

# Antecedent and Consequence of E-procurement Implementation on Performance of Small and Medium Enterprises: An Institutional Theory Perspective

Lydia Asare-Kyire, PhD  
Kumasi Technical University – Ghana  
Email: lasarekyire@yahoo.com

M. A. Kodom  
Department of Development Studies, Valley View University  
Email: mkodom@vvc.edu.gh

Mawutor Humphrey-Ackumey Korda  
University of Environment and Sustainable Development, Department of Built Environment  
Email: mhakorda@uesd.edu.gh

Owusu Ackah, PhD  
Jayee University College – Ghana  
Email: ackah\_owusu@yahoo.com

## Abstract

The purpose of the study is to investigate the antecedents of e-procurement adoption and implementation and its consequence on organizational performance of small and medium enterprises in Ghana. Using the institutional theory as theoretical lens, the study examined the influence of memetic, normative and coercive force on e-procurement implementation. The findings of the study indicate memetic, normative and coercive forces have a positive impact on the adoption and implementation of e-procurement system among SMEs. Consequently, e-procurement implementation on performance of SMEs. The findings of the study have both implication for academic and practice. The findings of this study have significant implications for policy makers, SMEs, and other stakeholders in the procurement process in Ghana. Policymakers can use the study findings to develop policies and regulations that promote e-procurement adoption among SMEs. SMEs, on the other hand, can use the study findings to identify the benefits of e-procurement adoption and make informed decisions on implementing e-procurement systems.

**Keywords:** Institutional Theory, SME performance, Ghana, PLS – SEM, Normative Forces, Memetic Forces, Coercive Forces

**DOI:** 10.7176/EJBM/15-9-02

**Publication date:** May 31<sup>st</sup> 2023

## Introduction

Technological advancements have transformed individuals' functional activities in every industry. Several industries have adopted the use of technology as a tool to improve productivity and performance over the last decade. Organizations gain a competitive advantage by integrating technology, business activities, and operational tasks (Kraus et al 2021; Chawla & Goyal, 2022). In recent years, the adoption of electronic procurement (e-procurement) has become increasingly popular among businesses worldwide. E-procurement refers to the use of electronic technologies to manage and streamline procurement processes, including sourcing, purchasing, and payment (Tutu et al, 2019). While there is extensive literature on the benefits of e-procurement for large corporations, less attention has been given to its impact on small and medium enterprises (SMEs), particularly in developing countries like Ghana (Adjei-Bamfo et al, 2020).

SMEs play a vital role in Ghana's economy, accounting for approximately 70% of the country's GDP and employing over 80% of the workforce (Ghana Statistical Service, 2020). However, SMEs face various challenges, including limited access to finance, poor infrastructure, and inefficient procurement processes (Osei-Kyei & Chan, 2017). Inefficient procurement processes can result in increased transaction costs, longer lead times, and reduced competitiveness (Maqsood et al., 2017). E-procurement has the potential to address some of these challenges by reducing procurement cycle times, improving transparency, and enhancing supply chain efficiency (Naeem, 2021).

Despite the potential benefits of e-procurement, its adoption among SMEs in Ghana remains low. According to a study by Osei-Kyei and Chan (2017), only 13% of SMEs in Ghana use e-procurement, compared to 36% in South Africa and 47% in Kenya. The low adoption rate can be attributed to various factors, including

limited awareness of e-procurement, inadequate technical expertise, and limited access to technology and infrastructure (Osei-Kyei & Chan, 2017).

Therefore, this paper aims to assess the impact of e-procurement on the performance of SMEs in Ghana. From an institutional perspective, the study examines the antecedents of e-procurement adoption/implementation and its consequence on the performance of small and medium enterprises. Institutional theory can explain how institutional pressures, such as regulative, normative, and cognitive pressures, influence the adoption and implementation of e-procurement among SMEs in Ghana (Scott, 2014). Regulative pressures refer to formal rules and regulations that prescribe the use of e-procurement, such as government regulations and industry standards. Normative pressures refer to the expectations and norms of stakeholders, such as suppliers and customers, regarding the use of e-procurement. Cognitive pressures refer to the taken-for-granted assumptions and beliefs regarding the effectiveness and efficiency of e-procurement. The institutional theory provides a useful framework for understanding the institutional pressures and factors that influence the adoption and implementation of e-procurement among SMEs in Ghana. By using institutional theory, we can identify the institutional pressures and challenges that SMEs face in adopting e-procurement, and the potential impact of e-procurement on SME performance. The remainder of the study is arranged as follows, section 2 presents the literature review; section 3 presents the methodology; section 4 presents the analytical outcome and findings and lastly, section 5 discusses the major findings, implications and conclusion of the study.

## Literature Review

### E-procurement

E-procurement refers to the use of electronic technologies to manage and streamline procurement processes. E-procurement can encompass a range of processes, including sourcing, ordering, invoicing, and payment, and can be implemented in both public and private sector organizations. In recent years, there has been growing interest in the adoption of e-procurement, with many organizations seeking to realize the potential benefits of increased efficiency, cost savings, and improved transparency. This literature review will examine some of the key themes in the literature on e-procurement, including its benefits and challenges, adoption factors, and impact on organizational performance (Tutu et al, 2019; Schoenherr & Tummala, 2007).

