

International Journal of Procurement Management

ISSN online: 1753-8440 - ISSN print: 1753-8432

https://www.inderscience.com/ijpm

Impact of strategic procurement participation and role conflict on procurement performance: a perspective of municipal and district assemblies in the Upper East Region of Ghana

Mustapha Torobo Seidu, Bright Junior Tanzubil, John Ayuekanbey Awaab, Ibrahim Mohammed

DOI: 10.1504/IIPM.2023.10056412

Article History:

Received: 18 February 2023 Last revised: 22 February 2023 Accepted: 05 March 2023 Published online: 05 April 2024

Impact of strategic procurement participation and role conflict on procurement performance: a perspective of municipal and district assemblies in the Upper East Region of Ghana

Mustapha Torobo Seidu*

Department of Procurement and Logistics Management, Bolgatanga Technical University, Post Office Box 767, Upper East Region, Ghana Email: mtseidu@bolgatu.edu.gh *Corresponding author

Bright Junior Tanzubil

Department of Procurement and Logistics Management, Bolgatanga Technical University, Upper East Region, Ghana Email: btanzubil@bolgatu.edu.gh

John Ayuekanbey Awaab

Department of Statistics, Bolgatanga Technical University, Upper East Region, Ghana Email: awaabjohn@gmail.com

Ibrahim Mohammed

Department of Procurement and Logistics Management, Bolgatanga Technical University, Upper East Region, Ghana Email: mibrahim@bolgatu.edu.gh

Abstract: The public procurement function in local government assemblies facilitate the implementation of government policies which may translate into significant social and economic outcomes that improve communities' wellbeing. Consequently, strategic procurement participation and role conflict have attracted great attention as these concepts have the potential to influence the procurement function's contribution to public organisations' performance. This study examines the effect of strategic procurement participation and role conflict on the procurement function performance of local government assemblies in the Upper East of Ghana. Institutional theory underpins this empirical research and the study follows a quantitative research approach, using a questionnaire to collect data from nine municipal and district assemblies (MDAs). A multiple regression model was used to test the theoretical model and the research confirms that strategic procurement

participation activities have a strong direct influence on procurement function's performance. However, role conflict was found to be negatively related to procurement performance.

Keywords: strategic procurement participation; SPP; role conflict; public procurement; procurement performance; Ghana.

Reference to this paper should be made as follows: Seidu, M.T., Tanzubil, B.J., Awaab, J.A. and Mohammed, I. (2024) 'Impact of strategic procurement participation and role conflict on procurement performance: a perspective of municipal and district assemblies in the Upper East Region of Ghana', *Int. J. Procurement Management*, Vol. 20, No. 1, pp.106–124.

Biographical notes: Mustapha Torobo Seidu is a PhD candidate reading Supply Chain Management at the Ghana Institute of Management and Public Administration (GIMPA), Ghana, and completed his MSc in Supply Chain Management from Coventry University, UK. He is a Lecturer at the Department of Procurement and Logistics Management, Bolgatanga Technical University. Some courses he teaches include procurement and supply environment, measuring procurement performance, supply chain diligence, supply chain sustainability, and logistics and transportation management. His research interests are public procurement, sustainability management and humanitarian logistics.

Bright Junior Tanzubil is a Lecturer with the Department of Procurement and Logistics Management at Bolgatanga Technical University, Ghana. He is currently a PhD candidate in Transportation and Logistics with the Malaysia University of Science and Technology, Malaysia. He holds a Master of Business Administration from the Kwame Nkrumah University of Science and Technology (Kumasi) with specialisation in Logistics and Supply Chain Management and Bachelor of Science in Agricultural Technology from University for Development Studies (Tamale) with specialisation in Agriculture Economics and Extension. He has been teaching various courses in supply chain management, project management, logistics management, sustainable supply chain management and warehouse management. His areas of research interest include green supply chain management, service operations management, logistics management, logistics management, sustainable public procurement.

John Ayuekanbey Awaab is a PhD candidate in Medical Statistics at the CK Tedem University of Technology and Applied Sciences, Navrongo, Ghana. He is currently a part time Lecturer at the Department of Statistics, Bolgatanga Technical University. His research interests include time series analysis and modelling.

Ibrahim Mohammed holds an MPhil in Logistics and Supply Chain Management, and an Assistant Lecturer in the Department of Procurement and Logistics Management of Bolgatanga Technical University. He is a currently a PhD student reading Supply Chain Management at the SD Dombo University of Business and Integrated Development Studies, Wa, Ghana. His areas of interest in research include inventory management, supply chain risk management and procurement management.

1 Introduction

The strategic positioning of the procurement function in public organisations has been widely acknowledged among practitioners and academics as there has been a significant shift in roles of procurement; from administrative and transactional tasks to one that involves strategic partnerships, innovation, risk assessment and supply base management (Arshoff et al., 2012; Carr and Smeltzer, 1997; Handfield and Nichols, 2004; Tassabehji and Moorhouse, 2008). Prior research attributes the changing roles and status of the procurement function in public organisations to changes in the macroeconomic fundamentals within which it operates (Cragg and Chraibi, 2020). These macroeconomic contextual issues include globalisation, increase demand of value for money by tax payers, unstable supply environment and corporate social responsibility (Giunipero et al., 2005; Zheng et al., 2007).

Similarly, the value and volume of public procurement (PP) activities contribute to this new status of procurement in public organisations. For instance, Organisation for Economic Cooperation and Development (OECD, 2019) indicate that PP accounts for a third of government spending. In emerging economies, the procurement of goods and services amounts to an average of 25% of gross domestic product (GDP) (Basheka and Bisangabasaija, 2010; Bhagat, 2017). In the case of Ghana, after personal emoluments, PP is estimated around 50%–70% of the national budget (Osei-Tutu et al., 2011).

These developments have transformed and widened the scope of the PP function to include facilitating an organisation-wide performance improvement (Murray, 2009; Rajagopal and Bernard, 1993). Thus, public organisations could become dysfunctional if it fails to adapt its organisational structures to these new paradigms (Cousins et al., 2006; Lowe et al., 2021). PP involves the purchase of goods, services, and works by governments and state-owned enterprises for national developments (OECD, 2019). PP is an essential function as policymakers use it to influence the effectiveness of public spending and the utilisation of public resources. For example, at the local assembly level, an efficient procurement function can generate a substantial difference in the fight against poverty by achieving government policy objectives (Kihamba, 2021; McDonald, 2008).

