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AUTHORS	Chengedzai Mafini
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Chengedzai Mafini (South Africa)

Barriers to public supply chain management strategy implementation: an exploratory diagnosis

Abstract

This paper investigated barriers to the implementation of public supply chain management strategy in the South African public sector. The public sector in South Africa faces serious supply chain management challenges that are detrimental to the effectiveness and efficiency of public sector operations. A structured questionnaire was administered to a sample of 309 public supply management professionals based in Gauteng Province, South Africa. Data were analyzed using the Statistical Packages for the Social Sciences (SPSS version 23.0). The Exploratory Factor Analysis (EFA) using the Principal Components Analysis (PCA) technique was applied to identify the intended barriers. Seven factors which are the barriers to supply chain management strategy implementation; namely, management practices, human resource capabilities, customer service, external orientation, internal communication, innovation and employee motivation were extracted. Management practices emerged as the most influential barrier after the application of the mean score ranking technique.

Keywords: public supply chain management, management practices, human resource capabilities, customer service, external orientation, internal communication, innovation and employee motivation.

JEL Classification: H57.

Introduction

Supply chain management is one of the important instruments that facilitates policy implementation in governments. However, it remains a misconstrued and unappreciated domain in many circles, to the degree that its strategic importance is yet to be acknowledged (Hawkins, Gravier and Powley, 2011). Be that as it may, the fundamental issue is that the detrimental influence of ineffective public supply chain management can be catastrophic to any economy (Pooe and Mathu, 2011). For instance, according to the South African National Treasury (2015), some of the negative effects of inconsistency in public supply chain management include excessive prices charged by suppliers; unreliable and substandard quality of goods and services contracted for and delivered; corruption and waste. This is in contrast to the private sector, where there has been the realization of the strategic importance of supply chain management practices to the prosperity of the business enterprise, leading to large investments in that area in order to maximize shareholder wealth (Mols, Hansen and Villadsen, 2012). The public sector, therefore, faces the challenge of emulating the private sector by embracing a mounting appreciation of the impact of supply chain management and developing initiatives or reforms intended to increase both the efficiency and effectiveness in that area (Ambe and Badenhorst-Weiss, 2011).

The aim of this paper is to identify barriers to the successful implementation of supply chain management strategy in the South African public sector. Public expenditure continues on an extensive

and essential scale in the country, with the South African public sector spending an estimated 500 billion South African rand on goods, services and other capital expenditures through over 1000 procuring entities in each financial year (South African National Treasury, 2015). However, despite these substantial financial outlays, there is evidence of widespread inefficiency, ineffectiveness and corruption within the public supply chain management system in the country, and has led to the wastage of precious financial resources obtained from the fiscal system (Mhlango, 2014). The perpetual existence of numerous volleys of service delivery protests throughout the country serves as an emblem of the dissatisfaction with the quality of the service that South African citizens are receiving from the supply chain management system in the public sector. Furthermore, although some studies (e.g., Ambe and Badenhorst-Weiss, 2011, 2012) have in the past investigated the dynamics occurring within South African public supply chain management, there is a paucity of studies that focused specifically on barriers to supply chain management strategy. Still, the methodologies, samples and dimensions used in most previous studies differ significantly from those adopted in this paper, which presents possibilities of obtaining new insights on the matter through continuing research. In any case, given the importance of public supply chain management to an emerging economy such as South Africa, as well as the highly volatile or elusive nature of supply chain management itself, an impulsion is presented to investigate the impediments to strategy implementation in South Africa's public supply chain management system on a continuous basis, in order to provide more current information that may contribute to present-day solutions.

1. A brief review of literature

1.1. Public supply chain management. According to Cao and Zhang (2011), supply chain management is the amalgamation of key business processes throughout the supply chain with the aim to generate value for customers, as well as other stakeholders. Typical supply chain activities include everything from product development, sourcing and procurement, production, logistics, and the information systems required for the coordination of these activities (Prajogo and Olhager, 2012). Supply chain management has emerged as very important driver of business success, since most organizations have become more conscious of the increasing need to depend on effective supply chains, or networks, in order to compete in the networked economy and globalized market of today (Prajogo and Olhager, 2012). In the government sector, public supply chain management may simply be perceived as the acquisition (through buying or purchasing) of goods and services by government or public organizations (Chinomona and Poole, 2013). Included in public supply chain management are various business activities that support the service delivery, social and political functions of government, and this may range from routine items to complex construction and development projects (Wieland and Handfield, 2013).

In South Africa, the public supply chain management function falls under the jurisdiction of the Office of the Chief Procurement Officer, which is a division of the National Treasury. Section 217 of the South African Constitution (Republic of South Africa, 1996) also recognizes the importance of supply chain management, specifying that the prudent management of this function is intentioned to yield six major benefits, namely, 1) good quality service delivery, which, in turn, results in improved welfare of South African citizens; 2) growth of the economy through infrastructural expansion and maintenance; 3) lower costs for goods, services and infrastructure; 4) promotion of innovation throughout the economy; 5) acceleration of e-learning through the acquisition and use of relevant technologies in educational institutions and 6) decreased cost of doing business with the state, which benefits suppliers. The South African government has also flexed its regulative tentacles into supply chain management by initiating the Preferential Procurement Policy Framework Act of 2000, the Municipal Finance Management Act of 2003 and the Broad-Based Black Economic Empowerment Act of 2003, all of which were intended to give direction to public supply chain management activities in the country (National Treasury, 2015). Therefore, supply chain management is recognized as a dominant mechanism for managing state procurement activities in South Africa.

