Developing capability of public sector procurement in Ghana: An assessment of the road subsector client

Peter ADDO-DUAH¹, Tony WESTCOTT¹, Jim MASON¹, Colin BOOTH¹ and Abdul-Majeed MAHAMADU¹

¹ Construction and Property Research Centre, University of the West of England, Frenchay Campus, Coldhabour Lane, Frenchay, Bristol, BS16 1QY, United Kingdom, email: peter2.addoduah@live.uwe.ac.uk; abdul.mahamadu@uwe.ac.uk

ABSTRACT
The Ghanaian public sector procurement is experiencing a paradigm shift from a clerical role to a more strategic function targeting optimum achievement of value for money. For this to be fully realised, the skills of the workforce must be developed to meet contemporary expectations. Underperformance and misapplication of the public sector procurement function has been linked to a shortage of an adequately-skilled workforce. This study was designed to ascertain the nature and level of professional development required to enhance competencies of the workforce for successful delivery of the procurement function. The study employed questionnaires and interviews in a mixed methodology to collect data from the procurement management workforce within the Ghanaian Road Subsector. The findings of the study suggest weaknesses in key skill areas required of modern procurement practice which inhibit the achievement of maximum value for money. Up-skilling is recommended through appropriate training and continuous professional development with focus on the key areas identified.

Keywords: Public Sector, Roads, Procurement, Skills Assessment, Professional Development

INTRODUCTION
Governments all over the world employ public procurement to provide infrastructure projects such as roads, bridges, hospitals and education. The socio-economic development and economic growth fortunes of every nation depend largely on the availability of these facilities. Public procurement incorporates “all actions from planning and forecasting, identification of needs, sourcing and solicitation of offers, evaluation of offers, review and award of contracts, contracting and all phases of contract administration until delivery of the goods, the end of a contract, or the useful life of an asset.” (United Nations Office for Project Services, 2010, p.6). This underscores the need for requisite competencies and skills for managing these functions in any organisation. However, despite, attempts by successive governments to improve the procurement systems, eg. by regulation and good practice guidance, there remains many challenges that threaten the procurement of these development facilities. The absence of a solid technical expertise with the requisite capability and competence have been cited by several publications from institutions including the World Bank as the cause of the weaknesses and underperformance of Ghana's road sector (Peprah, 2001; World Bank, 2008; Ameyaw et al., 2012). The World Bank
(2002) has drawn a strong link between the reliance on untrained procurement staff and the misapplication of the procurement procedures and sometimes unethical practices which have bedevilled Ghana's procurement system. Anvuur et al. (2006) assert that all attention has been focused on formulation of a legal and regulatory framework and anti-corruption measures to secure economic transparency and accountability with relatively lesser focus on the development of the professional skills and expertise of the personnel responsible for implementing these strategies (Humphreys, 2001). However, according to Appiah (2011), no matter how robust the regulation or law on public sector procurement is structured, its effective application and implementation depends largely on a trained skilled workforce; hence, the need for evaluation of both the current state and future skill requirement.

Due to its significant and strategic role in socio-economic development of the country, the Ghanaian road sector receives a substantial proportion of budgetary allocation for road construction and maintenance annually (Foster and Pushak, 2011). However, road agencies are challenged by varying degrees of weak management and inadequately trained workforce (World Bank, 2008; Owusu-Manu et al., 2011). Ameyaw et al. (2012) attribute the underperformance of the sector to the lack of expertise with the requisite competence to effectively manage the procurement process. Lamptey and Elle (2000) comments that this problem is compounded by the fact that road agencies have difficulty in attracting and retaining a highly competent and qualified workforce. The severity of the situation potentially threatens to undermine the ability to offer value for money outcomes through procurement management, including embracing new and modern practice paradigms (Anvuur et al., 2006).