However, public organisations are finding it difficult to utilise PP to deliver performance (Santos and Cabral, 2022). Reasons attributed to the procurement function's inability to bring about the necessary deliverables (i.e., cost reduction, fitness for use, innovation, lead-time) include difficulties in managing new roles like buyer-supplier relationships, procurement planning and implementation (Changalima et al., 2021; Fourie and Malan, 2020). Additional challenges borders on organisational structural factors including the decentralisation or centralisation of procurement activities (Johnson et al., 2006; Patrucco et al., 2021), power structure and control (Glock and Hochrein, 2011; Pearson et al., 1996) and participation in strategic decision-making (Lakemond et al., 2001; Luzzini and Ronchi, 2016). Nonetheless, extant literature suggests that activities like strategy formulation and planning, defined roles and responsibilities, and risk management can mitigate the non-performance of the procurement function (Plantinga et al., 2020). A combination of the proposed mitigation measures for improving the non-performance of the procurement function is referred to as strategic procurement participation (SPP) (Cousins et al., 2006; Giunipero et al., 2005; Gonzalez-Benito, 2007). These researchers define SPP as the degree to which the procurement function participates in strategic planning, supply base management and inputs refinement. SPP may also include participation in the formulation of organisational goals and in corporate strategy meetings (Bergman and Lindegren, 2022).

As a result, a comprehensive implementation of SPP would require that staff take on multiple roles at the same time. The aforementioned organisational-related factors reflect the changing responsibilities of the procurement unit in public organisations (Zheng et al., 2007). Procurement managers and other key officers (i.e., planning, budget, finance, coordinating director, works and internal audit) manage new product/service development, financial planning and control, supply and distribution planning (Handfield and Lawson, 2007). They experience stress when there is conflicting information emanating from poor or nonexistent communication. This may lead to role conflict; a situation where there is incompatibility in roles and expected outcomes (Ilgen and Hollenbeck, 1991; Nambisan and Baron, 2021). Particularly, when an employee's intended set of actions and the actual behaviours are contrary (Katz and Kahn, 1978).

Governments through local assemblies are expected to deliver value added services, build and/or maintain infrastructure. However, the unsatisfactory performance of PP affects local development and social cohesion (Basheka, 2008; Rogerson, 2018). PP performance research has been conducted for decades to address the unsatisfactory performance (Loader, 2015; Musanzikwa, 2013). In search for solutions to the poor performance, previous studies have focused on the non-compliance and non-competitiveness of the PP processes (Broms et al., 2019; Chikwere et al., 2019), with little attention to the participation of key procurement actors in strategic activities (Glock and Broens, 2013; Patrucco et al., 2021). Thus, the PP management literature on procurement performance is deficient in addressing the peculiarity of strategic procurement activities (Harland et al., 2021; Matthews, 2005; Murray, 2007). More so, public organisations are system oriented; with roles and social interactions happening throughout the role-system. The role system encompasses the design, development and management of organisations. Dealing with these complexities is a central question, hence, it is critical to understand how role conflict are related to work performance (Katz and Kahn, 1978). Few scholars have tried to provide empirical studies that examined the relationship between SPP, RC and procurement performance (Nair et al., 2015; Quayle, 1998). Furthermore, there have been calls for more empirical evidence on influence role conflict on performance (Fisher, 2001; Viator, 2001).

This article examines the empirical relationship between a set of strategic procurement practices and attributes of incompatibility in roles of local assembly staff, and their effects on PP performance in the context of municipal and district assemblies (MDAs) in the Upper East Region of Ghana. Our investigation is significant for both academics and public administration managers as it has the prospect to shed light on strategic procurement practices and sources of incompatibility of roles in local government assemblies. Additionally, it supports and develops our understanding of SPP practices and incompatibility in roles as applied in local assemblies to spur sterling PP performance. This study is also significant as it improves the comprehension and application of SPP and RC in institutional regulations and training programmes in MDAs.

The rest of the paper is structured as follows. Section 2 presents the theoretical foundation and research hypotheses. Section 3 discusses the research methodology with focus on the population, sampling and data collection. In Section 4, we present the results and discussion, then in Section 5, we discussed the theoretical and managerial

implications of the research. Section 6 presents the conclusions, limitations of the study and suggestions for further research.

2 Theoretical foundation and research hypotheses

The study is anchored by the assumptions of the institutional theory. Drawing on the concepts of this theory, we examine the effects of SPP and role conflict on procurement performances. The conceptual model is presented in Figure 1.

Figure 1 Conceptual framework (see online version for colours)



2.1 Institutional theory

The institutional theory explains how the evolution of formal structures in organisations is influenced by the social and environmental context. It also relate to the more complex aspects of social structure that is reflected by the effects of implementing norms, rules and routines in organisations (Kauppi, 2013). According to Grob and Benn (2014), the institutional theory is commonly used to describe how new practices are adopted in organisations and the numerous roles that must be performed by staff to enable the improvement of organisational performance.

While previous conceptualisations of institutional theory focus on the direct constraint of institutions on human resource management, Lewis et al. (2019) opine that the institutional theory can be applied to address the day-to-day level operations of organisations and explore how staff behaves when new operational measures are introduced. This theory has been used to explain the acceptance and dissemination of formal organisational structures, such as written policies, standard procedures, and novel forms of business operations (Dávid-Barrett and Fazekas, 2020). Dagilienė and Nedzinskienė (2018) adopted the institutional theory to evaluate the impact of institutional factors on non-financial reporting systems in public institutions. In the field of procurement management, several authors (Loosemore et al., 2021; Rolfstam, 2012; Schlecht and Spiller, 2009) have adopted the institutional theory to investigate the adoption of innovative strategic procurement strategies in various industries.

Therefore, in accordance with the institutional theory, as SPP activities are implemented in the MDAs, the staff will be required to assume multiple roles and participate effectively in all organisational operations to ensure improvements in the procurement performance.

2.2 Hypotheses development

2.2.1 SPP and procurement performance

Attributing strategic importance to the procurement function in public organisations has generated enormous debate (Johnson et al., 2012; Knoppen and Sáenz, 2015). Despite the debate, several studies posit that the status of the procurement unit within organisations affects procurement's ability to contribute to value creation (Luzzini and Ronchi, 2016; Schneider and Wallenburg, 2013). For example, Nani and Ali (2020) argue that buyers' interaction with suppliers play an important role in the procurement of goods and services that are required for service delivery in public organisations. Additionally, some practitioners assert that procurement's capacity to manage cost, quality, on time delivery, flexibility, and innovation are indicators of the strategic influence of the procurement unit in public organisations. In the automotive and chemical industries, the cost of procurement and supply management operations can be as high as 70% of the cost of items sold (Quinn, 2005).

These claims have pushed for effective and efficient procurement management. One significant approach by which the procurement unit can contribute is to be actively involved in strategic decision-making (Iyer, 1996; Rajagopal and Bernard, 1993; Saad et al., 2016), as earlier studies suggest that the status of procurement in the organisation can influence organisational processes and outcomes (Carr and Pearson, 2002; Cousins et al., 2006). Again, literature has emphasised the need for the procurement department to align with the overall organisational strategies for improved performance (Hardt et al., 2007; Schoenherr et al., 2012).