1.2. Common barriers to strategy implementation.

A business strategy may be perceived as a plan of action employed by an organization that pronounces how it intends to deploy its resources when producing either a service or a product (Ledwith & O'dwyer, 2014). Implementation of strategy is usually an intricate matter, since one has to contend with a multiplicity of barriers that inhibit its successful implementation (Rorsted and Knobel, 2012). Barriers are those factors that act as stumbling blocks or impediments to the process of strategy implementation, thus, making it difficult for the organization to realize its goals (Mohammadi and Vakilalroaia, 2013). Whilst it is acknowledged that there are a plethora of barriers, as well as various classifications, this paper identifies four major barriers to strategy implementation in organizations, namely vision, people, management and resources. Vision barriers are manifested through an ineffective mission and vision statement, which fails to clarify the critical business matters that need to be emphasized for success (Kaplan, 2010). Management barriers include the adoption of some undesirable types of management approaches, whilst people-based barriers are those that are linked to the manner in which both employees and management conduct themselves within the organization (Zheng, Yang and McLean, 2010). With regard to resource-based barriers, most organizations with acceptable practical strategies fail to implement their strategies because of the non-availability of critical resources (Bingham and Eisenhardt, 2011).

2. Data and methodology

2.1. Research design. A quantitative approach was adopted, because it allows the use of statistical methods in order to objectively analyze the data, which makes the results more dependable (Sedmak and Longhurst, 2010). The present study further espoused the cross-sectional survey design, which involves the use of a questionnaire in the collection of data for a particular investigation from any given sample of population elements (Moutinho and Hutcheson, 2011). The cross-sectional survey design was selected, because it has several desirable advantages, such as stronger representativeness, impartiality and replicability (Khan, 2014), all of which were applicable and guaranteed that the research method used matched the objectives of the study.

2.2. Sample. The sample consisted of 309 supply management professionals employed in the South African public sector and were based in Gauteng Province. The sample size was determined using the historical sample size technique, with reference being given to previous studies (Tachizawa and Gimenez, 2010; Piderit, Flowerday and Von Somes, 2011) in which sample sizes ranging between 300 and 400

respondents were used in representing target populations of between 1000 and 1500 people. Respondents were selected using the convenience sampling technique, because it was always going to be difficult to access the respondents at the same place and time, since most of the respondents are always out of their offices, due to work commitments.

2.3. Instrumentation and data collection procedures. For the purposes of data collection, a self-administered structured questionnaire was used. A 37 question measurement scale was operationalized using previous studies (Amarjit and Nahum, 2012; Doern, 2011; Glenn-Richey, Chen, Upreti, Fawcett and Adams, 2009; Osborne and Brown, 2005; Ülgen and Forsland, 2015). Response options were scored on a 5-point Likert-scale anchored by 1 = Strongly Disagree, and 5 = Strongly Agree. Out of a total of 550 questionnaires that were distributed to respondents in April 2015, 347 were returned. Among the later, 38 were found to be unusable and were, consequently, eliminated. This culminated in 309 usable questionnaires, which gives a usable response rate of 56.18%. Questionnaire items are listed in Table 1.

2.4. Statistical analysis. Data analysis was conducted with the aid of the Statistical Packages for the Social Sciences (SPSS version 23.0) software. Statistical techniques used in the study include descriptive statistics (frequencies and percentages, mean scores and Z-scores) and exploratory factor analysis.

2.5. Validity and reliability. For testing reliability, the Cronbach's Alpha statistic was adopted. The result showed an overall Cronbach's Alpha value of 0.79 which is considered to be acceptable, since it is beyond the 0.7 minimum acceptable threshold (Fiss, 2011). In order to ascertain face validity, the questionnaire was reviewed by two faculty members whose lines of focus lie within strategic management. To ascertain content validity, the questionnaire was pilot tested with a convenient sample of 50 respondents. Feedback obtained from both the expert reviews and the pilot study facilitated some amendments to the questionnaire, thereby improving its content validity. Construct validity was assessed through the reliabilities of the individual factors (Table 2) and was measured using Cronbach's Alpha coefficient. The Cronbach's Alpha coefficients of the five factors (Table 2) were considered to be satisfactory because they were greater than the recommended 0.7 (Schwab et al., 2011). In addition, construct validity was also assessed through exploratory factor analysis (EFA). The results indicated that no constructs were cross-loading, which lead to the extraction of seven barriers to strategy implementation.

3. Exploratory factor analysis

In the study, exploratory factor analysis (EFA) using the Principal Components Analysis (PCA) method and Varimax Rotation was applied in order to identify possible barriers to supply chain management strategy. The scale was purified by eliminating low cross-loadings, low factor loadings, as well as low communalities in order to improve the extent to which the factor structure could be interpreted, as suggested by Zyphur and Oswald (2013). A lowest cut-off value of 0.50 was utilized on the variable loadings, in line with the suggestion by Kruschke, Aguinis and Joo (2012) that factor loadings that are greater than ± 0.30 are adequate in meeting minimum levels; factor loadings of ± 0.40 should be considered as important, and factor loadings of ± 0.50 or more should be considered more important.