There is a growing body of literature that highlights the potential benefits of e-procurement for organizations. One of the primary benefits is increased efficiency, with e-procurement enabling organizations to automate and streamline procurement processes. This can lead to faster processing times, reduced paperwork, and increased accuracy. Additionally, e-procurement can help to improve transparency and accountability, as all procurement activities can be tracked and audited. E-procurement can also help to reduce costs, as it can help organizations to negotiate better prices with suppliers, reduce inventory costs, and eliminate paper-based processes (Melon & Spruk, 2020; Mavidis & Folinas, 2022).

The literature on e-procurement adoption has identified a range of factors that influence the decision to adopt e-procurement. One of the key factors is organizational size, with larger organizations being more likely to adopt e-procurement due to their greater resources and ability to manage the complexities of e-procurement systems. Additionally, organizational culture and leadership can play a significant role in e-procurement adoption, with organizations that have a culture of innovation and supportive leadership more likely to adopt e-procurement. Regulatory and market pressures can also influence e-procurement adoption, with government regulations and industry standards mandating the use of e-procurement in some sectors (Zhao et al., 2018).

The impact of e-procurement on organizational performance is a topic of much debate in the literature. While some studies have found significant positive effects of e-procurement on performance, others have found no significant impact or even negative effects. One of the primary challenges in measuring the impact of e-procurement on performance is the difficulty in isolating the effects of e-procurement from other factors that may influence performance. Additionally, the impact of e-procurement may vary depending on the specific context and organizational factors (Wang & Xie, 2017).

### E-Procurement Implementation Among SMEs

E-procurement implementation among SMEs is a topic of growing interest in the literature, as SMEs often face unique challenges when it comes to implementing e-procurement systems. The literature on e-procurement implementation among SMEs has identified a range of factors that influence the decision to adopt e-procurement. One of the key factors is organizational size, with larger SMEs being more likely to adopt e-procurement due to their greater resources and ability to manage the complexities of e-procurement systems. Additionally, organizational culture and leadership can play a significant role in e-procurement adoption, with SMEs that have a culture of innovation and supportive leadership more likely to adopt e-procurement. Finally, regulatory and market pressures can also influence e-procurement adoption, with government regulations and industry standards mandating the use of e-procurement in some sectors (Shahin & Shen, 2016).

Some benefit of e-procurement implementation among SMEs is increased efficiency, as e-procurement can

help to automate and streamline procurement processes. This can lead to faster processing times, reduced paperwork, and increased accuracy, which can in turn help to reduce costs and improve the overall efficiency of the organization (Eei, Husain & Mustaffa, 2012).

E-procurement implementation among SMEs has also identified a number of strategies for successful implementation. One of the key strategies is to carefully assess the needs and capabilities of the organization before implementing e-procurement. This can involve conducting a thorough analysis of procurement processes, identifying areas of inefficiency, and determining the specific features and functions that are required from an e-procurement system (Zhang, 2017).

However, there are also a number of challenges associated with e-procurement implementation among SMEs. One of the key challenges is the lack of resources and expertise, as SMEs may not have the necessary resources or expertise to implement and manage e-procurement systems. Additionally, SMEs may face resistance from employees who are not familiar with e-procurement systems or who are resistant to change (Hassan, Tretiakov & Whiddett, 2017; Mohungoo, Brown & Kabanda, 2020).

E-procurement implementation among SMEs is a complex and challenging process that requires careful planning, assessment, and management. While there are many potential benefits of e-procurement for SMEs, there are also significant challenges that must be addressed in order to ensure successful implementation. By carefully assessing the needs and capabilities of the organization, providing adequate training and support to employees, and carefully managing the implementation process, SMEs can successfully implement e-procurement systems.

## **Theoretical Background and Hypotheses**

### **Institutional Theory**

Institutional theory over the years has been predominantly used to explain the behaviour and actions of both individuals and organizations. This framework enables organizations to determine what actions influence the behaviour of individuals and activities in a peculiar direction (Bruton, Ahlstrom, Li, 2010; Geels, 2004; Lowndes, 2001). Several scholars have criticized institutional theory; however, it is still the most acceptable framework for assessing the homogeneity of phenomena. Although organizations change over time with a non-uniform approach, institutional theory happens to provide proper insights into the process and activities that govern organizational settings. And this is attributed to the richness and diversity of processes and procedures integrated into the institutional logic framework (Scott 2005).

The institutional theory argues that organizations are shaped by the institutional environments in which they operate. For SMEs, this means that they are influenced by a range of external pressures, including government regulations, industry standards, and cultural norms. Research has shown that SMEs often respond to these institutional pressures in a variety of ways, including conformity, resistance, and manipulation (Kostova et al., 2018). research has focused on the role of institutional pressures in shaping the adoption of new technologies among SMEs. Studies have shown that SMEs are often influenced by industry norms and standards when deciding whether to adopt new technologies and that institutional pressures can either facilitate or impede the adoption process (Mady et al, 2022; Ko et al, 2021). For example, a lack of institutional legitimacy for a particular technology may discourage SMEs from adopting it.