These actions and suggestions reflect SPP. SPP refers to the procurement function's participation in strategic planning processes including aligning the supply base with broad organisational goals that affects changes to goods, works or services needed to deliver services (Chen and Paulraj, 2004; Gonzalez-Benito, 2007). Actualising these strategic activities in organisations significantly influence the performance of procurement. Hence, achieving the procurement targets can guarantee reduction in cost, technical and financial risks, increased profitability, improvement in quality of supplies and operational flexibility (Hong and Kwon, 2012; Monczka and Trent, 1991; Porter, 1985).

Many scholars have applied different non-conventional key performance areas including alignment between organisational and procurement strategies to measure PP performance (Diggs and Roman, 2012; Patrucco et al., 2016). Other areas are customer service and the general improvement in the well-being of communities (Kakwezi and Nyeko, 2019; Rendon, 2008; Uyarra and Flanagan, 2010). The link between SPP and procurement performance has been explored in earlier studies. Smith and Conway (1993) identified seven key success factors, including a clear procurement strategy, efficient management information and control systems, the development of expertise, a role in corporate management, an entrepreneurial and proactive approach, coordination, and focused efforts, as the critical success factors that drive procurement performance. Other researches have provided evidence for the association between SPP and performance (Cousins et al., 2006). Thus, creating participatory opportunities is essential to procurement performance in organisations (Talluri et al., 2013). Based on the literature discussed above, we hypothesise that:

H₁ SPP is positively related with procurement performance.

2.2.2 Role conflict and procurement performance

The extent of procurement function's authority, responsibility, and power is an area of interest to many scholars of procurement management research as the execution of sound PP has great social, environmental and economic consequences (Choi, 2010; Gordon Murray, 2009; Manu et al., 2021; Patrucco et al., 2017; Thai, 2001). In a typical hierarchical organisation as seen in many public organisations, there are challenges that relate to the multifaceted roles played by staff involved in the acquisition of goods, works and services. However, a significant challenge to the optimum performance of staff engaged in the procurement activity has to do with the 'unity of command' during the performance of roles (Rizzo et al., 1970). Staff are challenged due to the uncertainty about whom to obey and the possibility of contradictory orders from different superiors (Marume and Jubenkanda, 2016). This makes it impossible to achieve the maximum benefits involved in coordinated efforts as associated with PP. Rizzo et al. (1970) suggest that role conflict is the result of incompatibility between the demands and expectations of a role, with compatibility being determined by several factors that have an impact on role performance. Role conflict is the degree to which staff perceives demands within one function that are incompatible with pressures emanating from another role (Arumugham et al., 2012; Coverman, 1989; King and King, 1990). This definition enables a thorough comprehension of the role conflict concept. Hence, staff would experience role conflict if they are required to perform at least two or more tasks simultaneously (Avey et al., 2011).

Extant literature has established a link between the level of role conflict employees experience at work and dysfunctional outcomes such as job-induced stress and anxiety, job dissatisfaction and poor organisational performance (House, 1974; Parayitam et al., 2021; Rizzo et al., 1970). Apart from the poor performance at work, high levels of role conflict exposes employees' odd behaviours which culminant into sentiments of rage, exasperation and anxiety (Fisher, 2002). These organisational intricacies could lead to unsatisfactory organisational performance. Jones (1993) on the other hand highlight the benefits of role conflict claiming that encountering opposing roles on a regular basis is likely to make staff more adaptable and opened to a wider range of information sources. Additionally, Jones and George (2009) proposed that an extensive set of formal norms and standard operating procedures serve as a bureaucratic control mechanism that shapes and manages the behaviour of staff. Jones and George's (2009) assertion that strict rules and control systems would be necessary for an effective operations of procurement activities have been corroborated in the procurement management literature (Agaba and Shipman, 2007; Chimwani et al., 2014; Patrucco et al., 2016).

The extant literature on role conflict and job performance has been the subject of prior studies with mixed results. For instance, Fisher (2001) and Viator (2001) found that role conflict has a negative impact on job performance. Evidence contradicts earlier findings (Lenaghan and Sengupta, 2007). Based on the extant review of literature above, we hypothesise that:

H₂ Role conflict has a positive effect on procurement performance.

3 Research methodology

3.1 Population

The study's population include staff (i.e., planning officer, budget officer, finance officer, coordinating director, procurement officer, works officer and internal audit officer) from the 15 MDAs of the Upper East Region. Two officers (i.e., head and deputy) of interest in each category of unit of the MDA constitute the population of 210 (15 * 14).

3.2 Sampling

A stratified-cluster sampling approach was used to collect data from the field. Thus, a total of nine municipal/district assemblies were sampled and all staff categories/structures within the selected district/municipality interviewed. Thus, the total sample for the study was 126 (9 * 14) staff.

3.3 Data collection

126 questionnaires were administered employing a survey consisting of a seven-point Likert scale. 103 of the 126 (non-response rate of 18.3%) questionnaires sent out were deemed to be complete, while 23 were not because of incompleteness and non-response.

3.4 Data analysis

Data cleaning was done prior to data analysis to ensure that all data were accurate. To determine the impact of the SPP and RC on PP, a multiple regression analysis was applied after the data had been transformed. The underlying constructs (SPP, RC) as retained by the factor analysis procedure were the predictor variables whereas the construct PP was considered the response variable. Thus, representing the model in a matrix form (Westfall and Arias, 2020).

$$Y = \beta X + e$$

where the *X* denotes the vector of covariates of interest (latent construct on SPP and RC), *Y* denotes the procurement performance and *e* denotes the error component.

It is understood from the introductory explanation by Afifi et al. (2011) that factor analysis is a statistical technique for data reduction whose application serves to reduce the number of variables in an analysis by describing the linear combinations of the variables that contain most of the information and that acknowledge meaningful interpretations. Thus, if there are p variables in an analysis, factor analysis finds a few common factors that linearly reconstruct the p original variables:

$$y_{ij} = \beta_{1i} x_{i1} + \beta_{2i} x_{i2} + \dots + \beta_{qi} x_{iq} + e_{ij}$$

where

 y_{ij} the value of the i^{th} observation on the j^{th} variable

 x_{ik} the i^{th} observation on the k_{th} common factor

- β_{ki} the set of linear coefficients called factor loadings
- e_{ij} residual or the j^{th} variable's unique factor.

In the current study, factor analysis was used to identify the underlying constructs on the SPP, role conflict and procurement performance.

