

# Role of Public Procurement to promote Indian SMEs Sustainability

*Debashree De (ded1@aston.ac.uk)*  
*PhD Research Student, Operations Management,*  
*Aston Business School, Birmingham, UK.*

*Ayon Chakraborty*  
*Associate Professor,*  
*Operations Management and Quantitative Techniques,*  
*IIM Tiruchirappalli, India*

*Prasanta Kumar Dey*  
*Professor, Operations Management,*  
*Aston Business School, Birmingham, UK.*

## ABSTRACT

Small and medium-sized enterprises (SMEs) contribute significantly to Indian GDP and Public Procurement. The supply and demand side of SMEs are challenging; hence they struggle with their sustainability. In demand side public procurement are very demanding, and competitive. In public procurement, there is an economic pressure of bidding at the lowest price consequently threatening the SMEs sustainability. Literature discusses policy and marketing strategy of the public procurement with SMEs, but there is limited literature on the procurement practices of public sector undertakings (PSUs) with Indian SMEs. The paper aims to explore the role of Indian public procurement in driving SMEs business sustainability.

**Keywords:** SMEs, Sustainability, Public Procurement.

## Introduction

Small and medium-sized enterprises (SMEs) are the backbone of Indian economy employing 40 percent of workforce and contribute 45 percent to India's manufacturing output (Moore and Manring, 2009). Public procurement is the procedure by which Public Sector Company obtains it supplies from third party by a contract. Public procurement accounts for approximately 12.8 per cent GDP for OECD countries (OECD, 2013). SMEs are significant percentage of supplier to the public procurement (Loader, 2013). The supply and demand sides of SMEs are challenging; hence they struggle with their sustainability. Achieving sustainability and remaining sustainable all through the products / services life cycle is the major concern of any business. Sustainability could be

achieved through most appropriate trade-off between economic, environment and social pillars (Tajbakhsh and Hassini, 2015).

In the supply side, adoption of new technology (Harland et al., 2007), retaining manpower, adhering to various regulations, promoting innovation (Freel, 2000) and managing procurement are also very challenging. In the SMEs demand side on one side public procurement are very demanding, while on another side there are numerous competitors (Loader, 2013). Public procurement has a large business; providing business opportunity for suppliers to trade as an attractive, reliable and prestigious customer (Loader, 2015). In the public procurement, there is an economic pressure of bidding at the lowest price consequently threatening the SMEs sustainability. SMEs struggle to bid in the public procurement as they find the resources to engage with a bureaucratic process and are disproportionately affected compared to larger suppliers (Glover, 2008).

Clearly the SMEs and public procurement directly affect the countries' economy. SMEs in India employ 40 percent of the total of 80 percent working workforce (Thakar, 2017). Public Procurement is recognized as a means of the giving government support to the SMEs (Loader 2007; Bannock and Peacock, 1989). Government of India tries to promote and provide opportunities to SMEs by its procurement policies. There are generally two types of procurement by which Public sector works with SMEs first by direct engagement with SMEs and secondly by the participating as a sub-contractor to the prime contractor (Morand, 2003).

Concern about SME engagement with public procurement is gaining interest of academics. There are literatures available, which looks into the barrier faced by the SMEs in public procurement (Loader, 2015; Akenroye and Aju, 2013). There has been a focus on the policy and marketing strategy adopted by the public procurement for the SME suppliers (Morand, 2003). The efficiency of policy approaches in public procurement in UK, Nigeria, US and Europe has been discussed (Flynn and Davis, 2016; Akenroye and Aju, 2013; Kidalov and Snider, 2011). However, there is a gap in literature for the study of role of public procurement in driving Indian SMEs sustainability.

The objective of the study is to investigate the role of public procurement in driving the SMEs sustainability. Considering the above observation, a systematic review of the practices in the Indian public procurement is done by developing a case study protocol and collecting data from four Public Sector Companies in India. The study makes practical contribution by bringing an insight into the practices, issues and challenges, policies in the public procurement process of driving the Indian SMEs.

The remainder of the paper is structured as follows: In Section 2 the literature review is done to outline the existing work in the public procurement with SMEs and consider the existing facts. In Section 3 research methodology is discussed. Finally, the results of the analysis are shown and discussed.

