buyer acting as the principal, and the vendor acting as the agent. There is the need for conscious efforts to develop this relationship via the deliberate implementation of relationship building structures. Developing and maintaining relationship with partners is key to creating a sustainable relationship with the firm's supply base (Luo *et al.,* 2013). This is important as it impacts directly on the firm's procurement performance. The development of partner relationships aligns the objectives of both parties and fosters the development of joint action plans for the achievement of supply chain goals. Also, partner relationship building provides a strong foundation for future resolution of challenges that may spring up in the supply relationship. The relationship between vendors and contracting firms is required to deal with supply market developments that threaten the existence of the supply relationship. It is therefore hypothesised that:

H3: Partner relations have a positive, significant effect on procurement efficiency.

4.4. Procurement Efficiency and Firm Performance

An efficiency procurement system contributes to firm performance in several ways. First, an efficiency procurement system eliminates waste and corruption in the procurement system. This reduces the firms cost of doing business. An efficiency procurement system also ensures that right quality materials are made available at every point in time to support the organisation's operations. When the procurement system is efficient, records are collected, information is shared among vendors and buyers, and relationships management is given a high level of

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importance. The firm is able to benefit via cost reduction and quality improvement, as well as customer satisfactions from the ability to provide better service to customers (Flynn, 2018). It is therefore hypothesized that:

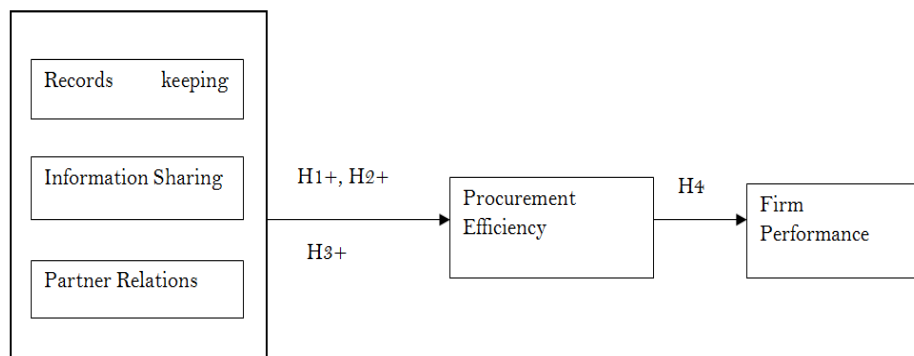*H4: procurement efficiency has a positive, significant effect on firm performance.*

Figure-1. Theoretical framework of the study.

5. RESEARCH METHODOLOGY

This study seeks to measure the impact of records keeping, information sharing and and partner relations on procurement performance. The study is thus explanatory in nature, with strong focus on establishing the causal relationships among the variables via a hypothesis testing approach. The deductive approach has been used in this study as it aims to test hypothesis about the possible interactions between the variables used in the study. Also, as noted by Saunders *et al.* (2011) with a note of caution though, deduction owes more to explanatory studies whiles induction is more tuned towards exploratory studies. This study adopted a purely quantitative approach. Traditionally, explanatory studies follow the quantitative studies to allow the testing of hypothesis via statistical procedures. For this study, a survey allows a cross industrial selection of firms, which in essence provides responses that can be generalised to all firms with procurement functions in the areas the study is conducted. The target population for this include firms in the Kumasi Metropolis that have a dedicated procurement department. Only firms with procurement departments are included because they are the ones likely to have procedures in place for the procurement function, as well as proper layout of responsibilities for the function to increase expected benefits. The target population is estimated to be in excess of 250. The sample size is determined based on Krejcie and Morgan (1970) sample size determination based on a confidence interval of 95% and margin of error 5%. From the estimated Population of 250, a sample of 142 is drawn using the table. The Convenience sampling technique is used in the study. Despite criticism against it as introducing bias in selection, it is useful in situations where there is difficulty in obtaining an accurate sampling frame to allow the use of a random sampling technique. This study used a structured questionnaire in gathering primary data. All research questions were answered through the use of primary data. The questionnaires were distributed personally and collected by the researchers. Descriptive statistics was used to present the characteristics of the data. Ordinary Least squares path analysis was employed to study the relationships among the variables.