To ascertain that the data captured in the present study were appropriate for exploratory factor analysis, two statistical tests, namely, the Kaiser-Meyer-Olkin (KMO), as well as the Bartlett's Test of Sphericity were conducted. The KMO measure of sampling adequacy was 0.891 and the Bartlett's Test of Sphericity was significant at (Sig = 0.001), supported by a Chi-square value of 3417.269 at 575 degrees of freedom (df). This result demonstrated that the captured data set was not an identity matrix with zero correlations (i.e., variables are correlated), which confirmed that the factor analysis method could be applied. Exploratory factor analysis yielded a seven factor structure. The rotated factor loading matrix illustrating the resultant factors, eigen values, percentage of variance explained and reliabilities is provided in Table 1 in Appendix.

The seven factors that were extracted or identified are the barriers to the implementation of supply chain management strategy in the South African public sector. The factors were labelled as management practices, human resource capabilities, customer service, external orientation, internal communication, innovation and employee motivation. The extracted factors accounted for approximately 77.36% of the variance, which was considered as satisfactory, since it lies beyond the minimum threshold of 60% (Marx, Rihoux and Ragin, 2014). This implies that approximately 22.64% of the variance can be accounted for by other barriers to supply chain management strategy implementation that were left out of this study.

4. Mean score ranking of extracted factors

Mean scores and Z-scores for all the constructs were computed in order to determine their relative importance. The results are reported in Table 2.

Table 1. Mean scores, reliability and mean score ranking of factors

Dimensions	Mean score \bar{x}	Reliability A	Standard deviation	Z-score	Significance (p-value)	Position in mean score rank
Management practices	4.723	0.738	1.661	2.698	0.061*	1
Human resource capabilities	4.237	0.725	0.789	1.075	0.004*	5
Customer service	4.379	0.709	1.458	2.302	0.0134*	3
External orientation	4.194	0.776	2.716	1.497	0.078*	6
Internal communication	4.065	0.719	1.054	1.563	0.002*	7
Innovation	4.285	0.744	1.675	2.892	0.006*	4
Employee motivation	4.612	0.769	0.997	1.184	0.016*	2
Minimum mean score value = 1: maximum mean score value = 5: *Significant at $p < 0.05$ (one-tailed)						

An analysis of Table 1 reveals that mean scores for all barriers ranged between ≥ 4.065 and ≤ 4.723 . These scores portray an average inclination between the 'agree' and 'strongly agree' points on the Likert scale. Management practices ($\bar{x}=4.723$) emerged as the highest scoring barrier in terms of means, while internal communication ($\bar{x}=4.065$) scored the lowest mean. This result depicts that among the barriers identified in this study, management practices are the strongest barrier to supply chain management strategy implementation, while internal communication is the weakest barrier. The significant scores obtained in the Z-test provide further empirical confirmation of the importance of all barriers identified in the present study.

5. Discussion focusing on the extracted barriers

As mentioned before, the exploratory factor analysis procedure culminated in the extraction of seven factors that are the barriers to supply chain management strategy implementation in the South African public sector. The ensuing discussion focuses on each of the seven barriers.

5.1. Barrier 1: management practices. The first barrier was labelled as 'management practices' and contributed to 15.19% of the variance. Fasanya and Onakoya (2013) conceptualized management practices in terms of the demeanor adopted by organizational authorities, as they initiate and implement the key activities of planning, leading, organizing, staffing and controlling. Every organization needs proper management practices in order to ensure a smooth running of operations (Rompheo, 2011). Success in implementing cutting edge and effective management practices leads to satisfactory performance in critical performance areas that include, inter alia, employee motivation, financial performance, reputation and goodwill, and employee and organizational productivity (Darwish and Sing, 2013). On the contrary, poor management practices could be one of the major reasons for failure of most business organizations. As captured by an old Chinese proverb, 'a fish starts rotting from the head', when an organization starts to fail, it could be the leadership that is the root cause (Garratt, 2010). A study by Mafini (2015) reports that corruption, incompetence, egocentricity, lack of commitment, jockeying for

position and general incompetence characterize management in the South African public sector. It is necessary, then, that managers adopt and implement suitable practices that can effectively steer the South African public supply chain management function to success and discard all forms of malpractices and inefficiencies that invoke trouble for the sector.

5.2. Barrier 2: human resource capabilities. The second barrier was labelled as 'human resource capabilities' and explained 9.73% of the variance. Katsikea, Theodosiou and Morgan (2015) define human resources management as a strategic and coherent approach to the management of the most valued assets in an organization; namely, the people working there who individually and jointly contribute to the accomplishment of organizational objectives. The purpose of the human resource system is to ensure that the organization is able to achieve success through people (Bouville and Alis, 2014). The main functions of human resources in an organization are to employ people, maintain and improve employee skills, organizational development programs, and to compensate employee's services for the organization (Jackson, Schuler and Jiang, 2014). Furthermore, human resource is concerned with the laws, policies, health and safety, reward systems, benefits and compliance available for staff (Katsikea, Theodosiou and Morgan, 2015). It is essential to develop effective human resource capabilities, because it is not possible for an organization to build a capable team that is composed of working professionals when it does not have an effective human resource system in place (Cooke, 2013). In the context of South Africa, an acute shortage of qualified supply management professionals in the country has been noted, and the profession has been included in the top 100 critical scarce skills (Department of Higher Education and Training, 2014). Since human resource capabilities are important tools for organizational performance in that they shape the behavior, attitudes, and performance of employees (Stone and Deadrick, 2015), it is clear, then, that human resource capabilities in terms of supply chain management are very important to the South African public sector. Its importance lies in that it deals with the provision of manpower or the workforce, without which very little can be accomplished.