3.5 Construct measurement

Valid measures were obtained by reviewing literature and adapting multi-item scales to measure SPP, role conflict and procurement performances. All indicators were weighed by employing the seven points Likert scale 7 (strongly disagree, disagree, somewhat disagree, neither agree nor disagree, somewhat agree, agree, strongly agree). The construct are discussed below:

- SPP: A four-item scale was adapted to measure SPP. All items relate to internal integration that demonstrates joint efforts from all key participants in the execution of the procurement function in local government assemblies (Gadde and Håkansson, 1994; Nair et al., 2015).
- Role conflict: The measurement items of role conflict were adapted from Rizzo et al. (1970) which emphasise conflict arising from playing more than two roles by a staff resulting in incompatible actions and changes in behaviour. Also of interest were the conflicting organisational demands and expectations that took the form of incompatible policies. Less attention was placed on the competing demands from other parties and divergent evaluation criteria. This construct has four items.
- Procurement performance: Items for procurement performance was adopted from Chao et al. (1993), Johnson et al. (2002) and Krause et al. (2001) which measures both the strategic and operational aspects of procurement performance. Innovation reflects the strategic dimension of procurement success whereas operational procurement performance is measured in the areas of cost, quality, delivery and flexibility performance.

4 Results and discussion

A regression analysis was conducted using STATA to test the hypotheses. In the field of procurement and supply chain management research, testing many independent variables effect on a dependent variable using multiple regression models is a common practice. First, the normality assumptions were tested, but there was no significant violation. Then, the research model for the study was analysed to determine the reliability of the constructs of the study. According to Hair et al. (2013), a research construct with Cronbach's alpha (α) loading of 0.7 or above is held to have fulfilled the threshold for internal consistency reliability. Based on the data presented in Table 1, all constructs in the research model exhibited loadings exceeding 0.7, ranging from 0.794 to 0.904. Hence, all the research constructs (SPP, RC and PP) used for this study demonstrated satisfactory construct reliability.

The R^2 in Table 2 indicate the level of variation of the dependent variable by the independent variables. The R^2 of 60.7% denotes that 60.7% of the variations in

procurement performance of MDAs can be explained by SPP. Hence, the research model is a significant predictor of the procurement performance of MDAs in the Upper East Region of Ghana.

Table 1 Reliability analysis

Items	Alpha	
SPP	0.822	
RC	0.794	
PP	0.904	

 Table 2
 Regression analysis of procurement performance

	Estimates (SE)	Confidence intervals
SPP	0.84 (0.07) ***	[0.07, 0.98]
RC	-0.01 (0.07)	[-0.15, 0.13]
Constant	< 0.001 (0.06)	[-0.12, 0.12]
Number of observations	103	
F (2, 100)	77.21	
p-value	< 0.001	
\mathbb{R}^2	60.7%	

Notes: *p < 0.05, **p < 0.01 and ***p < 0.001. SE = standard error.

The model examined whether SPP and role conflict influence the PP performance of MDAs in the Upper East Region. Table 2 summarises the results. The results of the analyses indicate support for Hypothesis 1, which postulated that SPP is positively associated with procurement performance with probability value ($p \le 0.01$) which is less than 0.05. Also, the coefficient of SPP (0.84) lies within the confidence interval range of (0.07–0.98). However, the analysis of RC indicated a negative relationship with procurement performance and was statistically insignificant as the coefficient of RC (–0.01) lies outside the confidence interval range of (–0.15–0.13). Therefore, providing no support for Hypothesis 2.

Recently, organisations are taking more effective and organised approaches to managing various aspects of their procurement function for improvement (Karikari Appiah et al., 2023) but the results have been mixed. Various factors such as the procurement skills and planning (Changalima and Mdee, 2023), supplier selection and monitoring (Changalima et al., 2023), procurement process risk (Nyamah et al., 2023) seem to have made establishing and managing a high performing procurement function a daunting tasks.

While past research has significantly enhanced the understanding of procurement performance, the majority of such studies have taken commercial/business perspective (Bordonaba-Juste and Cambra-Fierro, 2009; Morrissey and Pittaway, 2006; Quayle, 2003) and so their findings might not be equally applicable to public organisations. Some studies have investigated issues related to procurement performance from public sector perspectives, though, only a few have examined the value-adding activity of strategic participation role of the key officers (i.e., planning officer, budget officer, finance officer,

coordinating director, procurement officer, works officer and internal audit officer) of public organisations who actually interact with their counterparts to manage procurement.

The purpose of this research was to establish the effects of staff participation and the conflicting idiosyncrasies of working together to execute procurement deliverables of public organisations. Using data from nine MDAs in the Upper East Region, we empirically tested if these key employees' participation positively affects procurement performance. The first hypothesis examined the relationship between SPP and procurement performance. Similar to the findings of prior studies (Chenini et al., 2021; Murray, 2007), this research found that process integration is a key procurement participation activity that significantly affect performance. Again, organisational-wide strategic planning and making presentation to senior management are all avenues where value can be generated to aid improvement in procurement outcomes (Nair et al., 2015; Patrucco et al., 2016).

The findings are consistent with what institutional theory posit, which is that institutional pressures influence the adoption of formal structures (Odongo and Kazungu, 2023; Teeroovengadum et al., 2019) which is beneficial to the SPP (procurement performance relationship involving MDAs). On the other hand, the procurement function's capacity to recommend or affect changes in product or services was not related to procurement performance. This may possibly reflect MDA's inadequate resources for designing and refining inputs specifications that may result in value for money procurements (Marinelli and Antoniou, 2019).

The findings of the study indicated a negative effect of role conflict on procurement performance, suggesting, perhaps, that role conflict can have negative impact on procurement related activities and on departments which execute those tasks. The MDAs in the research sample are all public organisations, who are mandated to execute government's agenda in the areas of providing quality health, education, security, and facilitation of trade and employment. When staff of these units/departments is engaged in various procurement roles, they become vulnerable to incompatible behaviours, which probably reflect the experience role stress relating to their job or position (Getzels and Guba, 1954; Miles and Perreault, 1976; Rizzo et al., 1970).

However, this finding contradict previous studies that found a positive and significant relationship between role conflict and performance (Jimad and Apriyani, 2009; Safaria et al., 2011). As explained by Fisher (2001) and Viator (2001), a high level of engagement in the form of mentorship to staff can resolve specific types of role conflict. Relatedly, a conducive working environment increases staff creativity and productivity, encouraging prompt feedback from management (Kotz, 2010). These may account for the negative association between role conflict and procurement performance as established by this study.

5 Theoretical and managerial implications

The implications of the research are in two-fold: theoretical and managerial.

5.1 Theoretical implication

The literature on SPP, RC and institutional theory is expanded in various ways by the research. This study examined the link between SPP, RC, and procurement performance

and offers a more thorough explanation of how staff synthesis internal procedures and roles that have the tendency to improve procurement performance (Grob and Benn, 2014). As a result, the research elucidates how local government assemblies implement procurement plans and objectives from the perspective of institutional theory, strengthening the theoretical framework. Again, the theoretical literature on SPP is extended by providing empirical data that support the argument that a close fit integration of procurement related activities with other units in the local assemblies can enable shared knowledge, resources and objectives that are necessary for improving organisational performance.