6. OPERATIONAL DEFINITION OF CONSTRUCTS

Record Keeping: Creating, filling and maintaining records on procurement transactions and ensuring proper storage and retrieval.

Information Sharing: adequate and frequent flow of relevant transactional information between contracting authority and supply partners.

Partner Relations: Mutually committed relationships between enterprises and their partners.

Procurement Efficiency: Elimination of waste and redundant processes in the procurement system.

Firm Performance: Measure of the firms' position in the market using financial, cost and competitive positions.

7. DATA ANALYSIS

7.1. Respondent Firms

Table-1. Firm characteristics.

Variable	Variants	N	Percent
Ownership structure	Private	94	66.1
	Public	41	28.8
	NGO	7	4.92
	Total	*142*	*100.0*
Firm age (Years)	1 To 3	22	15.4
	4 To 6	39	27.7
	7 To 9	37	26
	10 or more	44	30.9
	Total	*142*	*100.0*
Industry type	Service	101	71.1
	Extractive	2	0.014
	Manufacturing	39	27.46
	Total	*142*	*100.0*

Source: Field study, 2019.

7.2. Descriptive Statistics and Reliability Test Results

Table-2. Descriptive statistics and Reliability test results.

Constructs	Item mean(Sd)	Ovr Mean	Ca (A)
Information frequency			
Formal contract for information exchange with our suppliers.	3.60 ± 1.12		
Informal information interchanges with our suppliers	4.96 ± 1.32		
Our suppliers share proprietary information with us	5.00 ± 1.46		
Our supplier keep us informed about issues that affect our business	5.05 ± 1.31		
We discuss future needs together with our suppliers	5.16 ± 1.29		
Information quality		4.89± 0.75	0.707
Information sharing between us and supplier is timely	5.00 ± 1.31		
Information sharing between us and supplier is accurate	5.03 ± 1.99		
Information sharing between us and supplier is adequate	5.09 ± 1.30		
Information sharing between us and supplier is critical	5.07 ± 1.33		
Information sharing between us and supplier is reliable	4.95 ± 1.52		
Partner relations			
We trust each other	4.78 ± 1.12		
We both try very hard to establish a long term relationship	5.09 ± 1.24		
We work in close co-operation	5.11 ± 1.39		
We communicate and express our opinions to each other	5.01 ± 1.36		
We can show our discontent towards each other through communication	4.99 ± 1.32	4.98 ± 0.85	0.883
We share the same opinions about most things	5.04 ± 1.24		
We always see things from each other's views	4.93 ± 1.31		
We understand each other's values and goals	5.02 ± 1.37		
We care about each other's feelings	5.07 ± 1.35		
We keep promises to each other in any situation	4.83 ± 1.39		
Records keeping			
There exist records for every procurement transaction	4.88 ± 1.35		
There is a policy to maintain procurement records	4.97 ± 1.34		
A dedicated storage area exist for procurement records	4.80 ± 1.43		
Access to procurement records is limited to authorized staff	4.90 ± 1.38		
Mechanisms in place to ensure the records are guarded from any natural occurrences that could damage them	4.95 ± 1.30		
Periodic records compliance reviews established to ensure adherence to records standards	5.00 ± 1.33	4.85 ± 0.82	0.816
There is sufficient training of procurement staff regarding records compliance requirements	5.06 ± 1.40		
Acquisition of items can proceed even without the necessary documentation	3.96 ± 1.11		
When creating records we ensure that only required, authentic and reliable records are created	4.87 ± 1.35		

Procurement records are all filed and shelved appropriately	5.08 ± 1.38		
Procurement efficiency			
Suppliers deliver on time	4.76 ± 1.30		
All materials and services received are of the right quality	5.00 ± 1.38		
Materials and services are obtained in the most cost effective manner	4.98 ± 1.29	4.96 ± 0.94	0.774
Suppliers fulfil our requirements at all times when we request	5.05 ± 1.45		
End user departments are satisfied with procured items	5.04 ± 1.30		
Materials and services are always available when needed for internal use	4.96 ± 1.49		
Firm performance			
Increase rate of sales growth	4.53 ± 1.24		
Increased profit margins	4.79 ± 1.36		
Improved competitive advantage	4.76 ± 1.31	4.76 ± 0.95	0.768
Increased cost management	4.83 ± 1.40		
Improved customer satisfaction	4.87 ± 1.27		

Source: Field study, 2019.