5.3. Barrier 3: customer service. The third barrier was labelled as ‘customer service’ and contributed to 11.47% of the variance explained. Customer service may be perceived as the advice and assistance provided by an organization to persons who purchase or utilize its products or services, in order to satisfy their needs (Tahir, Yusoff, Azam, Khan and Kaleem, 2012). In other words, customer service is analogous to client service delivery in the public supply chain management environment. The needs of customers fall into four categories which are quality, time, performance and service and cost (Jin and Oriaku, 2013). Customer service is administered to customers before the purchase transaction takes place, as the purchase transaction is conducted, and after the purchase transaction has been finalized (Chi, Grandey, Diamond and Krimmel, 2011). Since the needs of customers are ever changing and the behaviors of customers is highly unpredictable, businesses are compelled to be vigilant, tactical and aggressive in marketing their products or services (Tahir et al., 2012). Kim and Lee (2011) argue that satisfaction of customer needs or being the provider of choice through creating enthusiastic and loyal customers are major characteristics of any high performance organization. In a meta-analytic study conducted by Akinci (2015), it was found that there was a positive relationship between customer satisfaction, employee satisfaction and overall company productivity in approximately 8000 business units located in 36 organizations worldwide. Another study conducted by Beneke et al. (2013) found that organizations that prioritized customer service had a better performance than those that did not. It can be suggested, then, that the South African government is unlikely to be able to satisfy its service delivery imperatives if its supply chain management wing fails to recognize the importance of providing an effective service to its different clientele.

5.4. Barrier 4: external orientation. The fourth barrier was labelled as ‘external orientation’ and explained 8.97% of the total variance. External orientation involves interactions with external stakeholders such as partners and third parties that may include competitors, suppliers, customers, government and the community, among others (Vaccaro, Parente and Veloso, 2010). Using the information collected from these external strategic constituencies, the organization can implement important changes to its working practices, business relationships, and organizational culture and structure over time and space (Navarro et al., 2011). According to Maghrabi and Gargeya (2012), the organization’s external orientation has become very important for organizations to remain competitive in this era of globalization, since it is associated with several benefits accruing to the organization. These benefits

range from close linkages between the value chains of the organizations, which has the potential to lead to lowered transaction costs, improvement in services; high flexibility, a faster delivery of goods and services and closer partnerships (Chung et al., 2012). It is, therefore, necessary to closely monitor the developments in the external environment, as well as to identify the important players therein and to explore and consider their power and interests if implementation of public supply chain management strategy is to be successful.

5.5. Barrier 5: internal communication. The fifth barrier was labelled as ‘internal communication’ and accounted for 6.79% of the total variance explained. As suggested by Shahzad, Luqman, Khan and Shabbir (2012), in order for any organization to either function or perform successfully, any need exists to communicate freely amongst employees, between employees and management. This implies that there is a need for sustained vertical and horizontal communication in the organization (Dayaram and Fung, 2012). This matter is intricate in the procurement function of supply chain management, since widespread consultations are necessary before agreements are made with suitable contractors. Senior management should be able to know and understand what is happening at the lower level and be able to review, analyze and take appropriate measures to correct whatever gaps or lapses exist in all areas of the organization (Shahzad et al., 2012). While open communication should serve as a control measure for evaluating performance, informal communication should also be encouraged in an organization, because it leads to the uncovering of certain important details that would have remained hidden otherwise (Oh and Sundar, 2015). Such an environment could enable staff members to become open and unrestricted in reporting issues, leading to better supply chain management practices in the public sector.

5.6. Barrier 6: innovation. The sixth barrier was labelled as ‘innovation’ and contributed to 10.92% of the variance. Innovation refers to the creation of better or more effective products, services, processes, technologies, or new (fresh) ways of operating including the inclusion of information and communication technologies (ICTs) within organizational members (Robertson Casali and Jacobson, 2012). Given the dynamic nature of supply chain management and the fast pace with which radical transformations are taking place in the field, the importance of innovation to the South African public supply chain management landscape cannot be underestimated. In any given organization, development of innovation is based on the factors such as the impetus given to innovate, the available impediments against innovation and

the amount available resources, among others (Andersson and Lööf, 2012). As mentioned by Von Hippel, Susumu and Jong (2011), innovation is amongst the major sources of value creation in organizations and is an important enabler of competitive advantage. In addition, organizations that have managed to cultivate robust innovation systems normally report higher productivity, enhanced employee morale and superior financial performance than others (Carlborg, Kindström and Kowalkowski, 2014). In contrast, low-innovation oriented organizations often experience low employee commitment and poor productivity, as well as overall performance in most areas of their operations (García-Morales, Jiménez-Barrionuevo and Gutiérrez-Gutiérrez, 2012). It is, therefore, important for the public supply chain management function in South Africa to cope with the demands of the contemporary world to foster the culture of innovation at all times.

5.7. Barrier 7: employee motivation. The seventh barrier was labelled as ‘employee motivation’ and contributed to 14.29% of the total variance explained. Employee motivation refers to the individual’s inclination to exert high levels of effort toward organizational goals, as conditioned by that individual’s ability to satisfy some internal or external need (Arasli and Daskin, 2012). Motivation may either be intrinsic (for example, responsibility, autonomy, recognition and ability utilization) and extrinsic motivation (for example, prestige, working conditions, remuneration and promotion) (Chong and Roopnarain, 2014). Gupta and Pannu (2013) highlight that one traditional motivational theory, namely, Herzberg’s Hygiene factors suggests that intrinsic factors are motivators, whereas extrinsic (hygiene) factors are essential, but do not necessarily motivate employees. However, modern research by scholars such as Daskin and Tezer (2012), as well as Arasl, Daşkın and Saydam (2014) has challenged the view that extrinsic factor does not motivate. This implies that employee motivation is based on both intrinsic and extrinsic factors. The benefits of having motivated employees include improved, high job satisfaction, high employee commitment, greater employee productivity and satisfactory organizational performance (Qureshi and Syed, 2014). Given the demand of supply management professionals in South Africa, a need exists to motivate those that are available in public service, as they are likely to attrite should their service conditions be unsatisfactory. This makes it clear that by both the public sector, as well as supply management professionals stand to benefit immensely when effective motivational mechanisms are put in place that gratify the socio-emotional and physiological needs of employees.