5.2 Managerial implication

The study has a few managerial implications. First, the management of local government assemblies should frequently apply SPP activities considering the growing need to use PP as a tool for achieving the expansive government programmes. Second, management should promote internal operational integration, open and frequent communication among employees across the various units/department as this can could lead to timely identification and analysis of both challenges and new ideas related to PP. Again, an interactive platform for long-term teamwork can be established to increase employees' sense of trust and dependency on one another. Finally, the organisational structure should be looked at again in such a way that would give the procurement unit the required power to enforce agreed procurement strategies.

6 Conclusions

PP management is receiving attention from both researchers and practitioners due to its current strategic positioning in public organisations to ensure broad achievement of government developmental projects and welfare systems. The empirical data reported in this study helps to highlight the effects of SPP and role conflict on procurement function in MDAs in Upper East Region. The survey tends to support findings from recent studies that demonstrate that the procurement function becomes effective and efficient when allowed to participate in top-level management discussions. This action has direct impact on procurement performance and, by extension the local economy.

Despite the contributions of the research to the procurement literature, there are limitations which provide the ground for future research. First, only public organisations (MDAs) provided the survey data used in this study. Issues with the business environment can be complex and might originate from supplier organisations (Grimm et al., 2014). Our understanding of the effects of SPP and role conflicts may therefore be limited if data are only gathered from service-oriented public organisations. To better evaluate procurement performance, future study should include data from a variety of sources, including manufacturing companies, the private sector, and supplier organisations (Dou et al., 2018). Finally, there may be some contingency elements (i.e., competency and employee orientation) that could alter the relationship between SPP, role conflict and procurement performance. Hence, to have an in-depth understanding of the complexities of procurement management in diverse organisations, future research should

examine the moderating impact of these contingency factors on the relationship between SPP and RC and procurement performance.

References

- Afifi, A., May, S. and Clark, V.A. (2011) *Practical Multivariate Analysis*, 5th ed., Chapman and Hall/CRC, New York.
- Agaba, E. and Shipman, N. (2007) 'Public procurement reform in developing countries: the Ugandan experience', *Advancing Public Procurement: Practices, Innovation and Knowledge-sharing*, Vol. 2, No. 4, pp.373–391.
- Arshoff, L., Henshall, C., Juzwishin, D. and Racette, R. (2012) 'Procurement change in Canada: an opportunity for improving system performance', Paper presented at the *Healthcare Management Forum*.
- Arumugham, V., Neenu, R.J. and Gayatridevi, S. (2012) 'Job involvement and role conflict among government and private sector employees', *Journal of Organisation and Human Behaviour*, Vol. 1, No. 1, pp.18–23.
- Avey, J.B., Reichard, R.J., Luthans, F. and Mhatre, K.H. (2011) 'Meta-analysis of the impact of positive psychological capital on employee attitudes, behaviors, and performance', *Human Resource Development Quarterly*, Vol. 22, No. 2, pp.127–152.
- Basheka, B.C. (2008) 'Procurement planning and accountability of local government procurement systems in developing countries: evidence from Uganda', *Journal of Public Procurement*, Vol. 8, No. 3, pp.379–406.
- Basheka, B.C. and Bisangabasaija, E. (2010) 'Determinants of unethical public procurement in local government systems of Uganda: a case study', *International Journal of Procurement Management*, Vol. 3, No. 1, pp.91–104.
- Bergman, F. and Lindegren, J. (2022) *Transformation towards Strategic Procurement: A Multiple Case Study of Companies Undergoing a Procurement Transformation*, Master's thesis Linköping University, Sweden [online] https://www.diva-portal.org/smash/get/diva2:1664408/FULLTEXT01.pdf.
- Bhagat, G. (2017) 'Public procurement: a competition perspective', *Indian Journal of Public Administration*, Vol. 63, No. 2, pp.176–186.
- Bordonaba-Juste, V. and Cambra-Fierro, J.J. (2009) 'Managing supply chain in the context of SMEs: a collaborative and customized partnership with the suppliers as the key for success', *Supply Chain Management: An International Journal*, Vol. 14, No. 5, pp.393–402.
- Broms, R., Dahlström, C. and Fazekas, M. (2019) 'Political competition and public procurement outcomes', *Comparative Political Studies*, Vol. 52, No. 9, pp.1259–1292.
- Carr, A.S. and Pearson, J.N. (2002) 'The impact of purchasing and supplier involvement on strategic purchasing and its impact on firm's performance', *International Journal of Operations & Production Management*, Vol. 22, No. 9, pp.1032–1053.
- Carr, A.S. and Smeltzer, L.R. (1997) 'An empirically based operational definition of strategic purchasing', European Journal of Purchasing & Supply Management, Vol. 3, No. 4, pp.199–207.
- Changalima, I.A. and Mdee, A.E. (2023) 'Procurement skills and procurement performance in public organizations: the mediating role of procurement planning', *Cogent Business & Management*, Vol. 10, No. 1, p.2163562.
- Changalima, I.A., Mchopa, A.D. and Ismail, I.J. (2023) 'Supplier monitoring and procurement performance in the public sector in Tanzania: the moderating role of contract management difficulty', *IIM Ranchi Journal of Management Studies*, ahead-of-print.
- Changalima, I.A., Mushi, G.O. and Mwaiseje, S.S. (2021) 'Procurement planning as a strategic tool for public procurement effectiveness: experience from selected public procuring entities in Dodoma City, Tanzania', *Journal of Public Procurement*, Vol. 21, No. 1, pp.37–52.