7.3. Information Sharing

Information sharing in the study was captured by two related constructs: information frequency and information quality. This is based on the premise that information sharing between the procurement entity and suppliers should be rapid, ensuring that the required information is channelled on time to enable the requesting partner take quick decisions, and also accurate to ensure that the requesting partner's decisions based on the information received, will be correct. The descriptive statistics reveal that averagely, information sharing between respondent firms and their suppliers is rapid and accurate (Mean = 4.89, SD = 0.75). Item by Item inspection reveal however, that the existence of formal contracts for information sharing is not a standard practice among the firms (item Mean below 4.0 i.e. 3.6). Conversely, informal information exchanges is rather encouraged (Mean = 4.96). In supply chain governance literature, whiles formal contracts are known to help in fighting against potential opportunism (Yenidogan and Widspelger, 2013) informal exchanges have been known to encourage the development of trust and relationship building among firms in the supply chain (Tencati and Zsolnai, 2008).

7.4. Partner Relations

Partner relations sought to understand the nature of relationship between firms and their major suppliers. Overall, the findings reveal that respondent firms have a good relationship with their partners (Mean = 4.98, SD = 0.85). Good partner relations are an important part of the procurement process as it facilitates joint planning and efforts between the buyer and the seller to deliver ultimate supply chain value.

7.5. Record Keeping

Procurement records are documentation of procurement processes and relevant information about procurement transactions. Overall, the findings reveal that record keeping practices are upheld in the various organisations (Mean = 4.85, SD= 0.82). Section 28 of the public procurement Act 2003, Act 663 as amended, makes provisions about record keeping. Also, most private organisations have internal standards on record keeping to aid traceability and compliance to internal and external audit requirements. To further strengthen this position, the item by item inspection reveal that the statement "Acquisition of items can proceed even without the necessary documentation" obtained a mean score below 4.0, indicating that averagely, this practice is discouraged and not permitted in respondent organisations.

7.6. Procurement Efficiency

Overall, the findings reveal that respondent firms rate the procurement systems high on efficiency (Mean = 4.94, SD = 0.94). The responses show that averagely, the procurement units within the firm are able to work together with suppliers to achieve on time delivery, defect free products and high material availability.

7.7. Firm Performance

Averagely, the performance of participant firms have been rated high (Mean = 4.76, SD = 0.95). Firms are able to increase customer satisfaction, rate of sales growth and profit margin among others. In this study, it is envisaged that a section of this performance is attributable to procurement related practices.

8. ORDINARY LEAST SQUARES PATH ANALYSIS

To measure the relationship among the study's variables, an ordinary least squares (OLS) path analysis was conducted using PROCESS version 3.3 developed by Hayes. OLS helps to establish relationships between variables. OLS estimates both direct and indirect effects. In accordance with the recommendation of Hayes (2013) indirect effects in this model is established using the bootstrapping method (using 10000 samples) in contrast to the Sobel test, as well as Baron and Kenny (1986) procedure. In order to eliminate potential bias arising from the characteristics of the firm, industry type, ownership structure and firm age have been controlled for in the analysis. Each analysis has two models, followed by a test of direct and indirect effects and notes on the type of analysis.

8.1. Impact of Information Sharing on Procurement Efficiency and Firm Performance

In this section, firm performance is predicted from information sharing and procurement efficiency.

Model one

Outcome Variable: Procurement Efficiency (TOTPE).

Predictors: Information Sharing (TOTIFS).

Controls: Firm Age, Industry Type, Ownership Structure.