6. Limitations and implications for future research

Although this study provides some valuable information about barriers to public supply chain management strategy implementation, caution is warranted when considering the results, because the study has some inherent limitations. Firstly, the findings of the study are based on a single geographic location (Gauteng Province). This makes it difficult to generalize the results of the study to other contexts. Future studies on a similar topic could be conducted using an amplified geographic scope and sample size. Secondly, since a structured questionnaire was used, it was possible that the depth of information that was received from respondents was restricted to what was asked in the questionnaire. In this regard, a mixed method approach could be used in future studies, in order to capture those insights that were excluded in this study. Thirdly, the study was limited in the sense that analyses done in the study were restricted to descriptive statistics and exploratory factor analysis only. For future purposes, correlations and causality between operational effectiveness and the seven barriers identified could be investigated. Finally, the study was susceptible to common method bias, since all the response items were assessed using a single instrument that was administered to respondents in the same period of time. In the future, data could be collected at different time periods so that variations in responses can be captured.

Conclusions and managerial implications

The aim of this study was to investigate the barriers to the implementation of supply chain management strategy in the South African public sector. The study identified seven barriers: namely, management practices, human resource capabilities, customer service, external orientation, internal communication, innovation and employee motivation. Among these barriers, management practices were the strongest and internal communication emerged as the weakest barrier to the implementation of public supply chain management strategy.

The study has theoretical and managerial implications. On the theoretical front, the study makes significant contributions to supply chain management theory, particularly from a public sector perspective. From a managerial perspective, the study provides supply management practitioners in the public sector with information that provides improved discernment of problematic areas in supply chain management. The study can, thus, be used by supply management practitioners as a diagnostic tool in the quest to improve supply chain management performance in the public sector. To be specific, improvements in each of the identified areas can result in better supply chain management performance in the South African public sector.

