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# Role of multiple stakeholders and the critical success factor theory for the sustainable supplier selection process

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## Abstract:

The concept of sustainability has become an essential theme for many industries and organisations due to a heightened sensitivity towards environmental protection and social responsibility. At the same time, firms still need to achieve economic viability and retain their competitive advantage. Because suppliers are the first entity and the initial source of any supply chain, organisations should select their suppliers by a careful evaluation of their critical success factors (CSF). Achieving a successful sustainable supply chain management (SSCM) strategy requires a firm to consider its stakeholders' views. Based on the CSF theory and by considering the multi-stakeholders' view in a sustainability perspective, this work provides a decision support system for the sustainable supplier selection (SSS) problem in a real world textile industry located in the emerging economy of India. Through a three-phase methodology, this study examines Indian suppliers by considering the sustainability views of various stakeholders, including employees, customers, researchers, shareholders, and a government environmental officer. The CSF priorities show that the first four influential CSFs are categorized as social concerns (i.e., maintaining long-term relationships and alliances, stakeholder empowerment, equity labour sources, and individual human rights). The fifth factor is an environmental issue (i.e., production of polluting agents). Among the five suppliers being evaluated in this work, Supplier 4 receives the top ranking. Specifically, the results show that the supplier rankings are highly influenced by CSF's social dimensions. Hence, to validate the influence of CSF's social dimensions in relation to the SSS process, a sensitivity analysis has been done by varying the respective weights. The study concludes with the relevant managerial implications and limitations.

**Keywords:** Stakeholder theory, Critical Success Factor, Triple bottom line, Sustainable supplier selection, Multi criteria decision making, Fuzzy Delphi, ISM, ANP, COPRAS-G

## 1. Introduction

Due to globalization, many businesses face heavy competition, and a crucial element in a business' success is its supply chain. As a result, supply chain management (SCM) has become a popular topic among researchers (Larsen and Rogers, 1998; Büyüközkan and Çifçi, 2011); others choose to observe the topic from a different perspective (Beske et al., 2014). For a successful and prolonged stay in today's competitive global marketplace, organisations must attain proficiency throughout all elements of their supply chain. In short, successful managers realize that competition is not primarily between organisations, it is really between supply chains (Lu, 2011).

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