### **Literature Review**

SMEs is important SMEs contribute to 17 percent of the Indian GDP and employs 60million people in India (IBEF, 2011). Sustainability triple bottom line framework has major focus on the economy, environment and social aspects of the organization (Elkington, 1997). The operational and economic aspects of the SMEs are the essential targets to produce goods and to gain revenue. However environmental and social

performance, as well as their economic efficiency tend to conflict in their nature of contribution of sustainability (Tajbakhsh and Hassini, 2015).

SMEs face issues in their business and supply chain sustainability affecting the jobs of millions of people. SMEs are a critical part of the supply chain of the bigger companies, which may be public sector (Seuring et al., 2008). A bigger organization for example public sector transfers the pressure of sustainability on to its suppliers who are majorly SMEs, thus sharing both risk and responsibility (Dey and Cheffi, 2013).

Public procurement is a major buyer of goods from private sector. In a country such as India, public procurement contributes to 30 percent of the GDP (Sharma, 2012). This implies that public procurement gives ample opportunities to different business size class. SMEs face issues in their supply and demand side. In demand side they face strict requirements and tough competition to contest in public procurement. While the public procurement, there is an economic pressure of bidding at the lowest price consequently threatening the SMEs sustainability.

SMEs face challenges of capacity constraint, lack of skills and attitude in public procurement (Tammi et al., 2014). Small suppliers benefit from the value to money but the contracts available to them via open competition are generally short spanned (Loader, 2015). SMEs feel that public procurement has overly prescriptive requirements, poorly written tender specifications and the resource requirement as the major challenges. SMEs are concerned about public procurement practices and the competence of public procurement officers (Loader, 2015). Slow payment process, poorly defined specifications (MacManus, 1991), long expensive bidding process (Cabras, 2011) and a concern that tender prices must be much low (Michalis et al., 2003). SMEs supply products to the public sector. There are generally products and service categories only, in which SMEs can bid. Generally sensitive products are procured from the big brand companies. However the local services are generally procured from the SMEs (CRISPS, 2006). The preference of SMEs in public procurement depends on the sector and type of project handled, e.g., facility management, construction, consultancy, and social services (Pickernell et al., 2011).

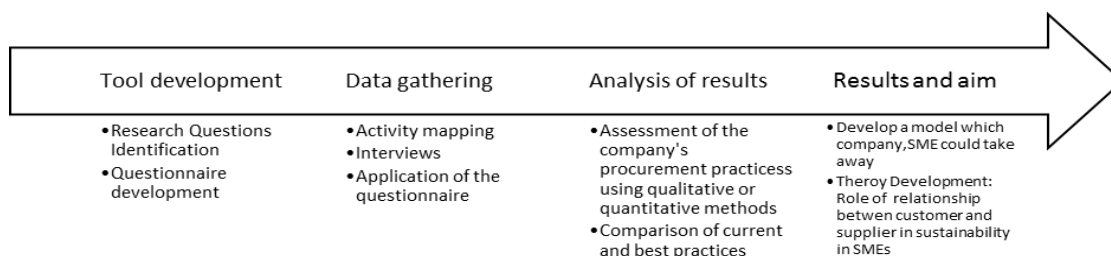
There has been discussion on the role of local authority in driving the SMEs sustainability. Available literature discusses on SMEs strategic orientation influence in their activity to participate in public procurement market. Literature has looked into the marketing orientation, customer orientation, competitor orientation and inter-functional coordination on how SMEs look for public sector procurement (Tammi et al., 2014). Akenroye and Aju (2013) developed taxonomy to reveal the specific schemes and measures to promote SME participation in public procurement in Nigeria. There has been comparison of the efficiency of policy approaches in public procurement in US and Europe (Kidalov and Snider, 2011).

There has been extensive discussion in the literature on the sustainable supplier selection and the issues faced by SMEs in their supply chain. The existing studies have looked into the SMEs perception by the semi-structured surveys and qualitative study derived from case study based study analysis (Loader 2015; Pickernell et. al. 2011; Karjalainen and Kempainen, 2008; Glover 2008; Loader 2005). The role of the PSUs in driving Indian SMEs sustainability needs to be looked into so the case study based methodology has been adopted.

## Research Methodology

Deductive theory testing and positivistic research methodologies are the major facets of management research (Alvesson and Willmott, 1996). These methodologies incorporate a more scientific approach with the formulation of theories and the use of large data samples to observe their validity. Mostly these approaches fail to give deep insights and rich data in enquiries such as about sustainable practices in SMEs and the role of PSUs. Schroeder et al. (2007) state the need for more theory grounded and contingency based research rather than be restrictive to deductive approaches. Akenroye and Aju (2013) and Kidalov and Snider (2011) emphasize this point by saying there is a paucity of systematic and rigorous evaluation about PSUs role in sustainable practice in SMEs.