Stuijts et al. (2009) are of the opinion that the regular and continuous development and/or training of the procurement workforce should be the main strategy for achieving value for money in procurement and increasing enforcement and compliance with the procurement rules and directives. As a result, this study was undertaken to establish the level of professional development and/or training required to enhance the capabilities (skills) and competencies of the procurement workforce within the Ghanaian road subsector, particularly in view of the increasing call for adoption modern procurement arrangements and forms which require new sets of skills.

**BACKGROUND**

**Developing the capabilities of public sector procurement**

According to Franks (1999), capability is dependent on the skills of the individuals or organisation to undertake responsibilities in a competent manner to achieve specific objectives. A high capacity and capability organisation must characteristically possess professional expertise to implement its procurement functions consistent with its objectives. Such objectives are usually linked with developing capability through training to update the skills of the workforce to strategically promote and contribute to the competitive advantage of the road subsector (Giunipero and Handfield, 2004).

A conceptual definition of skill in this study will provide a broader useful background and in-depth understanding of the kind of skills that are critical in
managing the current public sector procurement. Mumford and Peterson (1999, p. 4) in Esposto (2008, p. 112) defined the concept of skill as a “set of general procedures that underlie the effective acquisition and application of knowledge in different areas of endeavour” and the ability gained by practice or knowledge (Carr and Smeltzer, 2000; Tassabehji and Moorhouse, 2008). In a similar attempt, Humpherson (2011, p. 7) defined procurement skill as “the ability to interact on equal and professional terms with contractual counterparties in the procurement and management of programmes and projects”. Similarly, Elias and McKnight (2001, p. 511) refer to skill as “the ability to carry out the tasks and duties of a job in a competent manner.” These definitions bring together the ability, competence and experience which go beyond common sense characteristics.

**Acquisition of procurement skills through training**

Skills can be taught or coached and have a multifaceted construct ranging through knowledge, learning, training, practice, educational attainment and experience (Elias and Mc Knight, 2001; Esposto, 2008) guided by ethics and code of conduct. Skill is complex and dynamic. It requires regular updates to capture current technological trends and market innovation for organisational productivity and competitiveness (Giunipero and Handfield, 2004; Tassabehji and Moorhouse, 2008).

**The paradigm shift of the procurement function and skills**

“Good procurement is essential to delivering good quality public services, and we will only achieve good procurement across Government if we know we have the right skills and capability in place...on which we can build a world class procurement capability across Government.” – John Healey (MP) Treasury Financial Secretary, UK (OGC, 2007).

Government procurement was once perceived as a solely clerical function involving the conversion of a requisition into a purchase order (McCue and Gianakis, 2001; Matthews, 2005). However, managing the current procurement functional change to achieve the principles of Value for Money (VfM) within the dynamic global market demands more skills than converting requisitions into purchase orders. This is as a result of the changes in what Giunipero and Handfield, (2004) termed as environmental forces, such as “technology, global competition, government policies, and changing customer preferences.” These environmental forces raise the complex nature of the procurement role leading to the use of modern procurement tools such as computer and electronic commerce which have significant impact on the skills required to implement the procurement function. These changes certainly influence the procurement function and highlight the need for a progressive demand of different levels of skills than used to exist in the past to better hold in line with these changes (Tassabehji and Moorhouse, 2008; Owusu-Manu et al., 2011).

The attempt to determine and develop the skills to meet changes in public sector procurement practice is not a recent phenomenon (Giunipero and Pearcy, 2000). Yet there is no global “one-stop-shop” central reference point of procurement skills framework which guarantees consistency in terms of capability development policy (Giunipero and Handfield, 2004; OGC, 2007; Stuijts el al. 2009; Owusu-Manu et al., 2011). This is a reflection of the complexity of the procurement function, the changing environmental trends coupled with interdisciplinary related professions,
which are linked to the procurement practice such as law, accounting, economics, and marketing. According to Thai (2001), it is impossible to integrate these disciplines into the government procurement knowledge, but it is imperative for procurement workforce to be able to communicate effectively with these professionals. Even though this difficulty exists, the current paradigm shift of public sector procurement to more strategic practice needs to develop core skills reckoned as significant for implementing and managing the changing trends (Kolchin and Giunipero, 1993; Giunipero and Pearcy, 2000; Carr and Smeltzer, 2000; Giunipero and Handfield, 2004; Tassabehji and Moorhouse, 2008; Eltantawy et al., 2009). Despite the resemblance, different typologies and nomenclatures are often given to the same skills category by different authors. Table 1: Summary of Skill areas identifies sixteen core skills, which were concluded as a benchmark necessary to be developed by public sector procurement workforce to manage the modern procurement function.

