Quality Management & Supply Chain Performance Relationship: An Empirical Study

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ID # 100187-001

Thesis submitted in accordance with the

degree requirement of Masters of Science in

Supply Chain Management

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Acknowledgements

This is the biggest academic endeavor I have undertaken in my academic career. By grace of Allah Subhanuhu wa Ta'llah it is coming to an end. I feel obliged to thank the people who have directly or indirectly proven instrumental in completion of this study. Biggest support was provided to me by my supervisor Dr. Abdul Raouf. Despite his busy schedule, he always found time to see me. Every meeting with him throughout this period was a learning experience and this learning will stay with me throughout my life inshallah. I feel being his supervisee has helped me in many more ways than just completing this study. I would also like to acknowledge the support provided by Dr. Muhammad Usman Awan, my external supervisor who provided important insights for improving this study. Services of my class mate Mr. Javiad Iqbal have proven invaluable to me during this project. He provided the contact information and created liaison with the industrial professionals who eventually became the respondents of this study.

There are others who have played a role not only in this study but also in my joining and continuing this degree. In this respect, I would like to acknowledge the support provided by Dr. Sarwar Azhar, Dr. Tashfeen Azhar and Mr. Kamran Rashid. I have learned the basics of research from Dr Sarwar Azhar and that has helped me throughout this study and other research projects I have undertaken. Dr. Tashfeen Azhar and Mr. Kamran Rashid were instrumental in encouraging me to join this degree and then providing the support directly or indirectly throughout.

Lastly but most importantly the support of my parents both with their prayers and by taking care of me at home has helped me tremendously in all the achievements in life. I cannot thank Allah enough that he has bestowed me with his Rahmah in such a way. I would like to dedicate this study to my parents.

Abstract

There is a dearth of empirical evidence related to the relationship between Quality management and its impact on performance in Pakistan. Current study was conducted with the purpose of identifying the critical quality practices and their relationship with the performance of pharmaceutical supply chains. A cross-sectional survey based approach was used for the study. Data were collected from the managers working in the functional areas of supply chain and quality in pharmaceutical manufacturing companies in Pakistan. Total 68 responses were received through an email survey. Factor Analysis was used to identify the critical quality practices and supply chain performance indicators in the pharmaceutical supply chains. Eight quality practices and four supply chain performance indicators were identified. Regression Analysis was employed to find out which quality practices impact the supply chain performance. The results show that quality practices such as management leadership, training, process management, supplier quality management, and quality data and reporting significantly impact the supply chain performance. The results of this research show that quality practices are still relevant to the modern organizations. Implications and future research directions have been discussed.

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1- Introduction

1.1- Background

Quality management (QM) is one of the most highly studied areas in the field of operations management (Nair, 2006). QM as a discipline has evolved a great deal over the last two and a half decades. Research in this field has covered issues like identification of critical factors in QM and studying the relationship between QM and various aspects of organizational performance (Awan., et al., 2009; Das, et al., 2008; Flynn, et al., 1995; Fotopoulos & Psomas, 2010; Kaynak, 2003; Mohrman, et al., 1995; Prajogo & Sohal, 2006; Samson & Terziovski, 1999; Sila. & Ebrahimpour, 2003; Sila. & Ebrahimpour, 2005) and competitive advantage (Douglas & Judge, 2001; Powell, 1995). The direct impact of QM on performance is contingent upon the adequacy of planning and execution of its implementation and unassailable commitment to improvements targeted at increasing customer satisfaction (Fotopoulos & Psomas, 2010). Sila & Ebrahimpour (2002) narrated that although some opponents have criticized total quality management (TQM) on the basis of the time it takes to bring results, TQM has survived this criticism which is indicated by the fact that companies keep on implementing TQM and research articles keep on getting published in this area. Ugboro & Obeng (2000) suggested that half hearted implementation could be cited as cause of failure of TQM in many cases as opposed to flaw in its philosophy. Quality Management Practices (QMP) include Top Management Leadership, Product Design, Customer Focus, Employee Involvement & Training, Supplier Relationship Management, Process Management, and Quality Data Collection & Reporting (Flynn & Flynn, 2005; Kaynak, 2003; Kaynak & Hartley, 2008; Sila. & Ebrahimpour, 2005). A relatively new trend is the study of QM in supply chain (SC) perspective. Extension of QMP in SC's is required because the quality delivered to the end customer is the outcome of value added by each entity in

the supply chain in terms of product/service features, cost reduction, time and flexibility to customer demands. Last decade has seen development of body of knowledge in this area which is formerly known as "supply chain quality management" (Foster Jr, 2008; Foster Jr, et al., 2010; Kannan & Tan, 2007; Kaynak & Hartley, 2008; Kuei & Madu, 2001; Kuei, et al., 2010; Lin, et al., 2005; Ou, et al., 2010; Ramos, et al., 2007; Sila., et al., 2006; Zhang, et al., 2011). A still newer trend is the study of relationship between QM and supply chain performance (Flynn & Flynn, 2005; Vanichchinchai & Igel, 2010) . Flynn & Flynn (2005) argued that combining QMP with SC practices has a potential for broadening the scope of traditional supply chain management (SCM) practices from their focus on costs and competitive relationships to the collaboration between the supply chain partners for the achievement of combined competitive capabilities. The success of SC's is based upon the capability of its members to perform on aspects of supply chain such as lead time, transportation time and improved customer service levels etc (Kuei, et al., 2002). This study focuses on the factors that impact on indicators of supply chain success. Amongst the possible factors, this study centers on the role of quality practices as source of improvement in supply chain performance.

1.2- Research Gap

As the competition intensifies and getting the products to right place at the right time while minimizing the cost becomes more important than ever, companies recognize that SC wide improvements are required to remain competitive (Li, et al., 2006). This raises the need for designing measures for supply chain performance (SCP). Complexity of SC's makes this task very challenging (Beamon, 1999). In order for the organizations to implement quality programs and promote the quality culture it is imperative that relationship between the quality practices and various aspects of performance is established. Sila & Ebrahimpour (2003) in a meta analysis