Model summary						
R	**R-sq**	**MSE**	**F**	**Df1**	**Df2**	**p**
.7933	.6292	.3402	58.1298	4.0000	137.0000	.0000
Model						
	Coeff	Se	t	p	LLCI	ULCI
Constant	.4045	.3815	1.0604	.2908	-.3498	1.1588
TOTIFS	.9621	.0654	14.7134	.0000	.8328	1.0914
INDUSTRY	-.0716	.0444	-1.6125	.1092	-.1594	0.162
FIRMAGE	-.0765	.0422	-1.8121	.0722	-.1599	.0070
OWN	.0920	.0429	2.1467	.0336	.0073	.1768

Model Two

Outcome Variable: Financial Performance (TOTFP).

Predictors: Information Sharing (TOTIFS), Procurement Efficiency (TOTPE).

Controls: Firm Age, Industry, Ownership Structure.

Model summary						
R	**R-sq**	**MSE**	**F**	**Df1**	**Df2**	**p**
.6863	.4710	.4989	24.2174	5.0000	136.0000	.0000
Model						
	Coeff	Se	t	p	LLCI	ULCI
Constant	.8027	.4638	1.7306	.0858	-.1146	1.7200
TOTIFS	.5613	.1272	4.4122	.0000	.3097	.8128
TOTPE	.2802	.1035	2.7079	.0076	.0756	.4848
INDUSTRY	-.0180	.0543	-.3319	.7404	-.1254	.0893
FIRMAGE	-.0257	.0517	-.4980	.6193	-.1280	.0765
OWN	-.0284	.0528	-.5380	.5915	-.1328	.0760

8.1.1. Analysis of Direct and Indirect Effects

Direct effect of X on Y							
Effect	**se**	**t**	**p**	**LLCI**	**ULCI**	**c' ps**	**c' cs**
.5613	.1272	4.4122	.0000	.3097	.8128	.5885	.4434
Indirect effect(s) of X on Y:							
	Effect	BootSE	BootLLCI	BootULCI			
TOTPE	.2696	.1001	.0911	.4806			

Notes: Level of confidence for all confidence intervals in output: 95.0000
Number of bootstrap samples for bootstrap confidence intervals: 10000.

In model 1, procurement efficiency is predicted from information sharing. The overall model is significant (F 58.12, ρ≤.001). From the model analysis, the control variables (with the exception of ownership) are not significant and the Lower level confidence interval (LLCI) bootstrap estimate contains zero. Information sharing positively and significantly predicts procurement efficiency (β = 0.9621, t = 14.7134, ρ ≤ .0000). As a control variable, ownership structure also significantly predicts procurement efficiency (β = .0920, t= 2.1467, ρ ≤ .0336). Although the effect size is small in comparison with that of information sharing, it is still worth explaining. At this point, it cannot be explained which ownership type is more likely to have an efficient procurement system. However, given the current circumstance surrounding public procurement in the country, including allegations of excessive forward buying, nepotism and corruption (Adu-Fosu, 2016) it is likely that private sector procurement will be more efficient.

In model 2, firm performance is predicted from procurement efficiency and information sharing, amidst all control variables. The overall model achieves statistical significance (F 24.21, ρ ≤.001). Information sharing (β = .5612, t= 4.412, ρ ≤ .0001) and procurement efficiency (β = .2802, t= 2.7079, ρ ≤ .0076) are both significance predictors of firm performance. All control variables did not produce significant results.

Thus, it is established that information sharing has a positive significant impact on procurement efficiency, and procurement efficiency also has a positive, significant impact on firm performance. Also, information sharing is positively related to firm performance. The analysis of indirect effects seeks to establish the nature of the path from information sharing to firm performance via procurement efficiency. The aim is to examine a potential mediating effect of procurement efficiency on the relationship between information sharing and firm performance. The existence of significant relations between the variables have already been established in models 1 and 2. From the analysis, the direct effect of information sharing (X) on Firm performance (Y) is significant (β = .5613, t= 4.4122, ρ ≤ .0001). The indirect effect size β = .2696 has a bootstrapping confidence interval between .0911 and .4806, indicating significance as per Hayes (2013). Since the direct effect is also significant, this indicates that procurement efficiency partially mediates the relationship between information sharing and procurement efficiency.