METHODOLOGY

The Department of Feeder Roads (road subsector agency) was selected as a focus for this study because it manages over 65% of the total road network in Ghana and therefore has a significant performance effects on the country's socio-economic growth of Ghana. This research adopted a mixed methodological approach, questionnaire was the main method of data collection complemented by four interviews. The mixed method approach was meant to counter any empirical methodological weakness with appropriate clarification and explanation. According to Adams and Cox (2008) the effective way to fully explore various aspects of a phenomenon is to begin with a questionnaire survey and follow up with a series of interviews (Knight and Ruddock, 2008). A purposive sampling technique was employed for the questionnaire administration. The questionnaire survey was adopted to aid wider reach of all potential respondents within the selected agency. The sampling criteria was based on the fact that respondents involved are the main workforce who take procurement management decisions within the organisation. Out of the sixty two (62) questionnaires dispatched, forty-one (41) responses were returned constituting a 66.13% response rate. The questionnaire was designed using a five (5) point Likert scale, to aid respondent’s rating of level of agreement to skill areas requiring further development, based on a summary from the literature as presented in Table 1. The data was analysed descriptively and inferentially with the aid of IBM SPSS19 data analysis software package. Four semi-structured interviews with experienced senior management officials occupying senior management positions within one of the major public sector agencies were carried out for a deeper understanding, clarification and verification to validate the findings from the questionnaire survey. Descriptive statistics was adopted to determine the mean score (Ms). The Pearson’s coefficient test of agreement was performed to determine whether there is agreement between experienced and inexperienced procurement personnel regarding level of development.
### Table 1: Summary of skill areas derived from literature

| Author(s)                     | Communication skills | Computer literacy | Conflict resolution | Cost management | Leadership | Legal issues | Negotiation | Project management | Proposal evaluation | Quality management | Risk management | Sourcing development and analysis | Strategic planning | Supply Management | Variation/Change management |
|-------------------------------|----------------------|-------------------|---------------------|----------------|------------|--------------|-------------|-------------------|-------------------|--------------------|----------------|--------------------------------|------------------|---------------------|-------------------|
| Kolchin and Giunipero (1993)  | X        | X                 | X                   | X              | X          | X            | X           | X                 | X                 | X                  | X              | X                          | X                | X                   | X                 |
| Giunipero and Pearcy (2000)  | X        | X                 | X                   | X              | X          | X            | X           | X                 | X                 | X                  | X              | X                          | X                | X                   | X                 |
| Carr and Smeltzer (2000)      | X        | X                 | X                   |                | X          | X            | X           | X                 | X                 | X                  | X              | X                          | X                | X                   | X                 |
| Giunipero and Handfield (2004) | X      | X                 | X                   | X              | X          | X            | X           | X                 | X                 | X                  | X              | X                          | X                | X                   | X                 |
| Giunipero et al. (2006)       | X        | X                 | X                   |                | X          | X            | X           | X                 | X                 | X                  | X              | X                          | X                | X                   | X                 |
| Tassabehji and Moorhouse (2008) | X      | X                 | X                   | X              | X          | X            | X           | X                 | X                 | X                  | X              | X                          | X                | X                   | X                 |
| Eltantawy et al. (2009)       | X        | X                 | X                   |                | X          | X            | X           | X                 | X                 | X                  | X              | X                          | X                | X                   | X                 |
| Basheka (2010)                | X        | X                 | X                   |                | X          | X            | X           | X                 | X                 | X                  | X              | X                          | X                | X                   | X                 |
This is important because experience has a significant effect when determining the levels of development or training within an organisation, with have different levels of workforce in terms of working experience. The hypotheses upon which the study was conducted are:

\(H_0: \) Further development of different levels of experienced workforce requires the same levels of training (share the same views) regarding skill variables.