References

1. Akinci, G.M. (2015). The Purposes and Meanings of Surveillance: A Case Study in a Shopping Mall in Ankara, Turkey, *Journal of Transportation Security*, 28 (1), pp. 39-53.
2. Amarjit, G. and Nahum, B. (2012). Barriers to Small Business Growth in Canada, *Journal of Small Business and Enterprise Development*, 19 (4), pp. 656-668.
3. Ambe, I.M. and Badenhorst-Weiss, J.A. (2011). An Exploration of Public Sector Supply Chains with Specific Reference to the South African Situation, *Journal of Public Administration*, 46 (3), pp. 1100-1115.
4. Ambe, M.A. and Badenhorst-Weiss, J.A. (2012). Procurement Challenges in the South African Public Sector, *African Journal of Business Management*, 6 (44), pp. 11003-11014.
5. Andersson, M. and Löf, H. (2012). Small Business Innovation: Firm Level Evidence from Sweden, *Journal of Technology Transfer*, 37 (5), pp. 732-754.
6. Arasli, H. and Daskin, M. (2012). Management Commitment and Nepotism as Antecedents on Frontline Employees' Job Outcomes. *Conference Proceedings, World Conference on Business, Economics and Management (WCBE – 2012)*, Antalya, Turkey.
7. Arasli, H., Daşkın, M. and Saydam, S. (2014). Polychronicity and Intrinsic Motivation as Dispositional Determinants on Hotel Frontline Employees' Job Satisfaction: Do Control Variables Make a Difference? *Procedia – Social and Behavioral Sciences*, 109, pp. 1395-405.
8. Beneke, J., Flynn, R., Greig, T. and Mukaiwa, M. (2013). The Influence of Perceived Product Quality, Relative Price and Risk on Customer Value and Willingness to Buy: A Study of Private Label Merchandise, *Journal of Productivity and Brand Management*, 22 (3), pp. 218-228.
9. Bingham, C. and Eisenhardt, K. (2011). Rational Heuristics: The Simple Rules that Strategists Learn from Process Experience, *Strategic Management Journal*, 32, pp. 1437-1464.
10. Bouville, G. and Alis, D. (2014). The Effects of Lean Organizational Practices on Employees' Attitudes and Workers' Health: Evidence from France, *International Journal of Human Resource Management*, 25 (21), pp. 3016-3037.
11. Cao, M. and Zhang, Q. (2011). Supply Chain Collaboration: Impact on Collaborative Advantage and Firm Performance, *Journal of Operations Management*, 29, pp. 163-180.
12. Carlborg, P., Kindström, D. and Kowalkowski, C. (2014). The Evolution of Service Innovation Research: A Critical Review and Synthesis, *The Service Industries Journal*, 34 (5), pp. 373-398.
13. Chi, N.W., Grandey, A.A., Diamond, J.A. and Krimmel, K.R. (2011). Want a Tip? Service Performance as a Function of Emotional Regulation and Extraversion, *Journal of Applied Psychology*, 96, pp. 1337-1346.
14. Chinomona, R. and Poee, R.I.D. (2013). The Influence of Logistics Integration on Information Sharing and Business Performance: The Case of Small and Medium Enterprises in South Africa, *Journal of Transport and Supply Chain Management*, 7 (1), 9 p.
15. Chong, M.L. and Roopnarain, K. (2014). The Effects of Nonfinancial and Financial Measures on Employee Motivation to Participate in Target Setting, *The British Accounting Review*, 46, pp. 228-247.
16. Chung, H.F.L., Wang, Ch.L. and Huang, P.H. (2012). A Contingency Approach to International Marketing Strategy and Decision-Making Structure among Exporting Firms, *International Marketing Review*, 29 (1), pp. 54-87.
17. Cooke, F.L. (2013). Human Resource Development and Innovation in China: State HRD Policies, Organizational Practices, and Research Opportunities, *Journal Chinese Human Resource Management*, 4 (2), pp. 144-150.
18. Darwish, T.K. and Singh, S. (2013). Does Strategic Human Resource Involvement and Development Enhance Organizational Performance? *International Journal of Manpower*, 34 (6), pp. 674-692.
19. Dayaram, K. and Fung, L. (2012). Team Performance: Where Learning Makes the Greatest Impact. Available at: <http://rphrm.edu.au/2012/issue1/learning.html>. Accessed on 29 December 2015.
20. Department of Higher Education and Training. (2014). National Scarce Skills List: Top 100 Occupations in Demand. Available at: <http://www.inseta.org.za/downloads/Top%20100%20scarce%20skill%20occupations%20in%20south%20africa.pdf>. Accessed on 14 June 2015.
21. Daskin, M. and Tezer, M. (2012). Organizational Politics and Turnover: An Empirical Research from the Hospitality Industry, *Tourism: An International Interdisciplinary Journal*, 60 (3), pp. 273-291.
22. De Vries, R.E., Bakker-Pieper, A. and Oostenveld, W. (2010). Leadership-Communication: The Relations of Leaders' Communication Styles with Leadership Styles, Knowledge Sharing and Leadership Outcomes, *Journal of Business & Psychology*, 25 (3), pp. 367-380.
23. Doern, R. (2011). Understanding How Perceived Barriers Influence Growth Intentions and Behaviors, *International Journal of Entrepreneurial Behavior & Research*, 17 (5), pp. 488-514.
24. Fasanya, I.O. and Onakoya, A.B.O. (2013). Does Corporate Social Responsibility Improve Financial Performance Of Nigerian Firms? Empirical Evidence from Triangulation Analysis. *Acta Universitatis Danubius*, 9 (3), pp. 22-36.
25. Fiss, P.C. (2011). Building Better Causal Theories: A Fuzzy Set Approach to Typologies in Organization Research, *Academy of Management Journal*, 54 (2), pp. 393-420.
26. García-Morales, V.J., Jiménez-Barrionuevo, M.M. and Gutiérrez-Gutiérrez, L. (2012). Transformational Leadership Influence on Organizational Performance through Organizational Learning and Innovation, *Journal of Business Research*, 65 (7), pp. 1040-1050.
27. Glenn-Richey Jr, R., Chen, H., Upreti, R., Fawcett, S.E. and Adams, F.G. (2009). The Moderating Role of Barriers on the Relationship between Drivers to Supply Chain Integration and Firm Performance, *International Journal of Physical Distribution & Logistics Management*, 39 (10), pp. 826-840.