According to Yin (1994) three types of case studies are exploratory, explanatory, and descriptive. The exploratory stage comes before the theory building stage and seeks to uncover areas for research and theory development (Voss et al., 2002). The advantages of the case study approach at this stage of research help in achieving the *exploratory depth* of understanding (Nonthaleerak and Hendry, 2008; Meredith, 1998).



*Figure 1 Steps Taken in Research*

As studies about the role of PSUs are limited so, a multiple case study approach will be appropriate to overcome the drawbacks of previous literature, where the concentration was mainly on single organizations. Multiple case study approach will further help in a more direct comparison between the similarities and differences of the sustainable practices in the different contexts considered (Silverman, 2000). Multiple case experiments provide a theory better grounded, more accurate, and more generalizable. Multiple cases also create more robust theory because the propositions are more deeply grounded in varied empirical evidences. Constructs and relationships are more precisely delineated because it is easier to determine accurate definitions and appropriate levels of construct abstraction from multiple cases (Eisenhardt and Graebner, 2007; Meredith, 1998; Yin, 1994). Figure 1 demonstrates the steps taken in undertaking the research.

### *Practitioner involvement*

The research on Public Sector Unit's role in facilitating sustainable practices in SMEs till now is very limited in terms of interaction between academia and practice. This can be useful in maintaining objectivity, but it is not possible to not have proper alignment in views of industry and academia when various factors such as socio-political issues are involved (Leonard and McAdam, 2001).

Thus, multiple case studies help researcher to participate with both PSUs and SMEs to gain greater insights into the issues related to sustainable practices. In the field of

management this can be termed as “*mode 2* knowledge, created in a context of application”. Here the whole system depends on the interplay between academics and practitioners (Partington, 2000, pp. 91).

There is concern among researchers about the subjectivity of the findings because of practitioner involvement (Leonard and McAdam, 2001; Wilkinson and Wilmott, 1994). We followed suggestions provided by Yin (1994). In our research we followed some of the suggested methods such as using different research techniques and involving people from different ranges in the organization to balance subjectivity.

*Triangulation*

The study on the role of PSUs on sustainable practices in SMEs should be based on reliable data, which is ensured by triangulation. Triangulation requires the use of multiple sources of data, multiple investigators or multiple methods to confirm the emerging findings. Reliability of data also increases if multiple sources of data on the same phenomenon are used (Laws and McLeod, 2004; Voss et al., 2002). The data sources for our research included interviews, observation, archived materials, documentations, etc. Overall, practitioner-based data sources and inputs are required to ensure triangulation and theory building and testing within the research methodology (Strauss and Corbin, 1990).

*Data collection procedure*

A case study protocol was developed comprising a list of the research variables to address, and the respective questions, potential sources of information, and field procedures. Although data collection focused on the formal research variables, we also addressed other issues enabling us to understand the observed pattern of procurement process, such as the selection criteria of suppliers and factors, which help PSUs to decide on long- or short-term commitments with the SMEs. Table 1 provides the list of participants for this study.

*Table 1: List of respondents*

Organization	Designation	Numbers
PSU (Heavy Industry)	Engineer	3
	Senior Engineer	1
	Manager	1
	Senior Manager	1
	Deputy General Manager	6
	Additional General Manager	2
	Senior General Manager	1
	<i>Not Available</i>	2

**Discussion**

The study focused on understanding the procurement process of Public Sector Companies. At this stage the collected from interviews showed three main aspects: issues and challenges in selecting SMEs as suppliers, factors considered while selecting the suppliers and also about the factors in supplier evaluation.

*Issues and challenges in selecting SMEs as suppliers*

As literature suggests there are three phases in supplier selection by OEMs (Original Equipment Manufacturers). Outcome of the interview suggest that OEMs prefer to give

approximately 20 percent of their tenders to SMEs, as it is a government rule to encourage SMEs in bidding process. However, there is no difference in the procurement criteria of the SMEs. Challenges faced in interaction with SMEs are distance/location, delay in delivery time and past performance of the SMEs.