8.2. Impact of Partner Relations on Procurement Efficiency and Firm Performance
This section predicts firm performance from procurement efficiency and partner relations.

Model One
Outcome Variable: Procurement Efficiency (TOTPE).
Predictors: Partner Relations (TOTPR).
Controls: Firm Age, Industry Type, Ownership Structure.

Model summary						
R	**R-sq**	**MSE**	**F**	**Df1**	**Df2**	**p**
.8093	.6462	.3263	62.0937	4.0000	136.0000	.0000
Model						
	Coeff	Se	t	p	LLCI	ULCI
Constant	.7074	.3526	2.0063	.0468	.0101	1.4046
TOTPR	.8885	.0583	15.2293	.0000	.7731	1.0039
INDUSTRY	-.0710	.0438	-1.6222	.1071	-.1576	0.156
FIRMAGE	-.00621	.0414	-1.4975	.1366	-.1440	.0199
OWN	.0656	.0420	1.5615	.1207	-.0175	.1487

Model 2

Outcome Variable: Financial Performance (TOTFP).

Predictors: Partner Relations (TOTPR), Procurement Efficiency (TOTPE).

Controls: Firm Age, Industry, Ownership Structure.

Model summary						
R	**R-sq**	**MSE**	**F**	**Df1**	**Df2**	**p**
.6831	*.4666*	*.5063*	*23.6157*	*5.0000*	*135.0000*	*.0000*
Model						
	Coeff	Se	t	p	LLCI	ULCI
Constant	1.0620	.4456	2.3830	.0186	.1806	1.9433
TOTPR	.4978	.1195	4.1642	.0001	.2614	.7342
TOTPE	.2867	.1068	2.6841	.0082	.0755	.4979
INDUSTRY	-.0237	.0550	-.4314	.6669	-.1326	.0851
FIRMAGE	-.0159	.0520	-.3057	.7603	-.1188	.0870
OWN	-.0421	.0528	-.7974	.4266	-.1465	.0623

8.2.1. Analysis of Direct and Indirect Effects

Direct effect of X on Y							
Effect	**se**	**t**	**p**	**LLCI**	**ULCI**	**c' ps**	**c' cs**
.4978	.1195	4.1642	.0001	.2614	.7342	.5203	.4329
Indirect effect(s) of X on Y:							
	Effect	BootSE	BootLLCI	BootULCI			
TOTPE	.2547	.1086	.0384	.4676			

Notes: Level of confidence for all confidence intervals in output: 95.0000.
Number of bootstrap samples for bootstrap confidence intervals: 10000.

In model 1, partner relations is used to predict procurement efficiency, together with the control variables. The model is statistically significant (F 62.0937, ρ≤.0001). Partner relations positively, and significantly predict procurement efficiency (β = .8885, t= 15.2293, ρ ≤ .0001). The control variables did not produce significant results.

In model 2, firm performance is predicted from partner relations and procurement efficiency, whiles controlling for firm age, industry type and ownership structure. The overall model is statistically significant at (F 23.61, ρ≤.0001). In the model, both partner relations (β = .4978, t= 4.4642, ρ ≤ .0001) and procurement efficiency (β = .2867, t= 2.6841, ρ ≤ .0082) significantly, and positively predict firm performance. All control variables did not produce significant results.

Further analysis reveal that the direct effect between partner relations (X) and firm performance (Y) is significant and positive (β = .4978, t= 4.4642, ρ ≤ .0001). The bootstrapping estimated of confidence interval from 10000 samples also provide an interval that does not include zero (Boot LLC1 = 0.0384, Boot ULCI = 0.4676). This indicates significance of the indirect effect between partner relations and firm performance. Thus, procurement efficiency partially mediates the impact of partner relations and firm performance.

8.3. Impact of Records Keeping on Procurement Efficiency and Firm Performance

This section examines the extent to which procurement records keeping influences procurement efficiency and firm performance.

Model One

Outcome Variable: Procurement Efficiency (TOTPE).

Predictors: Records Keeping (TOTPR).

Controls: Firm Age, Industry Type, Ownership Structure.