- Chao, C.n., Scheuing, E.E. and Ruch, W.A. (1993) 'Purchasing performance evaluation: an investigation of different perspectives', *International Journal of Purchasing and Materials Management*, Vol. 29, No. 2, pp.32–39.
- Chen, I.J. and Paulraj, A. (2004) 'Towards a theory of supply chain management: the constructs and measurements', *Journal of Operations Management*, Vol. 22, No. 2, pp.119–150.
- Chenini, A., Iqbal, J., Qurrahtulain, K., Husain Mahmood, M.A. and Aldehayyat, J.S. (2021) 'Strategic procurement, supplier integration, and speed-to-market: the mediating role of procurement lead-time performance and manufacturing performance', *Journal of Public Affairs*, Vol. 21, No. 3, p.e2248.
- Chikwere, G.U., Simon, S., Dzandu, S. and Dza, M. (2019) 'Compliance issues with public procurement regulations in Ghana', *International Journal of Business and Management*, Vol. 14, No. 5, pp.1–8.
- Chimwani, B.I., Iravo, M.A. and Tirimba, O.I. (2014) 'Factors influencing procurement performance in the Kenyan public sector: case study of the state law office', *International Journal of Innovation and Applied Studies*, Vol. 9, No. 4, p.1626.
- Choi, J-W. (2010) 'A study of the role of public procurement can public procurement make society better', Paper presented at *The International Public Procurement Conference*, Seoul, South Korea.
- Cousins, P.D., Lawson, B. and Squire, B. (2006) 'An empirical taxonomy of purchasing functions', *International Journal of Operations & Production Management*, Vol. 26, No. 7, pp.775–794.
- Coverman, S. (1989) 'Role overload, role conflict, and stress: addressing consequences of multiple role demands', *Social Forces*, Vol. 67, No. 4, pp.965–982.
- Cragg, T. and Chraibi, S. (2020) 'Reviewing procurement: a change management model based on action research', *International Journal of Procurement Management*, Vol. 13, No. 6, pp.737–755.
- Dagilienė, L. and Nedzinskienė, R. (2018) 'An institutional theory perspective on non-financial reporting: the developing Baltic context', *Journal of Financial Reporting and Accounting*, Vol. 16, No. 4, pp.490–521.
- Dávid-Barrett, E. and Fazekas, M. (2020) 'Anti-corruption in aid-funded procurement: is corruption reduced or merely displaced?', *World Development*, Vol. 132, p.105000, ISSN: 0305-750X.
- Diggs, S.N. and Roman, A.V. (2012) 'Understanding and tracing accountability in the public procurement process: interpretations, performance measurements, and the possibility of developing public-private partnerships', *Public Performance & Management Review*, Vol. 36, No. 2, pp.290–315.
- Dou, Y., Zhu, Q. and Sarkis, J. (2018) 'Green multi-tier supply chain management: an enabler investigation', *Journal of Purchasing and Supply Management*, Vol. 24, No. 2, pp.95–107.
- Fisher, C.D. (2002) 'Antecedents and consequences of real-time affective reactions at work', *Motivation and Emotion*, Vol. 26, No. 1, pp.3–30.
- Fisher, R.T. (2001) 'Role stress, the type A behavior pattern, and external auditor job satisfaction and performance', *Behavioral Research in Accounting*, Vol. 13, No. 1, pp.143–170.
- Fourie, D. and Malan, C. (2020) 'Public procurement in the South African economy: addressing the systemic issues', *Sustainability*, Vol. 12, No. 20, p.8692.
- Gadde, L-E. and Håkansson, H. (1994) 'The changing role of purchasing: reconsidering three strategic issues', *European Journal of Purchasing & Supply Management*, Vol. 1, No. 1, pp.27–35.
- Getzels, J.W. and Guba, E.G. (1954) 'Role, role conflict, and effectiveness: an empirical study', *American Sociological Review*, Vol. 19, No. 2, pp.164–175.
- Giunipero, L.C., Denslow, D. and Eltantawy, R. (2005) 'Purchasing/supply chain management flexibility: moving to an entrepreneurial skill set', *Industrial Marketing Management*, Vol. 34, No. 6, pp.602–613.

- Glock, C.H. and Broens, M.G. (2013) 'Size and structure in the purchasing function: evidence from German municipalities', *Journal of Public Procurement*, Vol. 13, No. 1, pp.1–38.
- Glock, C.H. and Hochrein, S. (2011) 'Purchasing organization and design: a literature review', *Business Research*, Vol. 4, No. 2, pp.149–191.
- Gonzalez-Benito, J. (2007) 'A theory of purchasing's contribution to business performance', *Journal of Operations Management*, Vol. 25, No. 4, pp.901–917.
- Gordon Murray, J. (2009) 'Improving the validity of public procurement research', *International Journal of Public Sector Management*, Vol. 22, No. 2, pp.91–103.
- Grimm, J.H., Hofstetter, J.S. and Sarkis, J. (2014) 'Critical factors for sub-supplier management: a sustainable food supply chains perspective', *International Journal of Production Economics*, Vol. 152, pp.159–173, ISSN: 0925-5273.
- Grob, S. and Benn, S. (2014) 'Conceptualising the adoption of sustainable procurement: an institutional theory perspective', *Australasian Journal of Environmental Management*, Vol. 21, No. 1, pp.11–21.
- Hair, J.F., Ringle, C.M. and Sarstedt, M. (2013) 'Partial least squares structural equation modeling: rigorous applications, better results and higher acceptance', *Long Range Planning*, Vol. 46, Nos. 1–2, pp.1–12.
- Handfield, R.B. and Lawson, B. (2007) 'Integrating suppliers into new product development', *Research-Technology Management*, Vol. 50, No. 5, pp.44–51.
- Handfield, R.B. and Nichols Jr., E.L. (2004) 'Key issues in global supply base management', *Industrial Marketing Management*, Vol. 33, No. 1, pp.29–35.
- Hardt, C.W., Reinecke, N. and Spiller, P. (2007) 'Inventing the 21st-century purchasing organization', *McKinsey Quarterly*, Vol. 4, No. 4, p.114.
- Harland, C.M., Eßig, M., Lynch, J. and Patrucco, A. (2021) 'Policy-led public procurement: does strategic procurement deliver?', *Journal of Public Procurement*, Vol. 21, No. 3, pp.221–228.
- Hong, P. and Kwon, H-B. (2012) 'Emerging issues of procurement management: a review and prospect', *International Journal of Procurement Management*, Vol. 5, No. 4, pp.452–469.
- House, J.S. (1974) 'Occupational stress and coronary heart disease: a review and theoretical integration', *Journal of Health and Social Behavior*, Vol. 15, No. 1, pp.12–27.
- Ilgen, D.R. and Hollenbeck, J.R. (1991) 'Job design and roles', in *Handbook of Industrial and Organizational Psychology*, Vol. 2, No. 1, pp.165–207.
- Iyer, G.R. (1996) 'Strategic decision making in industrial procurement: implications for buying decision approaches and buyer-seller relationships', *Journal of Business & Industrial Marketing*, Vol. 11, Nos. 3/4, pp.80–93.
- Jimad, H. and Apriyani, I. (2009) 'Pengaruh Stres Kerja Terhadap Kinerja Pegawai Bagian Pelayanan pada Dinas Kependudukan Kota Bandar Lampung', *Jurnal Bisnis & Manajemen*, Vol. 5, No. 3, pp.303–322.
- Johnson, P.F., Klassen, R.D., Leenders, M.R. and Fearon, H.E. (2002) 'Determinants of purchasing team usage in the supply chain', *Journal of Operations Management*, Vol. 20, No. 1, pp.77–89.
- Johnson, P.F., Leenders, M.R. and Fearon, H.E. (2006) 'Supply's growing status and influence: a sixteen-year perspective', *Journal of Supply Chain Management*, Vol. 42, No. 2, pp.33–43.
- Johnson, P.F., Leenders, M.R. and Flynn, A.E. (2012) Administración de compras y abastecimiento, McGraw Hill Educación, New York, USA.
- Jones, G.R. and George, J.M. (2009) *Contemporary Management*, 6th ed., McGraw-Hill/Irwin, New York.
- Jones, M.L. (1993) 'Role conflict: cause of burnout or energizer?', *Social Work*, Vol. 38, No. 2, pp.136–141.
- Kakwezi, P. and Nyeko, S. (2019) 'Procurement processes and performance: efficiency and effectiveness of the procurement function', *International Journal of Social Sciences Management and Entrepreneurship (IJSSME)*, Vol. 3, No. 1, pp.172–182.