*Table 2: Issues and Challenges in Selection of SMEs*

<b>Issues and Challenges in Selection of SMEs</b>		
<b>SME Supplier Selection</b>	<b>SME Negotiation</b>	<b>SME Performance</b>
Ability to meet technical requirement	Acceptance of the terms and conditions	20 percent of tender quantity on matching of L1 rate
As per their capabilities	Always price is high compared to estimates	Ability to complete
Audit certification	Availability for negotiation	Cost comparison
Awareness issues	Cost reduction	Customer acceptance
Eligible to supply	Demanding payment on time	Delivery commitment
Financial capability of SME suppliers	Estimated value of Product/Service	Demanding payment rather than repairing rejected items
Identifying product	Far off location	Documentation
Location of the supplier	More cost than non-SME	Enquiries are give to only SMEs for all items reserved for SMEs
Long-term relationship	Negotiate with SME to match L1 rate	Quality issues
Low participation	Overhead of SME	Response is poor
NSIC not extending full cooperation	Profit percentage loaded by SME	They are exempted from submission of Earnest Money Deposit (EMD)
Ownership deed	Short notice limitation	
Partnership deed	Taking shelter under SME act	
Past experience on similar projects is very crucial	Time frame	
Poor response		
Product Range		
Social criteria		
Technology/manufacturing capability		
Tender on L1 basis		
Traders intervention than manufacturers		
Various items reserved for SMEs		
Women entrepreneur, SC/ST indicator		

The OEMs acknowledge generally there is delay in the delivery of products from the SMEs. SMEs performance is been assessed on basis of time delivery, quality and cost comparison. Practices of SMEs are observed while giving the tender. Quality of products, cost and delivery schedule for products is prioritized while giving an order to SMEs. Tender bidding comprised mostly of cost negotiation with SMEs. The process evaluation of the SMEs is an important. OEMs prefer SMEs with ISO 140001 Certification. The interviews suggest OEMs do not give much emphasis on the social aspects of the SME (refer Table 2). The interview highlights OEMs have concerns about the operational and economic aspects of the SMEs. OEMs perceive the SMEs don't struggle in the cash flow. OEMs prefer to have 14001 certifications from SMEs. However it will be interesting to see if the OEMs' perception matches with the SMEs perception on Public Procurement.

*Factors considered in strategic supplier selection*

The public sector units mostly preferred cost, quality, and delivery, which is in alignment with the existing literature. The preference of factors such as environmental considerations, health and safety, and past performance shows that due to changing global scenario and importance of sustainable practices public sector units also has to select their suppliers accordingly (OECD, 2011).

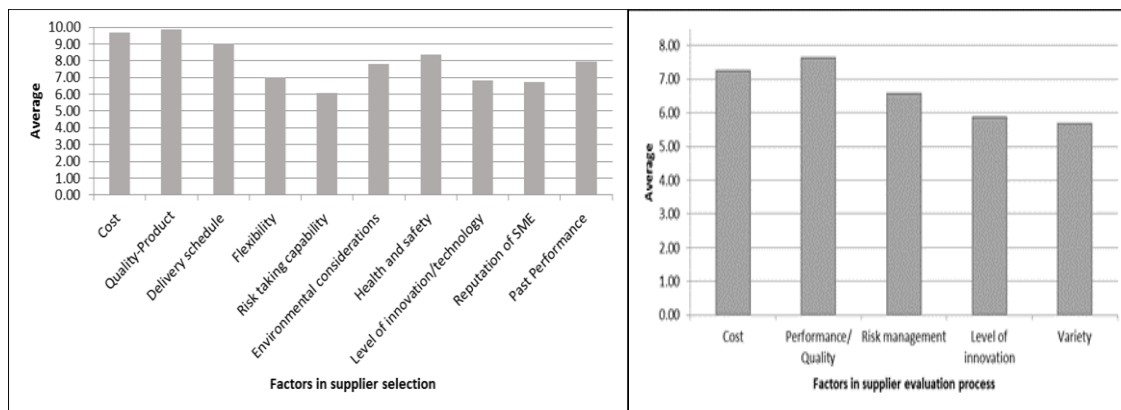


Figure 2: Factors considered in strategic evaluation strategic Supplier selection by PSUs

Figure 3: Factors in supplier process

In alignment with supplier selection, evaluation of supplier is also based primarily on cost and quality. Finding of factors such as risk management, level of innovation, variety in offerings suggests that public procurement require SMEs to be innovative as well as to be flexible enough to provide different product or service offerings. Thus SMEs has to overcome the barriers related to innovation and integrating themselves within the supply chain network to develop a long-term relationship with public sector procurement (Harland et al., 2007; Freel, 2000). Figure 4 shows the conceptual model for the role of Public procurement in driving SMEs sustainability.

