Chapter 1
Numbers Can Restrict Results?
Qualitative Research Methods as Information and Knowledge Management Support in Supply Chain and Logistics Sectors

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ABSTRACT

This chapter intends to evaluate how mixed researches are significant knowledge producers for business management. A discussion is conducted about the trade-off around the success and restrictions offered by the dominance of quantitative methods, especially when there is interest to study supply management and logistics. Quantitative methods are essential for any kind of management, but, as more dynamics in market competition produces more complex scenarios, qualitative answers are needed, along its approaches to formulate new questions that will help organizational decision-makers to apply knowledge for their planning activities. This chapter will explore three main points: 1) how the excessive concentration on quantitative methods can restrict managerial views; 2) how any organization can apply qualitative methods to enrich results observed from quantitative, resulting in better, more sustainable decisions; and 3) how qualitative and quantitative methods, associated, can implement this approach in real cases, with an overview of mixed scientific research methodologies.

INTRODUCTION

The main theme of this book produces a rich context for this study: Supply chain, Logistics and information management are, as a matter of fact, cooperative contexts where information and knowledge emerge every second. Facts as the massive production of data in every transaction, entrepreneurial chains being formed dynamically and the intensive application of information technology resources, frequently impact business operations. This way, old, established research and managerial methods must be continuously reviewed and a new scenario descriptions produced, allowing new fronts of knowledge application for

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understanding, comprehension and problem-solving. It is possible to consider that production, operations and innovation management are among different and relevant paths where this intensively generated data, information and knowledge can produce immediate results that, unavoidably, will potentially lead to another level of organizational maturity (Bowersox, Closs & Cooper, 2002; Akbar, 2003).

Supporting such initial attractiveness for continuous learning, business-oriented scientific methodologies are the real pillars where such valuable contents can always be supplied. But, with a worrying frequency, these methods are neglected, mostly due to the fast market dynamics, where produced results should be immediately applied, without the needed reflection or scientific criteria. This sense of instantaneous need for decisions, along with precarious level for decisions implementations, are the main motivations to propose this study. In this chapter, our main objective is to observe how some of information and knowledge management practices can be applied with a better combination of quantitative and qualitative research methods, observing specially the context of supply chain and logistics operations (Babbie, 1990; Bowersox, Closs & Cooper, 2002; Chen, Long & Yan, 2004; Creswell, 2013).

It is opportune to select the area or service of supply chain and logistics because, firstly, it is, remarkable, complex, fast-moving and competitive sector which, at a first glance, potentially produces immense volumes of numeric, quantitative results (Bowersox, Closs & Cooper, 2002; Ballou, 2003). It also unfolds in managerial cultural aspects, as executives are trained to work mainly applying numbers in typical decisions, and, because of this fact, dedicate also more attention to processes and methods which focuses the generation, analysis and reports of quantitative results. Some of these results are, nowadays, considered classical methods, topics, themes and services that constitute "a must" for software projects and products, consulting services and almost all knowledge production for these sectors, leading to a situation where it is regarded to be as the only source of structured knowledge (Leidner & Elam, 1995; Bowersox, Closs & Cooper, 2002; Golicic & Davis, 2012; Jamil *et al,* 2012, Bazeley, 2015).

But it is possible to understand, also from several sources, mainly from those of research methods for scientific studies, that there is a great potential on combining quantitative methods to qualitative, improving the results obtained or, additionally, exploring generated analysis with enrichment of details, advancing the comprehension about the studied phenomena or problem (Venkatesh, Brown & Bala, 2013). This chapter intends to motivate researchers, especially those initiating their scientific investigations adopting the "mix researching" – as some authors gently call the combination of these two research methods paradigms – along with readers such as managers, businessmen and solution providers and implementers (such working as consulting services professionals) to understand how the coherent, planned and supported combination of research paradigms and its methods can result in benefits for any study (Golicic & Davis, 2012; Creswell, 2013, Johnson, 2015). Obviously, it is not an easy, always responsive option, as these decisions to improve methodological aspects demand more investment, time, people assignment and delegation, planning, project management among several other demands. As in any kind of innovative or exploratory advance, it is recommended that an evaluation is held, trying to ponder factors, aspects and predicted results, along with increased factors for costs, risks and communication needs, some of them will be included in the chapter development to conform to an investigation plan, which can guarantee improved results from a specific research.

For this introductory study, the following structure was proposed: first, a minimum theoretical background will be approached, defining main conceptual bases. This background is designed to appreciate fundamental information management context concepts and those regarding research methods analysis, specifications and application. In the following, an overview of business operations (also approached theoretically in the first section) as a "double agent" – process which are number providers, but also