- Karikari Appiah, M., Amaning, N., Tettevi, P.K., Frimpong Owusu, D. and Opoku Ware, E. (2023) 'Internal audit effectiveness as a boon to public procurement performance: a multi mediation model', *Cogent Economics & Finance*, Vol. 11, No. 1, p.2164968.
- Katz, D. and Kahn, R.L. (1978) 'Organizations and the system concept', *Classics of Organization Theory*, Vol. 80, p.480.
- Kauppi, K. (2013) 'Extending the use of institutional theory in operations and supply chain management research: review and research suggestions', *International Journal of Operations & Production Management*, Vol. 33, No. 10, pp.1318–1345.
- Kihamba, J.S. (2021) 'Public procurement reforms in Tanzania: dispersion of corruption and governance', in *Public Procurement, Corruption and the Crisis of Governance in Africa*, pp.185–204, Palgrave Macmillan, Cham.
- King, L.A. and King, D.W. (1990) 'Role conflict and role ambiguity: a critical assessment of construct validity', *Psychological Bulletin*, Vol. 107, No. 1, p.48.
- Knoppen, D. and Sáenz, M.J. (2015) 'Purchasing: can we bridge the gap between strategy and daily reality?', *Business Horizons*, Vol. 58, No. 1, pp.123–133.
- Kotz, D.M. (2010) 'The final conflict: what can cause a system-threatening crisis of capitalism?', *Science & Society*, Vol. 74, No. 3, pp.362–379.
- Krause, D.R., Pagell, M. and Curkovic, S. (2001) 'Toward a measure of competitive priorities for purchasing', *Journal of Operations Management*, Vol. 19, No. 4, pp.497–512.
- Lakemond, N., Van Echtelt, F. and Wynstra, F. (2001) 'A configuration typology for involving purchasing specialists in product development', *Journal of Supply Chain Management*, Vol. 37, No. 3, pp.11–20.
- Lenaghan, J.A. and Sengupta, K. (2007) 'Role conflict, role balance and affect: a model of well-being of the working student', *Journal of Behavioral and Applied Management*, Vol. 9, No. 1, pp.88–109.
- Lewis, A.C., Cardy, R.L. and Huang, L.S. (2019) 'Institutional theory and HRM: a new look', *Human Resource Management Review*, Vol. 29, No. 3, pp.316–335.
- Loader, K. (2015) 'SME suppliers and the challenge of public procurement: Evidence revealed by a UK government online feedback facility', *Journal of Purchasing and Supply Management*, Vol. 21, No. 2, pp.103–112.
- Loosemore, M., Alkilani, S.Z. and Murphy, R. (2021) 'The institutional drivers of social procurement implementation in Australian construction projects', *International Journal of Project Management*, Vol. 39, No. 7, pp.750–761.
- Lowe, T., French, M., Hawkins, M., Hesselgreaves, H. and Wilson, R. (2021) 'New development: responding to complexity in public services the human learning systems approach', *Public Money & Management*, Vol. 41, No. 7, pp.573–576.
- Luzzini, D. and Ronchi, S. (2016) 'Cinderella purchasing transformation: linking purchasing status to purchasing practices and business performance', *Production Planning & Control*, Vol. 27, No. 10, pp.787–796.
- Manu, P., Asiedu, R.O., Mahamadu, A-M., Olomolaiye, P.O., Booth, C., Manu, E., Agyekum, K. et al. (2021) 'Contribution of procurement capacity of public agencies to attainment of procurement objectives in infrastructure procurement', *Engineering, Construction and Architectural Management*, Vol. 28, No. 10, pp.3322–3345.
- Marinelli, M. and Antoniou, F. (2019) 'Improving public works' value for money: a new procurement strategy', *International Journal of Managing Projects in Business*, Vol. 13, No. 1, pp.85–102.
- Marume, S. and Jubenkanda, R. (2016) 'The basic concepts and principles of unity of command and the span of control', *International Journal of Business and Management Invention*, Vol. 5, No. 6, pp.14–18.
- Matthews, D. (2005) 'Strategic procurement in the public sector: a mask for financial and administrative policy', *Journal of Public Procurement*, Vol. 5, No. 3, pp.388–399.

- McDonald, O. (2008) Buying Power Aid, Governance and Public Procurement, Christian Aid, London.
- Miles, R.H. and Perreault Jr., W.D. (1976) 'Organizational role conflict: its antecedents and consequences', *Organizational Behavior and Human Performance*, Vol. 17, No. 1, pp.19–44.
- Monczka, R.M. and Trent, R.J. (1991) 'Evolving sourcing strategies for the 1990s', *International Journal of Physical Distribution & Logistics Management*, Vol. 21, No. 5, pp.4–12.
- Morrissey, W.J. and Pittaway, L. (2006) 'Buyer-supplier relationships in small firms: the use of social factors to manage relationships', *International Small Business Journal*, Vol. 24, No. 3, pp.272–298.
- Murray, J.G. (2007) 'Strategic procurement in UK local government: the role of elected members', *Journal of Public Procurement*, Vol. 7, No. 2, pp.194–212.
- Murray, J.G. (2009) 'Towards a common understanding of the differences between purchasing, procurement and commissioning in the UK public sector', *Journal of Purchasing and Supply Management*, Vol. 15, No. 3, pp.198–202.
- Musanzikwa, M. (2013) 'Public procurement system challenges in developing countries: the case of Zimbabwe', *International Journal of Economics, Finance and Management Sciences*, Vol. 1, No. 2, pp.119–127.
- Nair, A., Jayaram, J. and Das, A. (2015) 'Strategic purchasing participation, supplier selection, supplier evaluation and purchasing performance', *International Journal of Production Research*, Vol. 53, No. 20, pp.6263–6278.
- Nambisan, S. and Baron, R.A. (2021) 'On the costs of digital entrepreneurship: role conflict, stress, and venture performance in digital platform-based ecosystems', *Journal of Business Research*, Vol. 125, pp.520–532, ISSN: 0148-2963.
- Nani, D.A. and Ali, S. (2020) 'Determinants of effective e-procurement system: empirical evidence from Indonesian local governments', *Jurnal Dinamika Akuntansi Dan Bisnis*, Vol. 7, No. 1, pp.33–50.
- Nyamah, E.Y., Feng, Y., Yeboah Nyamah, E., Opoku, R.K. and Ewusi, M. (2023) 'Procurement process risk and performance: empirical evidence from manufacturing firms', *Benchmarking: An International Journal*, Vol. 30, No. 1, pp.75–101.
- Odongo, K.O. and Kazungu, I. (2023) 'Predictors of strategic procurement performance metrics adoption in county governments: empirical evidence from Kakamega county government, Kenya', LBS Journal of Management & Research, ahead-of-print.
- Organisation for Economic Cooperation and Development (OECD) (2019) Report on the Implementation of the Recommendation of the Council on Public Procurement [online] https://one.oecd.org/document/C(2019)94/FINAL/en/pdf (accessed 8 December 2022).
- Osei-Tutu, E., Mensdah, S. and Ameya, C. (2011) *The Level of Compliance with the Public Procurement Act (Act 663) in Ghana* [online] http://resolver.tudelft.nl/uuid:f6134e5f-f6e4-4f37-b547-90e8d5fdd642.
- Parayitam, S., Usman, S.A., Namasivaayam, R.R. and Naina, M.S. (2021) 'Knowledge management and emotional exhaustion as moderators in the relationship between role conflict and organizational performance: evidence from India', *Journal of Knowledge Management*, Vol. 25, No. 6, pp.1456–1485.
- Patrucco, A.S., Agasisti, T. and Glas, A.H. (2021) 'Structuring public procurement in local governments: the effect of centralization, standardization and digitalization on performance', *Public Performance & Management Review*, Vol. 44, No. 3, pp.630–656.
- Patrucco, A.S., Luzzini, D. and Ronchi, S. (2016) 'Evaluating the effectiveness of public procurement performance management systems in local governments', *Local Government Studies*, Vol. 42, No. 5, pp.739–761.
- Patrucco, A.S., Luzzini, D. and Ronchi, S. (2017) 'Research perspectives on public procurement: content analysis of 14 years of publications in the *Journal of Public Procurement*', *Journal of Public Procurement*, Vol. 17, No. 2, pp.229–269.