From the insights of the interviews conducted and published paper, it is evident that OEM has a sustainable supplier selection strategy. Legislation forces OEMs to procure from SMEs a certain percentage of product type. Public procurement hence tries to develop the suppliers. SMEs try to meet the requirements of the OEMs by negotiation. However, the SMEs feel pressure and conflict of interest in working with OEMs. Hence, OEM tries to support SMEs by their Supplier development strategy. Through the both way

communication between customer and supplier, SMEs tend to adopt the sustainability practices.

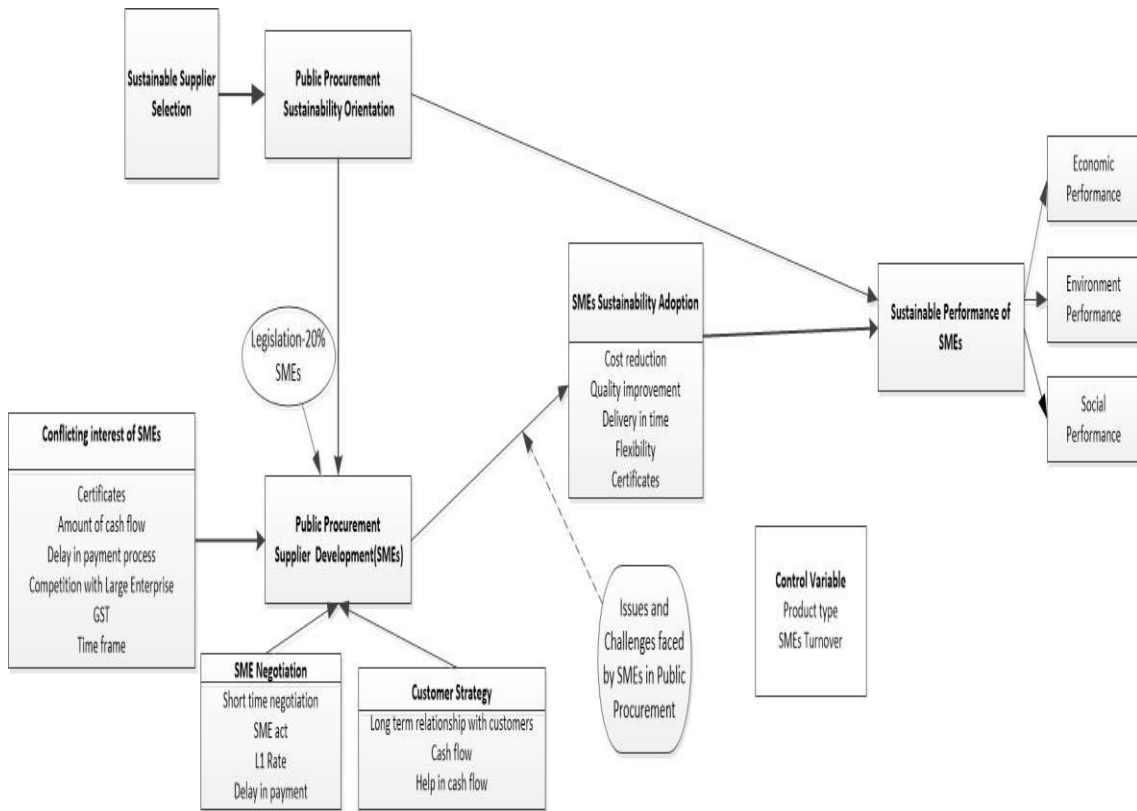


Figure 4 Conceptual model

The Sustainability practices adopted helps in the driving of the sustainability of the SMEs. The public procurement supplier development strategy acts as a mediator in the Public Procurement Sustainability orientation and SMEs sustainability adoption. However, the issues and challenges faced by SMEs in Public procurement acts as a moderator on the SMEs sustainability adoption. The SMEs sustainability adoption needs to researched further through more data collection. The model can be observed in the case of the different product type and size-turnover of the SMEs.

