

Measuring Service Supply Chain Management Processes: The Application of the Q-Sort Technique

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Abstract—The emphasis in supply chain and operations management is still strongly skewed toward the manufacturing sector. Thus, there has been little research to date on service supply chain related to the development of sound measurement constructs. The aim of this study is to develop a meaningful scale to measure service supply chain management processes. The finding of Q-Sort technique is a set of scales corresponding to a target dimension. However, four dimensions, including Demand Management, Capacity and Resource Management, Order Process Management, Service Performance Management have limited numbers of qualifying scales, indicating that the scales need to be reviewed, and another round of Q-Sort should be run to give a second chance. As the implication, the results indicate that the Q-Sort technique is a useful approach in eliminating the validity and reliability problem particularly in the early scale development stages for defining the constructs of supply chain management processes in the service context.

Index Terms—Service supply chain; Q-sort; scale development

I. INTRODUCTION

In the highly competitive environment of today, service industries are facing the challenge of improving operational efficiencies and reducing costs, without negatively impacting customer service. Further, challenges come up due to technology revolution, increasing customer expectations, frequently changing customer needs and a dynamic market situation. As a result, service firm has to reduce cost, turning into an innovative player and differentiate itself in the market to achieve sustainable growth. To meet these challenges, service providers are beginning to implement the supply chain management practices (SCM), that create a balance between customer requirements and supply chain capabilities [1]. Supply chain management can bring reliability, responsiveness, consistency, flexibility, cost reduction and process efficiency.

From academic and practical standpoints, the emphasis in supply chain and operations management is still strongly skewed toward the manufacturing sector. Although, it is believed that service can benefit applying some best practices from manufacturing, the indifferences between service and manufacturing businesses could create a need

for specific constructs or scales reflecting a service supply chain practices. Thus, there has been little research to date on service supply chain related to the development of sound measurement constructs or scales. For this reason, it is necessary for researchers to operationalize and validate empirically sound scales to measure the service supply chain processes. The aim of this study is to develop a meaningful scale to measure service supply chain management processes. For this reason, it is necessary to find appropriate methodologies to develop robust empirical scales to measure supply chain integration. In other words, there is a need for researchers to operationalize and validate scales to measure the supply chain management practices in service industry. The Q-sort technique could be beneficial in this regard [2].

In this study, the basic procedure is to have 12 practitioners working in the service business acting as respondents. The scales were sorted into several groups, with each group corresponding to a specific dimension (process), based on the similarities and differences among them. According to [3], there are seven theoretical processes of service supply chain including: (1) Demand Management, (2) Capacity and Resource Management, (3) Customer Relationship Management, (4) Supplier Relationship Management, (5) Order Process Management, (6) Service Performance Management, and (7) Information and Technology Management.

This paper applies the Q-sort technique to the scale development process in order to address the reliability and validity problems caused by subjectivity of the supply chain management in service. In other words, this study provides an overview of Q-sort technique to test whether these constructs could be described and differentiated at the preliminary stage of scale development. Indeed, the main contribution in this paper is not related much on theoretical concepts; rather, it focuses on the methodological aspects in terms of how to use Q-sort as a tool to pre-validate and measure supply chain management in Thai service context. This paper is set out in three sections. The first section provides a review of the theoretical background of service supply chain management. This is followed by explanations of the Q-sort technique. Section three discusses the major findings and how to analyze these results and certain conclusions are drawn in the last section on the suitability of the Q-sort technique for scale development for service supply chain management construct.

II. THEORETICAL BACKGROUND OF SERVICE SUPPLY CHAIN MANAGEMENT

Service supply chain management is a tool for

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