28. Gupta, S. and Pannu, H. (2013). A Comparative Study of Job Satisfaction in Public and Private Sector, *Indian Journal of Arts*, 1 (1), pp. 3-6.
29. Hawkins, T.G., Gravier, M.J. and Powley, E.H. (2011). Public versus Private Sector Procurement Ethics and Strategy: What Each Sector Can Learn From the Other, *Journal of Business Ethics*, 103 (4), pp. 567-586.
30. Jackson, S.E., Schuler, R.S. and Jiang, K. (2014). An Aspirational Framework for Strategic Human Resource Management, *The Academy of Management Annals*, 8 (1), pp. 1-56.
31. Jin, Y. and Oriaku, N. (2013). E-service Flexibility: Meeting New Customer Demands Online, *Management Research Review*, 36, pp. 1123-1136.
32. Kaplan, R.S. (2010). Conceptual Foundations of the Balanced Scorecard, Harvard Business School Working Paper 10-074. Available at: <http://www.hbs.edu/faculty/Publication%20Files/10-074.pdf>. Accessed on 24 December 2015.
33. Katsikea, E., Theodosiou, M. and Morgan, R.E. (2015). Why People Quit: Explaining Employee Turnover Intentions among Export Sales Managers, *International Business Review*, 24 (3), pp. 367-379.
34. Khan, S.H. (2014). Phenomenography: A Qualitative Research Methodology in Bangladesh, *International Journal on New Trends in Education and Their Implications*, 5 (2), pp. 34-43.
35. Kim, Y.K. and Lee, H.R. (2011). Customer satisfaction using low cost carriers, *Tourism Management*, 32, pp. 235-243.
36. Kruschke, J.K., Aguinis, H. and Joo, H. (2012). The Time Has Come: Bayesian Methods For Data Analysis In The Organizational Sciences, *Organizational Research Methods*, 15 (4), pp. 722-752.
37. Ledwith, A. and O'dwyer, M. (2014). Perception of Product Advantage, NPD and Organizational Performance, *Journal of Small Business and Enterprise Development*, 21 (1), pp. 49-68.
38. Mafini, C. (2015). Investigating Antecedent Factors to Job Performance: Contemporary Evidence from Government Supply Management Professionals, *Acta Commercii*, 15 (1), 11 p. Available at: <http://dx.doi.org/10.4102/ac.v15i1.287>.
39. Maghrabi, R. and Gargeya, V. (2012). Inter-Organizational Systems (IOS): A Boon Or Bane Lessons Learned From Inter-Organizational Supply Chain Management Systems. Proceedings of the AMCIS Conference. Available at: <http://aisel.aisnet.org/amcis2012/proceedings/Posters/53>. Accessed on 21 November 2015.
40. Marx, A., Rihoux, B. and Ragin, C.C. (2014). The Origins, Development, and Application of Qualitative Comparative Analysis: The First 25 Years, *European Political Science Review*, 6(1), pp. 115-142.
41. Mohammadi, Z. and Vakialroaia, Y. (2013). Operational Planning by Using Balance Score card and Strategy Map in a Petroleum Industry Research Company, *Applied Mathematics in Engineering, Management and Technology*, 1 (4), pp. 251-261.
42. Mols, N.P., Hansen, J.R. and Villadsen, A.R. (2012). Plural Governance: The effect of Internal Production on Supplier Performance, *Journal of Industrial Marketing Management*, 41, pp. 874-885.
43. Navarro, A., Acedo, F.J., Losada, F. and Ruza, E. (2011). Integrated Model of Export Activity: Analysis of Heterogeneity in Managers Orientations and Perceptions on Strategic Marketing Management in Foreign Markets, *Journal of Marketing Theory & Practice*, 19 (2), pp. 187-204.
44. Oh, J. and Sundar, S.S. (2015). How does interactivity persuade? An Experimental Test of Interactivity on Cognitive Absorption, Elaboration, and Attitudes, *Journal of Communication*, 65 (2), pp. 213-236.
45. Piderit, R., Flowerday, S. and Von Solms, R. (2011). Enabling Information Sharing by Establishing Trust in Supply Chain: A Case Study in the South African Automotive Industry, *South African Journal of Information Management*, 13 (1), pp. 473-478.
46. Platt, H. and Platt, M. (2012). Corporate Board Attributes and Bankruptcy, *Journal of Business Research*, 65 (8), pp. 1139-1143.
47. Poore, R.I.D. and Mathu, K. (2011). The South African Coal Mining Industry: A Need for a More Efficient and Collaborative Supply Chain, *Journal of Transport and Supply Chain Management*, 5 (1), pp. 316-336.
48. Prajogo, D. and Olhager, J. (2012). Supply Chain Integration and Performance: The Effects of Long-Term Relationships, Information Technology and Sharing, and Logistics Integration, *International Journal of Production Economics*, 135, pp. 514-522.
49. Qureshi, M.O. and Syed, R.S. (2014). The Impact of Robotics on Employment and Motivation of Employees in the Service Sector, with Special Reference to Health Care, *Safety and Health at Work*, 5, pp. 198-202.
50. Republic of South Africa. (1996). *The Constitution of the Republic of South Africa Act 108, Section 217 (1) of 1996*. Pretoria: Government Printer.
51. Robertson, P.L., Casali, G.L. and Jacobson, D. (2012). Managing Open Incremental Process Innovation: Absorptive Capacity and Distributed Learning, *Research Policy*, 41 (5), pp. 822-832.
52. Rompho, N. (2011). Why the Balanced Scorecard Fails in SMEs: A Case Study, *International Journal of Business and Management*, 10, pp. 6-11.
53. Rorsted, K. and Knobel, C. (2012). The Relevance of Management Control for Henkel. Presentation. WHU, Henkel AG.
54. Osborne, S.P. and Brown, L. (2005). *Managing Change and Innovation in Public Service Organizations*. Milton Park: Routledge.
55. Schwab, A., Abrahamson, E., Starbuck, W.H. and Fidler, F. (2011). Researchers Should Make Thoughtful Assessments Instead Of Null-Hypothesis Significance Tests, *Organization Science*, 22 (4), pp. 1105-1120.
56. Shahzad, F., Luqman, R.A., Khan, A.R. and Shabbir, I. (2012). Impact of Organizational Culture on Organizational Performance: An Overview, *Interdisciplinary Journal of Contemporary Research in Business*, 3 (9), pp. 139-156.
57. Sedmak, M. and Longhurst, P. (2010). Methodological Choices in Enterprise Systems Research, *Business Process Management*, 16 (1), pp. 76-92.

