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Environmental goods valuations for social sustainability: A conceptual framework

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ABSTRACT

There is growing interest in the environmental impact of organizational activities. This exploratory study introduces the need to integrate economic market and non-market valuations for social sustainability in organizations. While organizations have not reached this integration, the potential to help in development and the introduction of social sustainability is significant. The methodology includes an extensive research into economic market and non-market valuation literature for social sustainability. This paper integrates a new approach to the current academic literature highlighting social aspects of sustainability within the supply chain and specifically in reverse logistics. The literature review led to the development of a framework guiding and simplifying these efforts. Practical situations of environmental goods valuations of social sustainability in reverse logistics are provided as an illustration. Using organizational supply chains and reverse logistics as an example, the application of various tools is presented using an environmental goods valuation framework. The integration of these topics aid researchers, policy makers, and practitioners. The findings make a contribution to the strategic organizational justification, performance measurement and sustainability literature by further integrating environmental goods valuation tools, models, theory and practices. The paper includes the development of propositions to be addressed in future research.

1. Introduction

Over time, corporate executives and ordinary consumers alike have grown more concerned about general sustainability and the environment (Staub et al., 2016). Therefore, organizations are faced with incorporating environmental or social sustainability decisions both globally as well as along their supply chains (Zhu et al., 2012; Marshall et al., 2015). These practices are a culmination of various social, cultural, political, technological and economic forces causing organizations to rethink how business is conducted and assessed. Unfortunately for organizations, the decisions regarding these practices and policies, especially those that require significant resources and investments, are not always easy to justify (Tachizawa and Yew Wong, 2014; Varsei et al., 2014; Wang, 2015). Most corporate evaluation and valuation methods for assessing the impact of social sustainability focus on financial or market measures using accounting systems to provide financial data. Corporate data is not well established for yielding information on social dimensions. When organizations consider their supply chain's social sustainability, identifying important attributes and determining their valuation is an important exercise.

Sustainability information for valuation purposes is difficult to attain because of various complexities, including subjective personal and cultural influences, intangible and poorly defined contexts, and a lack of understanding of or experience with social sustainability dimensions (Beske and Seuring, 2014; Johansson, 2016; Joung et al., 2013). However, it remains that inputs and results must be measured or assessed to guide further business decisions toward social sustainability performance and to integrate them into business and supply chain practices (Elzen and Wieczorek, 2005; Wiengarten and Longoni, 2015).

Overall, research has seen limited investigation validating programs and investments to enhance organizational and supply chain social sustainability (Spence and Rinaldi, 2014; Martínez et al., 2014; Cho et al., 2015). Tools exist to help with strategic and subjective evaluations of sustainability dimensions in organizations and their supply chains (Bai and Sarkis, 2014; Bai et al., 2012; Clift and Wright, 2000), but there is much to learn from other fields of study to strengthen the organizational strategic justification and forecasting tool set. The economics literature provides substantial groundwork and tools available for environmental valuations that may be applicable to organizational and supply chain social sustainability activities, both for internal

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organizational activities and across the broader supply chain players and actions.

Environmental goods valuation[1] research is a source of rich economic and environmental literature that aids in the corporate valuation of social sustainability. Bringing these broader macro-economic and micro-economic theories and developments to the supply chain and operational level of organizational decisions is a novel and potentially practical theoretical advancement for an organization's supply chain sustainability and strategic justification.

Brandenburg and Seuring (2010) agree an initial concern is to build a business case for social sustainability in organizations and further assert the issue demands more attention in the literature. While some work has been completed to make a business case and strategic justification of environmental sustainability in supply chains, a gap remains in the academic literature in investigating social sustainability evaluation and justifying from an organizational perspective, in supply chains, especially in the reverse logistics domain (Brandenburg et al., 2014).

The application of market and non-market valuations to complex organizational supply chains is an important activity for considering social sustainability. Although there are numerous locations in organizational supply chains for applying the environmental goods valuation framework and techniques, we have chosen reverse logistics as a case study application to model. This application of the environmental goods valuation framework is an important consideration for most organizations investing in reverse logistics processes need business and/or environmental reasons for 'close-the-loop'. While reverse logistics can be evaluated from a social sustainability perspective, it has rarely been evaluated using this perspective (Sarkis et al., 2010b). However, it remains that inputs and results must be measured or assessed to guide further business decisions toward social sustainability performance and to integrate them into business and supply chain practices (Elzen and Wieczorek, 2005; Wiengarten and Longoni, 2015).