### Conclusion

This study was an attempt to understand the public procurement process from OEMs perspective. The results show that there are several issues and challenges faced by the OEMs in selection, negotiation, and performance of suppliers, specifically from SMEs. It can also be seen from the findings that though cost and quality are foremost considerations in supplier selection but the growing importance of sustainability is leading OEMs to also consider the capabilities of SMEs in terms of health and safety, environmental considerations and levels of innovation. The scope of the present study is limited only to understand role of public procurement from OEMs perspective in driving SMEs sustainability. But to have a holistic understanding; the findings from this study will be substantiated by studying supplier's (SMEs) perspectives. Thus the future study will focus on SMEs to bring out the perception and propose the procurement framework for OEMs so that they can drive the SMEs sustainability.



## References

- Alvesson M. and Willmott (1996), *Making sense of management*, Sage: London.
- Akenroye, T. O. and Aju, O. (2013), "A taxonomy of approaches for promoting SMEs access to public procurement market", *Journal of Enterprising Culture*, Vol. 21, No. 3) pp. 335-357.
- Akenroye, T. and Aju, O. (2013), "Barriers to small and medium enterprises participation in public procurement in Nigeria: Some preliminary results", *International Journal of Entrepreneurship and Innovation Management*, Vol. 17, Iss. 4-6, pp. 313-328.
- Bannock, G., and Peacock, A. (1989), *Governments and small business*, London, Paul Chapman Publishing.
- Cabras, I. (2011), "Mapping the spatial patterns of public procurement. A case study from a peripheral local authority in Northern England", *International Journal of Public Sector Management*, Vol. 24, No. 3, pp. 187-205.
- CRiSPS (2006), *Delivering supply strategy: What considerations should local authorities take into account when developing a strategy to trade with SMEs*, University of Bath.
- De Medeiros, J. F., Vidor, G. and Ribeiro, J.L.D. (2015). Driving factors for the success of the green innovation market: A relationship system proposal. *Journal of Business Ethics*, pp. 1-15. (DOI: 10.1007/s10551-015-2927-3).
- Dey, P. K. and Cheffi, W. (2013), "Green supply chain performance measurement using the analytic hierarchy process: A comparative analysis of manufacturing organisations." *Production Planning and Control*, Vol. 24, No. 8-9, pp. 702-720.
- Eisenhardt, K.M. and Graebner, M.E. (2007), "Theory building from cases: opportunities and challenges", *Academy of Management Journal*, Vol. 50 No. 1, pp. 25-32.
- Elkington, J. (1997), *Cannibals with Forks. The Triple Bottom Line of 21st Century Business*, Capstone Publishing Ltd.: Oxford, UK.
- Flynn, A. and Davis, P. (2016), "Firms' experience of SME-friendly policy and their participation and success in public procurement", *Journal of Small Business and Enterprise Development*, Vol. 23, No. 3, pp. 616-635.
- Flynn, A. and Davis, P. (2016), "The policy–practice divide and SME-friendly public procurement", *Environment and Planning C: Government and Policy*, Vol. 34, No. 3, pp. 559–578.
- Freel, M. S. (2000), "Barriers to product innovation in small manufacturing firms", *International Small Business Journal*, Vol. 18, No. 2, pp. 60-80.
- Glover, A. (2008), *Accelerating the SME economic engine: Through transparent, simple and strategic procurement*, HM Treasury: London.
- Harland, C.M., Caldwell, N.D., Powell, P. and Zheng, J. (2007), "Barriers to supply chain information integration: SMEs adrift of eLands", *Journal of Operations Management*, Vol. 25, No. 6, pp.1234-1254.
- Johnson, M. P. (2015), "Sustainability management and small and medium-sized enterprises: manager's awareness and implementation of innovative tools", *Environmental Management*, Vol. 22, pp. 271-285.
- Karjalainen, K. and Kempainen, K. (2008), "The involvement of small-and medium-sized enterprises in public procurement: Impact of resource perceptions, electronic systems and enterprise size", *Journal of Purchasing and Supply Management*, Vol. 14, No. 4, pp. 230-240.
- Kidalov, M. V. and Keith, F. S. (2011), "US and European public procurement policies for small and medium-sized enterprises (SME): A comparative perspective", *Business and Politics*, Vol. 13, No. 4, pp. 1-41.
- Laws, K. and McLeod, R. (2004), "Case study and grounded theory: Sharing some alternative qualitative research methodologies with systems professionals", In *Proceedings of the 22<sup>nd</sup> International Conference of the Systems Dynamics Society*, Vol. 78.
- Leonard, D. and Mc Adam, R. (2001), "Grounded theory methodology and practitioner reflexivity in TQM research", *International Journal of Quality and Reliability Management*, Vol. 18 No. 2, pp. 180-194.
- Loader, K. (2013), "Is public procurement a successful small business support policy? A review of the evidence", *Environment and Planning C: Government and Policy*, Vol. 31, No.1, pp. 39-55.
- 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.