### **Normative Forces and E-procurement Adoption/Implementation**

Normative factors are considered to be pressures driven by an individual's affiliation to a particular professional group, association or network. In most cases, these professional association requires members to constantly renew their membership through the attainment of various certifications. Belonging to these associations requires individuals to abide by and conduct activities by certain norms. These norms serve as the moral, disciple and progression code of the network (Honig & Karlsson, 2004; Shore & Tashchian, 2002).

SMEs are likely to adopt e-procurement systems when there is a social norm that emphasizes the importance of such systems. When SMEs perceive that their peers or competitors are using e-procurement systems, they are more likely to adopt them as well. Additionally, when there is a cultural expectation that businesses should use technology to streamline their operations, SMEs are more likely to implement e-procurement systems (Eiadat et al, 2015; Martinez & Garcia-Sanchez, 2017).

Furthermore, the strength of normative forces is influenced by institutional factors such as government policies, regulations, and industry standards. When institutional forces align with normative forces, SMEs are more likely to adopt e-procurement systems. Normative forces can be manifested through various channels, such as institutional pressures, social expectations, and industry standards. These pressures can influence the attitudes and behaviors of SMEs towards e-procurement system implementation, shaping their perceptions of the importance and benefits of such systems (Oliveira & Martins, 2011; Chaudhury & Bharati, 2008).

Normative pressures from industry associations, trade organizations, and regulatory bodies can influence SMEs to adopt e-procurement systems as a standard practice in the industry. SMEs may feel compelled to

conform to these standards in order to gain legitimacy, credibility, and recognition from their peers and customers. Additionally, can promote knowledge-sharing and collaboration among SMEs, which can help to overcome barriers to e-procurement system implementation. For example, industry networks, communities of practice, and collaborative initiatives can facilitate the sharing of best practices, experiences, and resources, creating a supportive environment for SMEs to adopt and implement e-procurement systems (Zorn et al, 2011; Arshad et al, 2020).

Overall, normative forces can play a significant role in shaping SMEs' attitudes and behaviours towards e-procurement system implementation. Understanding these forces and their impact can help policymakers, industry associations, and other stakeholders to develop effective strategies for promoting e-procurement system adoption among SMEs. Based on the above theory hypothesis 1 is stated;

*H1: Normative pressures from industrial stakeholders and policymakers has a positive impact on e-procurement adoption/implementation among SMEs*

### **Memetics Forces**

Mimetic factors have their roots in mimetic isomorphism in organization theory. It posits that an institution or individual would mimic the behaviour of an organisation or individual if such behaviour were considered beneficial. During this process members of an institution turn to behave in a certain manner with the intention to be considered as superiors or gain particular status in-group. This level of imitation enables the deliberate transfer of attitude and behaviour to the individual over a period of time.

Mimetic factors, which refer to the tendency of organizations to imitate the behavior of others in their industry or environment, can have a significant impact on the implementation of e-procurement systems among SMEs. Mimetic pressures can create a sense of legitimacy around e-procurement system implementation among SMEs. SMEs may feel that they need to adopt e-procurement systems in order to be seen as legitimate and credible in their industry or market. This can be particularly strong when the SMEs perceive that other successful firms in their industry have implemented e-procurement systems (Honig & Karlsson, 2004; Li & Parboteeah, 2015).

It further aids to reduce uncertainty and risk associated with e-procurement system implementation. SMEs may be more willing to adopt e-procurement systems if they see that other firms in their industry have successfully implemented them. This can provide reassurance that the benefits of the system outweigh the costs and risks. Mimetic pressures can encourage SMEs to adopt best practices in e-procurement system implementation. By observing and imitating the behaviour of other successful firms, SMEs can learn about effective implementation strategies, potential pitfalls, and best practices in the use of e-procurement systems (Alshirah et al, 2021; Lutfi, 2020).

Summarily, mimetic factors can play a significant role in shaping SMEs' attitudes and behaviours towards e-procurement system implementation. Understanding these factors and their impact can help policymakers, industry associations, and other stakeholders to develop effective strategies for promoting e-procurement system adoption among SMEs. Hypothesis 2 is stated based on the above theoretical perspective.

*H2: Mimetic factors such as status and recognition from peers have a positive impact on the e-procurement adoption/implementation of SMEs.*

### **Coercive Forces**

Coercive factors are a critical dimension of the institutional framework. Coercive factors are pressure from the external environment that seeks to change the operational behaviour of organisations. Coercive forces, which refer to external pressures and regulations that compel organizations to adopt certain technologies, can have a significant impact on technology adoption among SMEs. These forces can mandate compliance with certain regulations or standards that require the adoption of specific technologies. For example, governments may require SMEs to adopt certain technologies in order to meet regulatory requirements, such as data protection, environmental standards, or workplace safety regulations (Martinez & Garcia-Sanchez, 2017; Honig & Karlsson, 2004).

It can also help to reduce the perceived risk associated with technology adoption. SMEs may be more willing to adopt new technologies if they see that there are regulations or standards in place that ensure the safety and reliability of the technology. This can provide a sense of reassurance that the benefits of the technology outweigh the risks. Furthermore, by imposing regulations or standards that require the use of new technologies, coercive forces can incentivize SMEs to invest in research and development and to explore new technological solutions to meet regulatory requirements (Larran, Herrera & Andrades, 2016; Papadimitriou & Westerheijden, 2010).