58. South African National Treasury. (2015). Public Sector Supply chain Management Review. Available at: <http://www.treasury.gov.za/publications/other/SCMR%20REPORT%202015.pdf>. Accessed on 22 December 2015.
59. Stone, D.L. and Deadrick, D.L. (2015). Challenges and Opportunities Affecting the Future of Human Resource Management, *Human Resource Management Review*, 25, pp. 139-145.
60. Tachizawa, E.M. and Gimenez, C. (2010). Supply Flexibility Strategies in Spanish Firms: Results from a Survey, *International Journal of Production Economics*, 124, pp. 214-224.
61. Tahir, S., Yusoff, R., Azam, K., Khan, A. and Kaleem, S. (2012). The Effects of Work Overload on the Employees' Performance In Relation To Customer Satisfaction: A Case of Water & Power Development Authority, Attock, Pakistan, *World Journal of Social Sciences*, 2 (1), pp. 174-181.
62. Mhlongo, N.F. (2014). Transparency in Supply Chain Management: A South African Local Government Case Analysis. Master's Thesis. Faculty of Management Science. Stellenbosch University. South Africa. http://scholar.sun.ac.za/bitstream/handle/10019.1/86626/mhlongo_transparency_2014.pdf?sequence=11&isAllowed=y. Accessed on 22 November 2015.
63. Ülgen, V.S. and Forslund, H. (2015). Logistics Performance Management in Textiles Supply Chains: Best-Practice and Barriers, *International Journal of Productivity and Performance Management*, 64 (1) pp. 52-75.
64. Vaccaro, A., Parente, R. and Veloso, F.M. (2010). Knowledge Management Tools, Inter-Organizational Relationships, Innovation and Firm Performance, *Technological Forecasting & Social Change*, 77, pp. 1076-1089.
65. Von Hippel, E., Susumu, O. and Jong, J.P.J. (2011). The Age of the Consumer-Innovator, *MIT Sloan Management Review*, 53 (1), pp. 27-35.
66. Wieland, A. and Handfield, R.B. (2013). The Socially Responsible Supply Chain: An Imperative for Global Corporations, *Supply Chain Management Review*, 17 (5), pp. 22-29.
67. Wong, C.W.Y., Lai, K.H. and Ngai, E.W.T. (2009). The Role Of Supplier Operational Adaptation on the Performance of IT-Enabled Transport Logistics Under Environmental Uncertainty, *International Journal of Production Economics*, 122, pp. 47-55.
68. Zheng, W., Yang, B. and McLean, G.N. (2010). Linking Organizational Culture, Structure, Strategy, and Organizational Effectiveness: Mediating Role of Knowledge Management, *Journal of Business Research*, 63 (7), pp. 763-771.
69. Zyphur, M.J. and Oswald, F.L. (2013). Bayesian Estimation and Inference: A User's Guide, *Journal of Management*. Available at: <http://dx.doi.org/10.1177/0149206313501200>.

Appendix

Table 1. Rotated component matrix: barriers to strategy implementation

Item	Description	F1	F2	F3	F4	F5	F6	F7
Factor 1: Management practices								
B1	I feel that senior managers are not connected to what is happening at lower levels	.796						
B2	Managers in the organization have a shallow understanding of the public sector	.565						
B3	Managers in the organization are slow in making decisions	.724						
B4	Senior managers function within their own silos and refuse to work together effectively, because they are afraid of losing their power	.612						
B5	Managers in the organization don't usually closely monitor the operations of the organization	.777						
B6	Managers in the organization give less emphases to efficiency and productivity	.549						
B7	Managers in the organization seldom consult with employees on matters that affect them	.557						
Factor 2: Human Resource capabilities								
B8	This organization does not have supply management professionals who possess the "right" skills to deliver its strategy		.643					
B9	In this organization, employees are promoted based on their seniority or tenure rather than merit		.764					
B10	The organization does not regularly assess and improve its staff training programs to reflect the latest processes and knowledge		.723					
B11	The reward system in this organization promotes unhealthy competition among employees		.749					
B12	The organization does not frequently renew its talent pool by externally hiring the best candidates for key posts		.677					
Factor 3: Customer service								
B13	The organization responds slowly to customer opinions and needs			.717				
B14	The organization is unable to meet the needs of its customers consistently			.848				
B15	The organization rarely requests for feedback from its customers in order to improve its ability to meet their needs			.846				
B16	The organization is not keen to consider the preferences and behaviors of customers when making decisions			.726				
Factor 4: External orientation								
B17	The organization is unable to effectively respond to competitive market conditions				.825			

Table 1 (cont.). Rotated component matrix: barriers to strategy implementation

Item	Description	F1	F2	F3	F4	F5	F6	F7
B18	The organization is not mindful of the important trends or developments in its industry segment				.756			
B19	The organization disregards competitor capabilities when making decisions				.719			
B20	The organization does not actively consider the responses of regulatory bodies when making decisions				.735			
B21	The organization does not implement best practices from other companies and industries				.740			
B22	The organization does not maintain an active network of external business partners				.775			
B23	The organization does not invest substantial resources to build and maintain satisfactory relationships with the community				.790			
Factor 5: Internal communication								
B24	No meaningful communication exists between and amongst departments					.772		
B25	Managers often give orders from top to bottom with little feedback from bottom up					.717		
B26	Open communication amongst employees is discouraged					.848		
B27	Senior managers are not open to frank discussions					.851		
B28	Top managers tend to bypass members of their senior team, preferring to get information and giving orders to lower level staffs					.726		
Factor 6: Innovation								
B29	The organization is unwilling to adopt new ideas for improving performance						.814	
B30	The organization does not promote the flow of innovation both internally and externally						.970	
B31	Staff members are not expected to contribute to the process of innovation						.836	
Factor 7: Employee motivation								
B32	Remuneration and other incentives are inadequate to motivate employees to excel in their performance							.870
B33	I am unwilling to apply a lot of effort beyond what is usually expected in order to assist this organization to be successful							.852
B34	Staff turnover at all levels is high in this organization							.801
B35	I am ashamed to tell others that I am part of this organization							.743
B36	I regret that I chose to work for this organization over other companies that I could have worked for							.876
B37	I do not care about the fate of this organization							.827
	Eigenvalue	9.634	3.219	2.713	1.307	1.667	1.592	6.485
	% of variance explained	15.193	9.725	11.471	8.972	6.785	10.924	14.290
	Cumulative %	15.193	24.918	36.389	45.361	52.146	63.070	77.360
Extraction method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation. Loadings of <0.50 were excluded from analysis. Total % of variance explained by the seven factors =77.36%								