\(H_1: \) Further development of different levels of experienced workforce does not require the same levels of training (do not share the same views) regarding skill variables.

Findings
The aim of the study was to solicit the level of development or training expected to enhance or improve the skills level of road subsector workforce in Ghana. Respondents were asked to identify the level of further development of their competencies in the skill areas outlined in Table 1. The results as illustrated in Table 2 show three levels of further development: Highly required, Moderately required and Slightly required. There was no variable within the scale of one (1) and five (5) range which are interpreted from the rating as Not required and Extremely required. This is an indication that respondents are neither extremely weak in any skills nor expert.

Table 2: Levels of further development based on responses to questionnaire

|   | Skill (s) areas               | Mean score | Interpretation | Effect of respondents experience on further development |    |
|---|------------------------------|------------|----------------|---------------------------------------------------------|----|
|   |                              |            |                | Pearson Correlation | Sig. (2-tailed) |    |
| 1 | Proposal evaluation          | 4.29       | Highly reqd.   | 0.178                                                   | 0.265 |
| 2 | Strategic planning           | 4.24       | Highly reqd.   | -0.014                                                  | 0.930 |
| 3 | Legal procurement            | 4.17       | Highly reqd.   | -0.176                                                  | 0.270 |
| 4 | Relationship management      | 4.05       | Highly reqd.   | -0.196                                                  | 0.219 |
| 5 | Negotiation                  | 3.24       | Mod. reqd.     | -0.196                                                  | 0.221 |
| 6 | Risk management              | 3.10       | Mod. reqd.     | 0.006                                                   | 0.974 |
| 7 | Sourcing dev. and analysis   | 3.10       | Mod. reqd.     | -0.120                                                  | 0.456 |
| 8 | Variation/Change management  | 3.02       | Mod. reqd.     | -0.403                                                  | 0.009 |
| 9 | Leadership                   | 3.27       | Mod. reqd.     | -0.175                                                  | 0.274 |
| 10| Communication                | 2.83       | Slightly reqd. | -0.177                                                  | 0.268 |
| 11| Computer literacy            | 2.80       | Slightly reqd. | -0.105                                                  | 0.513 |
| 12| Supply chain management      | 2.65       | Slightly reqd. | 0.038                                                   | 0.814 |
| 13| Cost analysis                | 2.63       | Slightly reqd. | -0.078                                                  | 0.627 |
| 14| Conflict resolution          | 2.59       | Slightly reqd. | -0.225                                                  | 0.158 |
| 15| Project management           | 2.48       | Slightly reqd. | 0.178                                                   | 0.265 |
| 16| Quality management           | 2.46       | Slightly reqd. | -0.039                                                  | 0.811 |

Rating: 1-Not required 2-Slightly required 3-Moderately required 4-Highly required 5-Extremely required
The Pearson's coefficient test was used as a measure to ascertain whether further development differed according to experience in terms of the number of years respondents have worked in the road subsector. The findings as illustrated in Table 1, show that fifteen (15) out of the sixteen (16) skill variables having p-values greater than 0.05 (p>0.05) are not significant.