Overall, coercive forces can play a significant role in shaping SMEs' attitudes and behaviors towards technology adoption. However, it is important to note that coercive forces may not always be effective in promoting long-term, sustainable adoption of technology. SMEs may adopt technologies purely to meet

regulatory requirements, without fully understanding the potential benefits or risks of the technology. Therefore, it is important to combine coercive forces with other strategies, such as incentives, education, and support, to promote sustainable technology adoption among SMEs. Based on the above theory hypothesis 3 is stated;

*H3: Coercive factors have a positive impact on the adoption/implementation of e-procurement systems among SMEs.*

### **E-procurement Implementation and SME Performance**

The implementation of e-procurement systems can have a significant impact on the performance of SMEs. E-procurement systems can improve efficiency, reduce costs, and enhance competitiveness, leading to improved financial and non-financial performance outcomes. E-procurement systems can streamline procurement processes, reduce paperwork, and automate routine tasks, leading to significant time and cost savings for SMEs. This can improve the efficiency of procurement operations and free up resources that can be directed towards other areas of the business, such as product development or customer service. Improved efficiency can lead to cost reductions, increased productivity, and higher profitability for SMEs (Marei, 2022; Sanchez-Rodriguez et al, 2020).

The adoption and implementation of an e-procurement system facilitate an improvement in supplier management and relationship. E-procurement systems can also improve supplier management by providing SMEs with better visibility into their supply chain, allowing them to identify and mitigate risks, and negotiate better prices and terms with suppliers. This can lead to improved supplier performance, reduced supply chain disruptions, and increased customer satisfaction (Oh, Yang & Kim, 2014). Furthermore, e-procurement systems can enhance SMEs' competitiveness by improving their ability to respond to changing market conditions, customer demands, and competitive pressures. By adopting e-procurement systems, SMEs can improve their agility, flexibility, and responsiveness, allowing them to adapt quickly to changing business environments.

The implementation of e-procurement systems can have a positive impact on SME performance, leading to improved financial and non-financial outcomes. However, it is important to note that the impact of e-procurement implementation on SME performance may vary depending on a range of factors, such as the size and nature of the business, the industry context, and the specific implementation strategies used. Therefore, SMEs should carefully assess the potential benefits and risks of e-procurement system implementation before making a decision to adopt such systems. Based on the above theory, hypothesis 4 is stated;

*H4: the adoption/implementation of the e-procurement system has a positive impact on the organizational performance of SMEs.*

## **Methodology**

### **Method**

The study explored the impact of e-procurement on the performance of small and medium enterprises in Ghana. From an institutional theory perspective, the study investigates the consequence of e-procurement adoption/implementation on organizational performance.

To investigate the research question understudy, a quantitative approach is employed. Data was collected from key informants in the SME landscape.

### **Sampling Technique and Data Collection**

The study adopted purposive sampling to identify and collect data from the relevant organization – potential respondents were identified from the database of the Ghana Enterprise Agency (the Government agency responsible for SMEs). Contact information such as emails and phone numbers were acquired. The selected firms were contacted through electronic mail – these mails are meant to explain the purpose of the study and survey and to further invite firms/SMEs to participate in the survey.

The data collection period covered a period of 3 months – from November 2022 to January 2023. The response rate was 62% out of the 533 questionnaires sent out. The response rate translates into 330 answered responses. After accounting for missing variables, an incomplete questionnaire, the study utilized 250 complete questionnaires.

**Data Analysis**  
**Profile of Respondents**

	Frequency
<b>Gender</b>	
Male	170
Female	80
<b>Respondents Age (in years)</b>	
18 – 25	-
26 – 30	45
31 – 35	50
36 - 40	35
41 – 45	70
46 - 50	25
> 50	15
<b>Educational Background</b>	
Doctorate Degree	3
Master’s Degree	80
Bachelor’s Degree	167
High School Diploma	-
<b>Job Position</b>	
Head of Organization/Founder (e.g Director	98
Middle- Level Management (e.g head of operation, accounting, marketing/business development)	105
Line Manager	47
<b>Year organization has been in Existence</b>	
< 5	38
6 – 10	88
11 – 15	43
16 – 20	72
> 20	9
<b>Work Experience of respondents (in years)</b>	
< 5	40
6 – 10	58
11 – 15	91
16 – 20	39
> 20	21

**Descriptive Statistics**

The distribution and characteristics of data are outlined in table 2. Characteristics of data such as mean, standard deviation, kurtosis, and skewness. From the table, it can be seen that respondents on average agreed with the statement on the questionnaire. In furtherance examining the mean and skewness suggest the data had no issues of outliers, thereby requires no data transformation.

