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International Journal of Productivity and Performance Management (IJPPM)

Editorial for the Special issue on “Performance measurement of sustainable supply chains”

Sustainability is of course vogue as well as being intentionally resource-conserving; yet despite its popularity and interest from the academic community, many of its characteristics still remain elusive. Its interpretation, management and cost seem only partially understood, for example, how can sustainability effectiveness best be measured? How do the opportunities for sustainability vary across different industry contexts? As such our interests lie in trying to better understand how opportunities for sustainability, particularly along a supply network, might manifest, and be performance- and cost-evaluated.

The call for papers for this special issue put forward some of these key questions on sustainable supply chains, similar to those proposed by other authors such as Piplani et al. (2008) and Hassini et al. (2012). Within this special issue, a range of strong publications have been selected to help address some of these issues.

First, the question: How could sustainability inform and determine the design or redesign of highly performing supply chains? has been addressed by Tatitchi, Tonelli and Pasqualino. They carry out an analysis of the literature on sustainable supply chain performance measurement. Their findings include that: publications on this topic have increased exponentially since the early 2000s; North American and European academic institutions are at the forefront of publications in this area; operations management-related journals are leading the debate; there are very few publications that truly cover the triple bottom line; and that the social dimension needs further focus. They propose that a structured approach to supply chain performance measurement, together with the need for country or industry-specific studies, the development of a single-one dimension standard, and further development of theory will progress the sustainability agenda.

Second, with regards to the question: Are performance measures in sustainable supply chains generic, or industry-specific? the papers addressing it can be divided into two strands: the generic strand and the specific strand.

Supporting the generic strand, Reefke and Trocchi present a conceptual model on the use of the traditional and well-known Balanced Score Card to measure performance of sustainable supply chains. This takes into account both financial and non-financial measures, as well as depicting the importance of alignment with supply chain strategy, supply chain objectives, applicability and relevance of selected performance measures. Also, Okongwu, Morimoto and Lauras explore the levels of disclosure related to their sustainability initiatives from a continuous improvement perspective, where disclosure is defined as “the self-reported firm’s information in excess of those required by law, accounting standards or stock exchange listing requests”. For doing this, they use a content analysis and principal component analysis of the firm’s reports. They propose an overarching framework for improving the maturity of disclosure.

Supporting the industry-specific strand, Bocken, Morgan and Evans present their results of how sustainability could be effectively embedded in their corporate performance management

system across three sectors. They quantify the size of the environmental performance variation between factory sites in multi-national companies that produce similar products using similar technology. Environmental performance is defined in relation to energy use, carbon emissions and waste generation. They use a survey, interviews and a workshop with 10 organisations. They report on a large level of variation (up to 500%) of performance between the ‘best’ factory and ‘worst’ factory.

Third, two papers address the question: How sustainability-related costs and gains be distributed among supply chain partners? Wang and Sarkis investigate, from a firm’s perspective, whether it pays off to be sustainable, by studying the relationship between sustainable supply chain practices and corporate financial performance. They do this by analysing a large publicly-available dataset for US-based companies. They use Least Squares Regression techniques and multivariate regression analyses to analyse the individual and joint effects of Environmental and Socially Responsible supply chain practices. They conclude that, in order to achieve positive effects on corporate financial performance, companies need to engage in both Environmental and Socially Responsible supply chain practices. In addition, Pazirandeh and Jafari analyse the effects of greening transport operations and greening transport procurement on two performance indicators: logistics effectiveness and logistics efficiency. Greening transport procurement is defined as “taking into account supplier environmental products and process performance when purchasing products and service”. They use a web-based survey directed to Swedish companies and analyse the results with Structural Equation Modelling. They conclude that the positive effects on their chosen performance indicators are achieved by investing on greening transport procurement.

However, the additional proposed question on: What set of performance measures could capture the effect of major disruptions in sustainable supply chains? remains unaddressed in this special issue, and therefore points to future research avenues.

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