- Pearson, J.N., Ellram, L.M. and Carter, C.R. (1996) 'Status and recognition of the purchasing function in the electronics industry', *International Journal of Purchasing and Materials Management*, Vol. 32, No. 1, pp.30–36.
- Plantinga, H., Voordijk, H. and Dorée, A. (2020) 'Clarifying strategic alignment in the public procurement process', *International Journal of Public Sector Management*, Vol. 33, Nos. 6/7, pp.791–807.
- Porter, M.E. (1985) 'Technology and competitive advantage', *Journal of Business Strategy*, Vol. 5, No. 3, pp.60–78.
- Quayle, M. (1998) 'The impact of strategic procurement in the UK government sector', International Journal of Public Sector Management, Vol. 11, No. 5, pp.397–413.
- Quayle, M. (2003) 'A study of supply chain management practice in UK industrial SMEs', *Supply Chain Management: An International Journal*, Vol. 8, No. 1, pp.79–86.
- Quinn, J.B. (2005) 'The intelligent enterprise a new paradigm', *Academy of Management Perspectives*, Vol. 19, No. 4, pp.109–121.
- Rajagopal, S. and Bernard, K.N. (1993) 'Strategic procurement and competitive advantage', *International Journal of Purchasing and Materials Management*, Vol. 29, No. 3, pp.12–20.
- Rendon, R.G. (2008) 'Procurement process maturity: key to performance measurement', *Journal of Public Procurement*, Vol. 8, No. 2, pp.200–214.
- Rizzo, J.R., House, R.J. and Lirtzman, S.I. (1970) 'Role conflict and ambiguity in complex organizations', *Administrative Science Quarterly*, Vol. 15, No. 2, pp.150–163.
- Rogerson, C.M. (2018) 'Pro-poor local economic development in South Africa: the application of public procurement', in *Local Economic Development in the Developing World*, pp.101–130, Routledge, UK.
- Rolfstam, M. (2012) 'An institutional approach to research on public procurement of innovation', *Innovation: The European Journal of Social Science Research*, Vol. 25, No. 3, pp.303–321.
- Saad, S.M., Kunhu, N. and Mohamed, A.M. (2016) 'A fuzzy-AHP multi-criteria decision-making model for procurement process', *International Journal of Logistics Systems and Management*, Vol. 23, No. 1, pp.1–24.
- Safaria, T., bin Othman, A. and Wahab, M.N.A. (2011) 'Role ambiguity, role conflict, the role of job insecurity as mediator toward job stress among Malay academic staff: a SEM analysis', *Current Research Journal of Social Sciences*, Vol. 3, No. 3, pp.229–235.
- Santos, J.B. and Cabral, S. (2022) 'Public procurement capabilities as engines for collaboration and enhanced performance in complex projects', *International Journal of Operations & Production Management*, Vol. 42, No. 1, pp.32–58.
- Schlecht, S. and Spiller, A. (2009) 'Procurement strategies of the German dairy sector: empirical evidence on contract design between dairies and their agricultural suppliers', Paper presented at the 19th Annual World Forum and Symposium "Global Challenges, Local Solutions", IAMA Conference.
- Schneider, L. and Wallenburg, C.M. (2013) '50 years of research on organizing the purchasing function: do we need any more?', *Journal of Purchasing and Supply Management*, Vol. 19, No. 3, pp.144–164.
- Schoenherr, T., Power, D., Narasimhan, R. and Samson, D. (2012) 'Competitive capabilities among manufacturing plants in developing, emerging, and industrialized countries: a comparative analysis', *Decision Sciences*, Vol. 43, No. 1, pp.37–72.
- Smith, R. and Conway, G. (1993) Organisation of Procurement in Government Departments and their Agencies, HM Treasury Consultancy and Inspection Services Division, London.
- Talluri, S., Kull, T.J., Yildiz, H. and Yoon, J. (2013) 'Assessing the efficiency of risk mitigation strategies in supply chains', *Journal of Business Logistics*, Vol. 34, No. 4, pp.253–269.
- Tassabehji, R. and Moorhouse, A. (2008) 'The changing role of procurement: developing professional effectiveness', *Journal of Purchasing and Supply Management*, Vol. 14, No. 1, pp.55–68.

- Teeroovengadum, V., Nunkoo, R. and Dulloo, H. (2019) 'Influence of organisational factors on the effectiveness of performance management systems in the public sector', *European Business Review*, Vol. 31, No. 3, pp.447–466.
- Thai, K.V. (2001) 'Public procurement re-examined', *Journal of Public Procurement*, Vol. 1, No. 1, pp.9–50.
- Uyarra, E. and Flanagan, K. (2010) 'Understanding the innovation impacts of public procurement', *European Planning Studies*, Vol. 18, No. 1, pp.123–143.
- Viator, R.E. (2001) 'The association of formal and informal public accounting mentoring with role stress and related job outcomes', *Accounting, Organizations and Society*, Vol. 26, No. 1, pp.73–93.
- Westfall, P.H. and Arias, A.L. (2020) Understanding Regression Analysis: A Conditional Distribution Approach, CRC Press, CRC Press, Boca Raton, FL, USA.
- Zheng, J., Knight, L., Harland, C., Humby, S. and James, K. (2007) 'An analysis of research into the future of purchasing and supply management', *Journal of Purchasing and Supply Management*, Vol. 13, No. 1, pp.69–83.