Table 2 Descriptive Statistics

Variables	Mean	Standard Deviation	Minimum	Maximum
MF1	4.231	2.202	2	6
MF2	3.678	0.457	1	6
MF3	4.892	1.912	1	7
NF1	4.213	4.891	1	7
NF2	5.098	1.360	1	7
NF3	3.456	2.202	1	7
CF1	4.981	1.089	3	6
CF2	6.121	0.247	3	6
CF3	4.891	1.820	2	7
CF4	4.342	1.002	3	7
EP1	4.019	0.566	3	7
EP2	3.564	1.318	3	7
EP3	4.679	1.459	2	7
EP4	3.274	1.018	3	7
OP1	5.184	1.263	2	5
OP2	5.789	1.219	2	6
OP3	5.190	1.285	2	7
OP4	4.876	1.119	2	7
OP5	4.342	1.002	3	7

**NOTE:** NF -Normative Forces, MF – Mimetic Forces, CF- coercive force, EP – E-procurement implementation, OP- organizational performance

#### Factor Analysis, Reliability and Validity of Constructs

To validate the indicators or scales under study, factor analysis is performed. Factor analyses would allow the researchers to determine which indicators have a high probability of predicting a specific unobserved variable. The scale factor validation or factor analysis is carried out in accordance with Hair et al (2014) techniques, which have been used in studies such as Henseler et al (2015) and Sarstedt & Mooi (2015).

To be considered a relevant measure for an unobserved variable, observed variables must have a numeric value of 0.5 or higher. Furthermore, Cronbach alpha and composite reliability techniques are used to assess the reliability of the obtained data. These methods would allow the researcher to statistically assess the internal consistency of measuring items. Furthermore, it can be used as a diagnostic tool to determine if there is a problem with multicollinearity and vice versa. These tests can determine the goodness of fit of a measurement model (Hair et al, 2014).

The average variance extracted test is used to assess the validity of measuring items. The average variance extracted test is used to evaluate a construct's discriminant validity. According to Fornell and Larcker (1981) and Henseler et al (2014), the AVE value should be greater than the highest squared correlation with any other latent variable. The table 3 presents the outcome of the factor analysis, reliability and validity tests.

	Loadings	Alpha	Composite	AVE
<b>Mimetic forces</b>				
MF1	<b>0.850</b>			
MF2	<b>0.779</b>	<b>0.764</b>	<b>0.828</b>	<b>0.787</b>
MF3	<b>0.672</b>			
<b>Normative Forces</b>				
NF1	<b>0.749</b>	<b>0.697</b>	<b>0.617</b>	<b>0.716</b>
NF2	<b>0.845</b>			
NF3	<b>0.580</b>			
<b>Coercive Forces</b>				
CF1		<b>0.898</b>		<b>0.738</b>
CF2	<b>0.823</b>		<b>0.873</b>	
CF3	<b>0.702</b>			
CF4	<b>0.654</b>			
	<b>0.893</b>			
<b>E-Procurement Adoption/Implementation</b>				
EP1	<b>0.868</b>	<b>0.810</b>	<b>0.789</b>	<b>0.749</b>
EP2	<b>0.713</b>			
EP3	<b>0.897</b>			
EP4	<b>0.613</b>			
<b>Organizational Performance</b>				
OP1	<b>0.817</b>			
OP2	<b>0.740</b>	<b>0.809</b>	<b>0.734</b>	<b>0.693</b>
OP3	<b>0.772</b>			
OP4	<b>0.213</b>			
OP5	<b>0.643</b>			

### Correlation Analysis

To examine the empirical relationship between different constructs correlation analysis is conducted. Although causal relationship cannot be made from correlation rest it aid in dealing with issues of high – inter variable correlation. High inter variable correlation in most cases results in the researcher arriving at findings that might be tainted with some form of biases and statistical anomalies. The correlation performed is between latent variables (independent variables such as mimetic forces, coercive forces, normative forces) and organizational performance among small and medium enterprises. Table 4 presents the outcome of the correlation analysis conducted for the study.

Table 4: Outcome of Correlation Test

Variables	1	2	3	4
Organizational Performance				
Mimetic Forces	0.171			
Normative Forces	0.521**	0.197		
Coercive Forces	0.245*	0.090	0.377*	
E-procurement adoption/implementation	0.140	0.303**	0.236	0.363