Model summary						
R	**R-sq**	**MSE**	**F**	**Df1**	**Df2**	**p**
.7758	.6019	.3653	51.7750	4.0000	137.0000	.0000
Model						
	Coeff	Se	t	p	LLCI	ULCI
Constant	.9715	.3675	2.6436	.0092	.2448	1.6981
TOTRK	.8569	.061	13.8624	.0000	.7347	.9791
INDUSTRY	-.0491	.0460	-1.0667	.2880	-1.402	.0419
FIRMAGE	-0.872	.0437	-1.9962	.0479	-1.735	-.0008
OWN	.0749	.0444	1.6854	.0942	-.0130	.1627

Model 2

Outcome Variable: Financial Performance (TOTFP).

Predictors: Records Keeping (TOTRK), Procurement Efficiency (TOTPE).

Controls: Firm Age, Industry, Ownership Structure.

Model summary						
R	**R-sq**	**MSE**	**F**	**Df1**	**Df2**	**p**
.6631	*.4397*	*.5284*	*21.3427*	*5.0000*	*136.0000*	*.0000*
Model						
	Coeff	Se	t	p	LLCI	ULCI
Constant	1.2181	.4531	2.6882	.0081	.3220	2.1141
TOTRK	.3783	.1152	3.2826	.0013	.1504	.6062
TOTPE	.3797	.1028	3.6951	.0003	.1765	.5829
INDUSTRY	-.0010	.0556	-.0175	.9860	-.1109	.1090
FIRMAGE	-.0249	.0533	-.4671	.6412	-.1303	.0805
OWN	-.0454	.0540	-.8413	.4017	-.1522	0.613

8.3.1. Analysis of Direct and Indirect Effects

Direct effect of X on Y							
Effect	**se**	**t**	**p**	**LLCI**	**ULCI**	**c' ps**	**c' cs**
.3783	.1152	3.2826	.0013	.1504	.6062	.3966	.3275
Indirect effect(s) of X on Y:							
	Effect	BootSE	BootLLCI	BootULCI			
TOTPE	.3254	.0835	.1620	.4915			

Notes: Level of confidence for all confidence intervals in output: 95.0000
Number of bootstrap samples for bootstrap confidence intervals: 10000.

In model 1, records keeping are used to predict procurement efficiency in the presence of the control variables. The overall model achieves statistical significance (F 51.77, $\rho \leq$ .0001). Records keeping significantly, and positively predicts procurement efficiency (β=.8569, t= 13.8624, $\rho \leq$.001). All control variables did not produce significant results.

In model 2, firm performance is predicted from procurement records keeping and procurement efficiency. The model is statistically significant (F 21.34, $\rho \leq$.0001). Records keeping (β=.3783, t= 3.2826, $\rho \leq$ .0013) and procurement efficiency (β=.3797, t= 3.6951, $\rho \leq$ .0003) positively and significantly predicts firm performance.

From the analysis of direct effects, records keeping (X) has a direct impact on firm performance (Y) in the presence of the mediator (procurement efficiency). The indirect effect analysis is also significant since the bootstrapping confidence interval does not include a zero (.1620 to .4915). Thus, procurement efficiency partially mediates the relationship between records keeping and firm performance.

9. DISCUSSION OF RESULTS

The findings reveal that information sharing has a significant, positive impact on procurement efficiency and firm performance. The impact of information sharing in supply chain relationships have been widely established in the literature. Evans and Wurster (2001) found the information sharing increases the flexibility of collaboration between partners on product specifications. Specific to the procurement process, buyer and seller collaboration is required to ensure all parties satisfy their expectations in the exchange relationship. Even after vendor choice and contract signing, the relationship between a buyer and seller must be one in which there is rapid, accurate flow of information.

Especially in procurement transactions which involves framework arrangements and/or Vendor managed Inventory, there is the need for parties to be in constant planning sphere to ensure continuous support for each other's objectives. Even in adversarial procurement relations, the flow of information is required to settle clearly on specifications and contractual terms guarding the exchange. Rapid information flow is required to eliminate inconsistencies in service delivery/expectations from the supplier, as well as expectations from the buyer.