Out of the four interviewees, three agreed with the findings from the survey and were of the view that the demand of levels development is an indication of apparent lack of skills within the road subsector. They explained that *few people have specialised and developed competencies ... and those people having found their way into the road subsector.* According them, the skill areas are relevant to their professional procurement practice and *further up-skilling is required to enhance competencies of staff to manage the changing global procurement practice.*

**DISCUSSION**

Findings show that there is general recognition of a gap in the skills of workforce within the road subsector (Figure1). This is evident from the identified levels of further skills development as *Highly, Moderately* and *Slightly* required. Areas that can be assumed to have high level of existing skills competencies and thus require least training are Cost analysis, Quality management, Project management, Supply chain management, Conflict resolution and Communication as well as Computer literacy. Skill areas classified as needed highly and moderately development is an indication of weakness in skill within the road subsector. Interviewees confirmed these findings, which is also consistent with that of Peprah.
(2001), who is of the view that procurement workforce within road sector in Ghana lack skills in various areas of the procurement function. These procurement skills strategically promote and contribute to the competitiveness within the global market as suggested by Giunipero and Handfield (2004) and offer value in cost management, and establish good supplier relationships to improve delivery of quality products and yield optimum value for money (Eltantawy, 2005) which interviewees confirmed.

The findings from the Pearson's test implied that both inexperienced and experienced workforce share the same views on level of development in Variation/Change management skill, which requires moderate level of development. On the other hand, the remaining skill areas were viewed differently (do not share the same views) in the perspective of inexperienced and experienced workforce. This suggests that experiences of workforce do have much effect on the levels of further training or development required and is consistent with the findings of Elias and McKnight (2001) and Esposto (2008) who count experience as one of the means of developing skills.

CONCLUSIONS AND RECOMMENDATIONS

The changing environmental trends and the unstable nature of the global market have contributed to the need for strategies to attain competitive advantage. The quest to maximise the competitive advantage to achieve maximum value for money within public sector procurement is dependent on the quality of the available procurement workforce. A well-trained professional procurement service is a fundamental requirement for promotion of good practice in using Government's limited resources for the optimum socio-economic development of the Ghanaian road infrastructure. However, the apparent weaknesses in the skills of procurement workforce within the road sector is likely to impede this development, which must be given progressive deliberate action to develop and empower procurement managers in order to manage and safeguard taxpayer’s money.

Professional development and continuous improvement through searching for innovative changes in skills within the international procurement practice is necessary in order to implement the current paradigm shift. The up skilling of procurement skills should develop in tandem with the changing environment trends through training to improve the professional practice to attain competitive advantage and maximise value for money. The public road sector in Ghana needs to implement effective systematic training policies and implement regular need assessment to monitor levels of skill gaps within the workforce to determine areas for development. The development of institutional assessment and system monitoring framework for each skill component to trace the need for training individual workforce will help improve competencies of procurement managers. Further research is recommended to explore how these assessments and system-monitoring frameworks can be tailored to the mainstream organisational operations, which will provide a more insightful integration of work performance and procurement training. This together with, further research is envisaged as capable of providing insight into the most appropriate means of developing these deficient skills towards the best fit of available training options.
and enhancement of procurement competency within the Ghana road sector with wider implications for developing countries at a similar state of development.

REFERENCE

Ameyaw, C., Mensah, S. and Osei-Tutu, E. (2012). “Public procurement in Ghana: The implementation challenges to the public procurement law 2003 (Act 663).” International Journal of Construction Supply Chain Management. 2(2), 55-65.

Anvuur, A., Kumaraswamy, M. and Male, S. (2006). Taking forward public procurement reforms in Ghana. CIB W107 Construction in developing countries international symposium “Construction in Developing Economies: New Issues and Challenges” January 18th – 20th: 2006 – Santiago, Chile

Appiah, R. E (2011). “Building relevant skills for public procurement.” E-Procurement Bulletin. 2 (1), 1-6.

Basheka, B. C. (2010). “Public procurement skills requirement framework for local government system in Uganda: Perception from professionals.” IPPU http://www.ippu.or.ug/

Callender, G. and Matthews, D. (2004). “The role of immanence in the future of public procurement.” International Public Procurement Conference Proceedings. 3, 227 – 251.