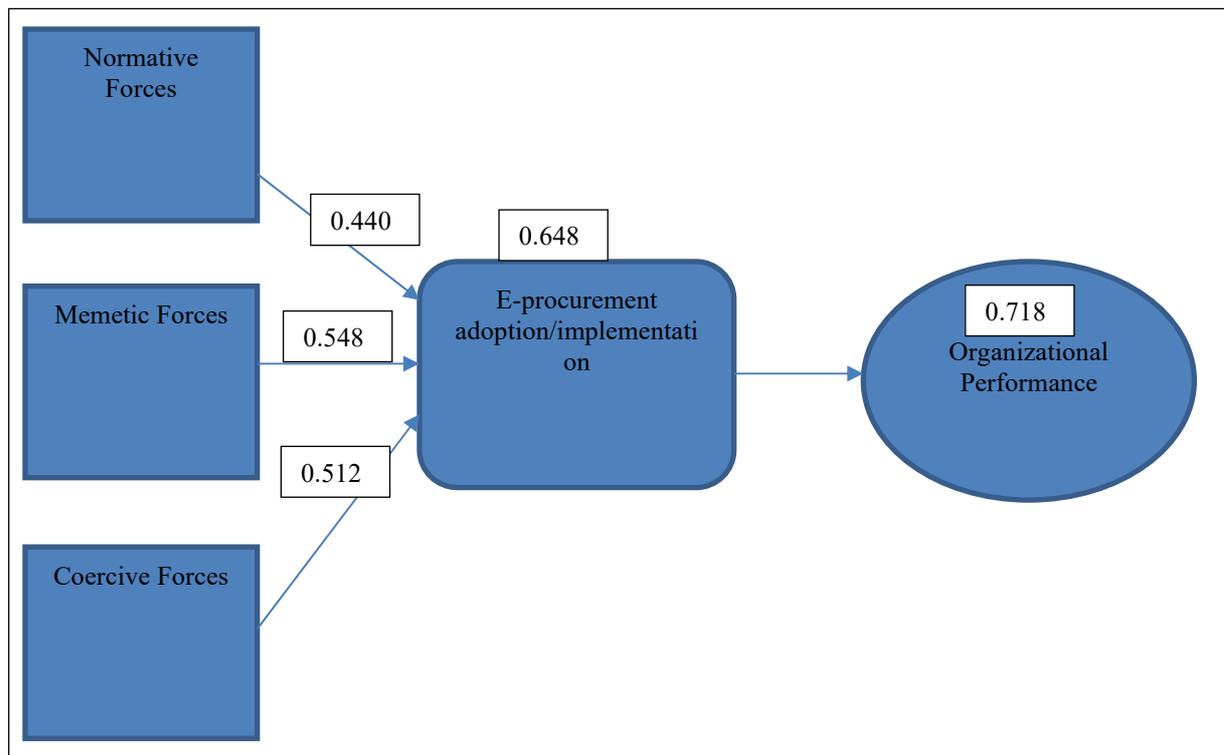
<sup>†</sup>P < .10, \* p < .05., \*\* p < .01., \*\*\*p < .001

### Path Analysis – Partial Least Square Structural Equation Modelling (SEM- PLS)

To examine the effect of e-procurement implementation on organizational performance of small and medium enterprises in Ghana, the study performed a partial least square structural equation modeling analysis. The outcome of the analysis indicates all the institutional forces had a positive and significant impact on the implementation of e-procurement systems. However, mimetic and coercive forces had most significant impact on e-procurement adoption and implementation. In summary, these forces can influence the implementation of an e-procurement system significantly judging by the R<sup>2</sup> value of 0.648.

Consequently, the adoption and implementation of e-procurement systems among small and medium enterprises is acknowledged to impact the performance of firms. E-procurement ensure open and transparency in the transaction. Additionally, the stated hypotheses were tested using the r-test statistics. The outcome of the test indicates the findings support the hypotheses of the study. The outcome of the empirical test is presented in

figure 1. Outcome of the hypotheses test is present in table 5.



### Outcome Hypotheses Testing

To test the stated hypothesis t- a statistics test is conducted. A benchmark index of 1.96 or higher to used to accept or reject a hypothesis. Table 5 shows the result of the hypothesis test. The outcome of the t-statistics test support all stated hypotheses.

Hypotheses	T-statistics value	Decision
Normative forces → E-procurement adoption/implementation	2.699	Supported
Mimetic forces → E-procurement adoption/implementation	5.485	Supported
Coercive force → E-procurement adoption/implementation	4.008	Supported
E-procurement adoption/implementation → Organizational Performance	7.608	Supported

### Discussion

The findings of the study indicate mimetic forces have a significant influence on e-procurement adoption/implementation. The influence of members in a particular network has been acknowledged to shape the behaviour of individuals. Actors in particular organizations and institutions turn to mimic the behaviour of adjacent institutions. The social capital enjoyed by an individual for being a member of a particular group is documented to influence the performance and productivity of small and medium enterprises. From an institutional theory perspective, individual parts of a complex system like organisations need to function coherently to ensure success. One significant characteristic of inter-firm is the degree to which individual turns to influence the behaviour of each other.

One of the significant ways in which memetic forces have positively impacted e-procurement implementation among SMEs in Ghana is through the adoption of innovative technologies. SMEs in Ghana have been able to adopt and implement e-procurement technologies such as online bidding, e-tendering, and online supplier registration due to the influence of memetic forces. This has led to increased efficiency, reduced costs, and improved transparency in the procurement process among SMEs in Ghana. Furthermore, memetic forces have also positively impacted e-procurement implementation among SMEs in Ghana by promoting a culture of transparency and accountability. The increased transparency and accountability in the procurement process have been facilitated by the influence of memetic forces such as public scrutiny and stakeholder engagement.

The successful adoption and implementation of e-procurement among Small and Medium Enterprises (SMEs) in Ghana have been influenced by various normative forces. Normative forces refer to the social and cultural norms, values, and beliefs that shape the behaviour and decision-making processes of individuals and groups. Normative forces have positively impacted e-procurement implementation among SMEs in Ghana by

promoting ethical and responsible behavior. The cultural and moral values of Ghanaians promote integrity, honesty, and transparency in business practices. These values have been applied in the procurement process, leading to a reduction in corrupt practices and promoting fair competition among SMEs. The promotion of ethical behavior has created an enabling environment for e-procurement implementation, which requires high levels of transparency and accountability.