The structure of this research provides a broad overview of non-market goods valuation approaches and tools that can be applied to the organizational supply chain and the discipline of operations management with respect to sustainability. Next, the research describes how these macro-level environmentally-oriented environmental goods valuation approaches can be applied to evaluate social sustainability dimensions in individual organizations. The research introduces these various dimensions of environmental goods valuation in a framework with examples. Finally, practical applications of these environmental goods valuation dimensions are implemented within the context of the reverse logistics supply chain. The results of the reverse logistics case show these methods validate the potential use of the broad, policy-based economic models and environmental goods valuation approaches in organizations and supply chains as well as expanding their application from the environmental and economic realms to the social sustainability dimensions.

This research provides both a contribution to theory and practice. Using the example of reverse logistics, we have provided an example of environmental goods valuations for social sustainability. For example, practitioners may be able to use our proposed decision tree to help guide them in methodology selection. Researchers are also provided with a set of propositions for further study leading to theory development. This research will further knowledge in valuing social sustainability within organizations.

[1] Economists define the value of a market good by how much a consumer directly pays for a good or service. Non-market resources provide outputs or services which are not easily bought or sold directly to individuals. The value of a non-market good or service—one which is not regularly bought and sold—cannot be observed from a market price. Economists have developed various valuation techniques to address non-market goods valuation. Major techniques are reviewed in this paper.

2. The business case for social sustainability in organizations and environmental goods valuations

Making the business case for sustainability is not an insurmountable task. Significant research and literature has shown that organizations can "do well by doing good" (Eichholtz et al., 2010; Eriksson and Svensson, 2015; Gualandris et al., 2014). Unfortunately, this aphorism is not always easy to achieve or put into practice because most organizational justification tools, approaches, and business cases focus on financial, quantitative, and tangible measures (Symons and Lamberton, 2014; Burritt and Schaltegger, 2014; Schaltegger, 2010: Lake et al., 2014) as previously noted. Factors including image and reputation, contribution to society, building community relationships, social stability, and other non-quantitative measures are difficult for organizations to integrate into their business case development portfolio (Soosay et al., 2012; Wang, 2015).

Efforts to integrate these qualitative and macro-level factors have utilized various multiple criteria decision tools (Govindan et al., 2015a,b). Some models utilize general methodological frameworks for making these business cases (Govindan et al., 2015a,b; Labuschagne et al., 2005a,b; Labuschagne and Brent, 2005; Ocampo and Clark, 2015; Afsordegan et al., 2015; and Lin et al., 2015). Many tools do not utilize or closely link to the broader environmental goods valuation approaches, providing a somewhat incomplete profile of social sustainability. There is an opportunity to utilize experience and research from these environmental goods valuation approaches, which have previously only been applied to broader environmental issues at the community or national level. These valuation approaches may provide a means for addressing the lack of consideration of social sustainability in supply chains and within organizations.

2.1. Social sustainability dimensions

Sustainability includes economic, environmental, and social dimensions that comprise the triple bottom line of an organization. These include environmental and social responsibility criteria, measured quantitatively, to judge the overall performance of a company. General agreement is that implementing and managing economic, social and environmental efforts of business sustainability should be connected in a balanced and comprehensive way (Svensson and Wagner, 2015). Yet effectively, for business case purposes, economic factors typically supersede the social and environmental, with social sustainability remaining the least integrated measure (Symons and Lamberton, 2014).

While it is important to consider social sustainability, it is challenging to address. Unlike environmental or economic dimensions, there are more cultural and intangible characteristics present in the social sustainability dimension, making the assessment more conducive for indirect and intangible evaluations (Varsei et al., 2014). How companies approach social sustainability may be supportive of such broader tools. Much of the research as well as public pressure concerning sustainability focuses on the effects of business and organizational activity on the physical environment (Pfeffer, 2010), but companies and their practices affect the human and social environment more often than the physical environment. There are both direct and indirect effects of organizations concerning decisions about people, human health, social systems, and mortality. Yet social sustainability has received limited coverage by sustainability researchers, especially with respect to the organization's supply chain (Brandenburg et al., 2014; Seuring and Müller, 2008).

Labuschagne et al. (2005a) proposed a framework of social sustainability criteria relevant to projects over their entire life cycle and included: (1) Internal Human Resources, (2) External Populations, (3) Stakeholder Participation, and (4) Macro-Social Performance issues. However, we believe that the life cycle management methodologies of Labuschagne et al. (2005a) do not efficiently address the objectives of sustainable development, especially in developing countries and agree