Carr, A.S. and Smeltzer, L.R. (2000). “An empirical study of the relationships among purchasing skills and strategic purchasing, financial performance and supplier responsiveness.” Journal of Supply Chain Management. 36 (3), 40–54.

Elias, P. and McKnight, A. (2001). “Skill measurement in official statistics: Recent developments in the UK and the rest of Europe.” Oxford Economic Papers. 53, 508–540.

Eltantawy, R, Giunipero L and Fox G. L (2009). “A strategic skill based model of supplier integration and its effect on supply management performance.” Industry Marketing Management. 38, 925-936.

Esposto, A. (2008). “Skill: An elusive and ambiguous concept in labour market studies.” Australian Bulletin of Labour. 34(1), 100 - 124.

Foster, V. and Pushak, N. (2011). Ghana’s infrastructure: A continental perspective. policy research working paper 5600. The World Bank, Africa region, sustainable development department. Washington, DC: World Bank

Franks, T. (1999) “Capacity building and institutional development: reflections on water.” Public Administration and Development.19, 51-61.

Giunipero, L. and Handfield, R. B. (2004). “Purchasing education and training II: CAPS Research.” www.phoenixhecht.com

Giunipero, L., Handfield, R.B. and Eltantawy, R. (2006). “Supply management’s evolution: Key skill sets for the supply manager of the future.” International Journal of Production and Operations Management. 26(7), 822–844.

Hoffmann, E and Scott, M (1993). “The revised international standard classification of occupation (ISCO-88). A short presentation, International Labour Office.”
Humpherson, E (2011). “Necessary skills and the broader public sector capabilities for complex procurement.” www.oecd.org/gov/budgeting/ 45038855.pdf.

Humphreys, P. (2001). “Designing a management development programme for procurement executives.” Journal of Management Development. 20(7), 604-623.

Lamptey, J.L. and Elle, L. (2000). “Evaluation Ghana joint evaluation of the road sub- sector programme 1996-2000.” www2.jica.go.jp/ja/ evaluation/pdf/2000 _GH-P12_4_f.pdf.

Matthews, D. (2005). “Strategic procurement in the public sector: A mask for financial and administrative policy.” Journal of Public Procurement. 5 (3), 388-400.

McCue, C. and Gianakis, G. (2001) “Public purchasing: Who’s minding the store?” Journal of Public Procurement . 1(1), 71–95.

Office of Government Commence, OGC (2007). “OGC Launches new procurement capability reviews.” http://www.bapcojournal.com/news/ fullstory.php

Owusu-Manu, D., Badu, E and Edwards, D. J. (2011). “Development of a procurement management framework in Ghana: A new paradigm for interdisciplinary postgraduate education.” Industry and Higher Education. 25(4), 289-305.

Peprah, C. (2001). “Coordination of the formulation of road transport investment policies in Ghana.” MSc, Kwame Nkrumah University of Science and Technology. dspace.knust.edu.gh

Stuijts, M., Waterman, D. and Schreijen, J. (2009) “Professionalising communal procurement: The experience in the Dutch public sector.” www.ippa.org/IPPC4/.../14ProcurementProfession/Paper14-4.pdf.

Tassabehji, R, and Moorhouse, A (2008) “The changing role of procurement: Developing professional effectiveness.” Journal of Purchasing and Supply Management. 14, 55–68.

Thai, K.V. (2001) “Public procurement re-examined.” Journal of Public Procurement. 1(1), 9-50.

United Nations Office for Project Services UNOPS (2010) “Procurement manual.” http://www.unops.org/SiteCollectionDocuments/Procurement %20docs

World Bank (2002) “Lao PDR: Country procurement assessment report, Report No. 25334-LA.” Washington, DC: Author. 21.

World Bank (2008) “Ghana - road sector development project.” Washington D.C. - The Worldbank. http://documents.worldbank.org/curated/en/2008/12/ 10276477/ghana-road-sector-development-project.