In addition, normative forces have positively impacted e-procurement implementation among SMEs in Ghana by promoting the use of electronic payments. The cultural norm of trust has encouraged the use of electronic payments in Ghana. SMEs have embraced electronic payments as a way of promoting transparency, and efficiency, and reducing the cost of doing business. The use of electronic payments has also improved the cash flow of SMEs, making it easier for them to participate in e-procurement processes.

Coercive forces have positively impacted e-procurement implementation among SMEs in Ghana by promoting compliance with regulations and laws. The government of Ghana has introduced laws and regulations that mandate the use of e-procurement systems by all public institutions. SMEs that supply goods and services to these public institutions must comply with these regulations, leading to increased adoption and implementation of e-procurement systems. It further promotes the use of electronic signatures. The government of Ghana has introduced regulations that require the use of electronic signatures in e-procurement processes. SMEs that fail to comply with these regulations risk losing government contracts, leading to increased adoption and implementation of electronic signatures.

Summarily, coercive forces have played a significant role in promoting the adoption and implementation of e-procurement among SMEs in Ghana. The use of regulations and laws has been effective in promoting compliance and promoting the use of electronic signatures and secure e-procurement platforms. The positive impact of coercive forces have led to increased efficiency, reduced costs, and improved transparency in the procurement process among SMEs in Ghana.

The adoption and implementation of e-procurement among Small and Medium Enterprises (SMEs) in Ghana have been associated with several positive impacts on organizational performance. E-procurement implementation has positively impacted organizational performance by reducing the time and cost of procurement processes. E-procurement systems allow for the automation of the procurement process, reducing the need for manual interventions, and improving the efficiency of the procurement process. This has resulted in faster procurement cycles, reduced procurement costs, and improved accuracy in procurement activities, leading to increased organizational performance.

E-procurement implementation has positively impacted organizational performance by improving supplier relationships. E-procurement systems provide SMEs with access to a broader pool of suppliers, enabling them to identify and collaborate with the best suppliers in the market. This has resulted in improved supplier relationships, increased trust and confidence, and better negotiation of contracts, leading to improved organizational performance. It provides SMEs with real-time visibility into procurement activities, making it easier to monitor and track procurement processes. This has resulted in increased transparency and accountability in procurement activities, leading to improved organizational performance.

In conclusion, the implementation of e-procurement among SMEs in Ghana has had a significant positive impact on organizational performance. The adoption of e-procurement systems has led to improved efficiency, reduced procurement costs, improved supplier relationships, increased transparency, and accountability, leading to improved organizational performance. SMEs in Ghana that has implemented e-procurement systems have realized significant benefits and remain competitive in the market.

## **Conclusion**

The central theme of the study is to investigate the impact of e-procurement adoption and implementation on the performance of small and medium (SME) enterprises in Ghana. Using the institutional theory as a theoretical lens, the study examined the effect of memetic forces, normative forces and coercive forces on the adoption and implementation of e-procurement adoption and implementation among SMEs in Ghana. It further examines the consequence of e-procurement implementation on the performance of SMEs. The study draws on data from the SME landscape of Ghana. In total, the study examined four (4) stated hypotheses. The findings of the study indicate institutional forces collectively and individually contributes to the adoption and implementation of e-procurement system among SMEs.

The study found that normative forces such as social norms and shared beliefs, as well as memetic forces such as knowledge sharing and collaboration, played a significant role in promoting e-procurement adoption among SMEs in Ghana. Additionally, coercive forces such as regulations and laws played a critical role in promoting compliance with e-procurement adoption and use of electronic signatures and secure e-procurement platforms.

The study highlights the need for SMEs in Ghana to embrace e-procurement systems to remain competitive in the market. The adoption of e-procurement systems not only provides SMEs with access to a broader pool of

suppliers but also improves the efficiency of procurement processes, reducing costs and improving accuracy. Furthermore, e-procurement systems promote transparency and accountability, leading to improved supplier relationships and negotiation of contracts.

The findings of this study have significant implications for policy makers, SMEs, and other stakeholders in the procurement process in Ghana. Policymakers can use the study findings to develop policies and regulations that promote e-procurement adoption among SMEs. SMEs, on the other hand, can use the study findings to identify the benefits of e-procurement adoption and make informed decisions on implementing e-procurement systems.

In conclusion, the study findings provide evidence that e-procurement adoption among SMEs in Ghana leads to improved organizational performance. Future research should focus on identifying the barriers to e-procurement adoption among SMEs in Ghana and developing strategies to overcome these barriers.

Inasmuch as the study makes some interesting contribution to the field of small and medium enterprise management and information systems, there are some limitation that can be addressed in future research. Future studies should adopt a longitudinal approach to examine how factor changes or influence e-procurement implement and organizational performance over time. The study proposes future studies should utilize covariance based approach to structural equation modelling so as to enable the inclusion of control variables. The addition of control variables might help deal with the issues of omitted variable bias.