In recent times, there are calls for procurement to move beyond adversarial relationships which involves a sort of power bargaining with suppliers, towards a more inclusive, participative partnership with suppliers. From the findings of Liker and Choi (2004) partner relations influence the procurement system is particularly beneficial in new product development, as it helps the procurement entity launch new products faster that competitors.

The impact of partner relationships on procurement efficiency and firm performance is expected. Earlier, Chang et al. (2013) argued that partner relations improves supply chain performance. This is because an improved relationship with suppliers facilitates joint planning initiatives, as well as creates a sense of shared purpose among partners. When a firm and its suppliers have good relationship, the buying firm is likely more than others receive relevant information on the status of the supply market, as well potential preferential treatment in times of shortages. Good partner relations also enables both partners provide the required support among themselves to build a formidable partnership.

The relevance of record keeping to the procurement system and the entire firm is enormous. Tumuhairwe and Ahimbisibwe (2015) found that poor records management compromises the creation of value in the procurement. Similarly, Lam and Wong (2011) found that poor record keeping procedures negatively affects procurement performance especially in the areas of contract management and asset disposal. Records helps to monitor the procurement process to ensure practitioners adhere to the laid down principles in the organisation.

Also, records provide blueprints for future procurement practices, which makes it easy, less costly or resource intensive. When kept well, procurement records provide readymade information for audits and other inquiries. Accordingly, section 28 of the Ghana Procurement Act 2003, Act 663 establishes the importance of records keeping. Public firms are expected to keep accurate records of procurement proceedings and transaction documents. In the private sector, firm procedures and the requirements of certification bodies like ISO and FSSC place a lot of emphasis on documentation and record keeping (Joseph et al., 2012). When the record keeping system is effective, it serves as a deterrence to criminal, shady deals as perpetrators know their actions can easily be traced. This is an important contribution to improving procurement efficiency and ensuring value for money, which ultimately impact on firm performance. Proper documentation helps to streamline the process and ensure that unnecessary, redundant processes are eliminated.

10. CONCLUSION

Information sharing, partner relations and record keeping are important procedures related to the procurement system and relevant to its ability to deliver the desired value. This study has examined the influence of the three practices on the creation of an efficient procurement system, which in turn creates improved overall performance of the firm. An examination has been conducted, using ordinary least squares path analysis, into potential direct and

indirect effects among the study's variables. The findings have established the relevance of information sharing, record keeping and partner relations in creating the desired efficiency in the procurement system. The findings show that procurement efficiency partially mediates the relationship between each of the three procurement related practices and firm performance. For all its worth, each practice directly, on its own significantly influences the performance of firms.

11. IMPLICATIONS FOR PRACTICE

For practitioners, the findings of the study imply that: A focus on collaboration, not competition must be the aim of procurement. Traditionally, procurement seeks to encourage competition among potential bidders to obtain value for money. In modern times, firms must move beyond adversarial relations and focus on creative collaborative, long term relationship with selected suppliers. The impact of partner relations and information sharing, as evidenced in this study, is enormous. The key point is that instead of the procurement system viewing suppliers as opponents in the price war on the market and wielding power to obtain low prices, the focus should be on working together to obtain quality suppliers, albeit affordable.

Records keeping is an important as the selection of the right vendor. The march towards keeping all required records accurately and easily retrievable is key to ensuring an efficient procurement system. The study proposes that records keeping and audit of the process must be accorded as much importance as tender evaluation and contract management. Firms, especially those in the public sector must move towards digitalisation of procurement records to allow easy storage and retrieval. Easy traceability, audit and deterrence from corruption are a few benefits to be obtained from the systematic records keeping procedure.

Suppliers are an extension of the focal firm and must be viewed as such. The popular "garbage in garbage out" adage must be in the mind of procurement professionals all the time. Most often, the output of a firm is as important as its inputs. The procurement system must consider suppliers as an extension of the firm and provide all required information and support to make the exchange relationship a fruitful one. Excessive use of power leaves the weaker party aggrieved and willing to resort to unethical practices, which may include supply of low quality materials or creation of artificial shortages.

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