- Loader, K. (2007), "The challenge of competitive procurement: Value for money versus small business support", *Public Money and Management*, Vol. 27, No. 5, pp. 307-314.
- Macmanus, S. A. (1991), "Why businesses are reluctant to sell to governments", *Public Administration Review*, pp. 328-344.
- Meredith, J. (1998), "Building operations management theory through case and field research", *Journal of Operations Management*, Vol. 16, No. 4, pp. 441-454.
- Michaelis, C., McGuire, M. and Ferguson, L. (2003), *SBS diversity in public sector procurement survey*, Final Report, Databuild: Birmingham.
- Moore, S. B. and Manring, S. L. (2009), "Strategy development in small and medium sized enterprises for sustainability and increased value creation", *Journal of Cleaner Production*, Vol. 17, No. 2, pp. 276-282.
- Morand, P. H. (2003), "SMEs and public procurement policy", *Review of Economic Design*, Vol. 8, No. 3, pp. 301-318.
- Nonthaleerak, P. and Hendry, L. (2008), "Exploring the Six Sigma phenomenon using multiple case study evidence", *International Journal of Operations and Production Management*, Vol. 28 No. 3, pp. 279-303.
- Organization for Economic Co-operation and Development. (2011), *Size of public procurement market. Government at a Glance*, OECD Publishing. [Accessed September 3, 2013, from [http://dx.doi.org/10.1787/gov\\_glance-2011-46-en](http://dx.doi.org/10.1787/gov_glance-2011-46-en)].
- Partington, D. (2000), "Building grounded theories of management action", *British Journal of Management*, Vol. 11, No. 2, pp. 91-102.
- Pickernell, D., Kay, A., Packham, G. and Miller, C., (2011), Competing agendas in public procurement: An empirical analysis of opportunities and limits in the UK for SMEs", *Environment and Planning C: Government and Policy*, Vol. 29, No. 4, pp. 641-658.
- Reijonen, H., Tammi, T. and Saastamoinen, J. (2016), "SMEs and public sector procurement: Does entrepreneurial orientation make a difference?" *International Small Business Journal*, Vol. 34, No. 4, pp. 468-486.
- Schroeder, R.G., Linderman, K., Liedtke, C. and Choo, A.S. (2008), "Six Sigma: Definition and underlying theory", *Journal of Operations Management*, Vol. 26, No. 4, pp. 536-554.
- Seuring, S., Sarkis, J., Müller, M. and Rao, P., (2008), *Sustainability and supply chain management*, An introduction to the Special Issue.
- Silverman, D. (2000), *Doing qualitative research: A practical handbook*, Sage: London.
- Sporrong, J. (2009), "Public procurement incentives for sustainable design services: Swedish experiences", *Architectural Engineering and Design Management*, Vol. 5, No. 1-2, pp. 24-35.
- Strauss, A.L. and Corbin, J. (1990), *Basics of qualitative research: grounded theory procedures and techniques*. Newbury Park, California: Sage Publications.
- Tajbakhsh, A. and Elkafi, H. (2015), "Performance measurement of sustainable supply chains: a review and research questions", *International Journal of Productivity and Performance Management*, Vol. 64, No.6, pp. 744-783.
- Tammi, T., Jani, S. and Reijonen, H. (2014), "Market orientation and SMEs' activity in public sector procurement participation", *Journal of Public Procurement*, Vol. 14, No.3, pp. 304.
- Voss, C., Tsikriktsis, N. and Frohlich, M., (2002), "Case research in operations management", *International Journal of Operations and Production Management*, Vol. 22, No. 2, pp. 195-219.
- Wilkinson, A. and Willmott, H. (1994), *Making quality critical: New perspectives on organizational change*, Routledge: London.
- Yin, R.K. (1994), *Case study research: Design and methods*, 3<sup>rd</sup> ed., Sage, Thousand Oaks, CA.