## Reference

- Adjei-Bamfo, P., Domfeh, K. A., Bawole, J. N., Ahenkan, A., Maloreh-Nyamekye, T., Adjei-Bamfo, S., & Darkwah, S. A. (2020). An e-government framework for assessing readiness for public sector e-procurement in a lower-middle income country. *Information Technology for Development, 26*(4), 742-761.
- Alshirah, M., Lutfi, A., Alshirah, A., Saad, M., Ibrahim, N. M. E. S., & Mohammed, F. (2021). Influences of the environmental factors on the intention to adopt cloud based accounting information system among SMEs in Jordan. *Accounting, 7*(3), 645-654.
- Arshad, M., Farooq, M., Afzal, S., & Farooq, O. (2020). Adoption of information systems in organizations: Understanding the role of institutional pressures in a collectivist culture. *Journal of Enterprise Information Management, 33*(2), 265-284.
- Chaudhury, A., & Bharati, P. (2008). IT outsourcing adoption by small and medium enterprises: A diffusion of innovation approach. *AMCIS 2008 Proceedings*, 390.
- Chawla, R. N., & Goyal, P. (2022). Emerging trends in digital transformation: a bibliometric analysis. *Benchmarking: An International Journal, 29*(4), 1069-1112.
- Eei, K. S., Husain, W., & Mustaffa, N. (2012). Survey on benefits and barriers of e-procurement: Malaysian SMEs perspective. *International Journal on Advanced Science Engineering Information Technology, 2*(6), 14-19.
- Hassan, H., Tretiakov, A., & Whiddett, D. (2017). Factors affecting the breadth and depth of e-procurement use in small and medium enterprises. *Journal of Organizational Computing and Electronic Commerce, 27*(4), 304-324.
- Ko, W. W., Chen, Y., Chen, C. H. S., Wu, M. S. S., & Liu, G. (2021). Proactive environmental strategy, foreign institutional pressures, and internationalization of Chinese SMEs. *Journal of World Business, 56*(6), 101247.
- Kostova, T., Nell, P. C., & Hoenen, A. K. (2018). Understanding agency problems in headquarters-subsidiary relationships in multinational corporations: A contextualized model. *Journal of Management, 44*(7), 2611-2637.
- Kraus, S., Jones, P., Kailer, N., Weinmann, A., Chaparro-Banegas, N., & Roig-Tierno, N. (2021). Digital transformation: An overview of the current state of the art of research. *Sage Open, 11*(3), 21582440211047576.
- Lutfi, A. (2020). Investigating the moderating role of environmental uncertainty between institutional pressures and ERP adoption in Jordanian SMEs. *Journal of Open Innovation: Technology, Market, and Complexity, 6*(3), 91.
- Mady, K., Abdul Halim, M. A. S., Omar, K., Abdelkareem, R. S., & Battour, M. (2022). Institutional pressure and eco-innovation: The mediating role of green absorptive capacity and strategically environmental orientation among manufacturing SMEs in Egypt. *Cogent Business & Management, 9*(1), 2064259.
- Marei, A. (2022). The effect of e-procurement on financial performance: Moderating the role of competitive pressure. *Uncertain Supply Chain Management, 10*(3), 855-866.
- Mavidis, A., & Folinis, D. (2022). From Public E-Procurement 3.0 to E-Procurement 4.0; A Critical Literature Review. *Sustainability, 14*(18), 11252.
- Mélon, L., & Spruk, R. (2020). The impact of e-procurement on institutional quality. *Journal of Public Procurement, 20*(4), 333-375.
- Mohungoo, I., Brown, I., & Kabanda, S. (2020). A systematic review of implementation challenges in public E-

- Procurement. In *Responsible Design, Implementation and Use of Information and Communication Technology: 19th IFIP WG 6.11 Conference on e-Business, e-Services, and e-Society, I3E 2020, Skukuza, South Africa, April 6–8, 2020, Proceedings, Part II 19* (pp. 46-58). Springer International Publishing.
- Naeem, M. (2021). Uncovering and addressing the challenges in the adoption of E-procurement system: Adoption process stages in SMEs. *International Journal of Information Systems and Supply Chain Management (IJISSCM)*, 14(1), 1-22.
- Oh, S., Yang, H., & Kim, S. W. (2014). Managerial capabilities of information technology and firm performance: role of e-procurement system type. *International Journal of Production Research*, 52(15), 4488-4506.
- Oliveira, T., & Martins, M. F. (2011). Literature review of information technology adoption models at firm level. *Electronic journal of information systems evaluation*, 14(1), pp110-121.
- Osei-Kyei, R., & Chan, A. P. (2017). Implementing public–private partnership (PPP) policy for public construction projects in Ghana: critical success factors and policy implications. *International journal of construction management*, 17(2), 113-123.
- Sánchez-Rodríguez, C., Martínez-Lorente, A. R., & Hemsworth, D. (2020). E-procurement in small and medium sized enterprises; facilitators, obstacles and effect on performance. *Benchmarking: An International Journal*, 27(2), 839-866.
- Schoenherr, T., & Tummala, V. R. (2007). Electronic procurement: a structured literature review and directions for future research. *International Journal of Procurement Management*, 1(1-2), 8-37.
- Tutu, S. O., Kissi, E., Osei-Tutu, E., & Desmond, A. (2019). Evaluating critical factors for the implementation of e-procurement in Ghana. *International Journal of Procurement Management*, 12(1), 1-14.
- Zorn, T. E., Flanagan, A. J., & Shoham, M. D. (2011). Institutional and noninstitutional influences on information and communication technology adoption and use among nonprofit organizations. *Human communication research*, 37(1), 1-33.