



Project sustainability strategies: A systematic literature review

Wenche Aarseth ^{a,*}, Tuomas Ahola ^{b,a}, Kirsi Aaltonen ^c, Andreas Økland ^a, Bjørn Andersen ^a

^a Norwegian University of Science and Technology, NTNU, Trondheim, Norway

^b Tampere University of Technology, Tampere, Finland

^c University of Oulu, Oulu, Finland

Received 29 February 2016; received in revised form 8 October 2016; accepted 29 November 2016

Abstract

Because research focusing on sustainability in a project context is still nascent and fragmented, we carried out a systematic literature review covering all research published in five leading journals in the fields of project management and sustainable production prior to 2016. Our analysis revealed two distinct perspectives in the project sustainability research; one assumes the perspective of the project organisation delivering the asset while the second assumes the perspective of the host organisation. We identify and describe eight distinct strategies used by either the project organisation, its host, or both in collaboration to support sustainability goals. We complement the findings of our literature review with an illustrative empirical case focusing on the delivery of an innovative seawater-based heating solution in Norway.

© 2016 Elsevier Ltd, APM and IPMA. All rights reserved.

Keywords: Sustainability; Project management; Project host; Sustainability strategies

1. Introduction

Projects have become increasingly globalized, contributing significantly to growth in the countries in which they are executed, particularly for the local industry in developing countries (Aarseth et al., 2011; Javernick-Will and Scott, 2010). On the other hand, projects also pose challenges to the local community and government, sustainable development being one of these challenges. The question of how actors like state bodies, corporations, and others can develop and execute projects without compromising the life and prosperity of future generations is fundamentally important. Our focus in this paper lies in delivery projects where investment assets (such as buildings and information systems) are delivered to external actors with significant emphasis placed on either that the asset

is delivered in a sustainable manner and/or that the asset itself can be operated by its owner in a sustainable manner.

Most definitions of the concept of sustainability direct attention to the relationship between humans and the resources they use (Voinov, 2007). Wimberley (1993, p. 1) states that “to be sustainable is to provide for food, fibre, and other natural and social resources needed for the survival of a group and to provide in a manner that maintains the essential resources for present and future generations”. This is very much along the lines of the widely used definition of the Brundtland Commission that defined sustainable development as the one that meets the needs of the present without compromising the ability of future generations to their own needs (WCED, 1987). While more than 100 definitions for sustainability have been presented, most scholars working in the area agree that sustainability highlights the need to simultaneously balance social, environmental and economic goals. These goals are also referred to as the three pillars or objectives of sustainable development (Azapagic and Perdan, 2000; Labuschagne and Brent, 2005; Sillanpää, 1999). Despite considerable research interest, sustainability and sustainable

* Corresponding author.

E-mail addresses: wenche.aarseth@ntnu.no (W. Aarseth), tuomas.ahola@tut.fi (T. Ahola), kirsi.aaltonen@oulu.fi (K. Aaltonen), andreas.okland@ntnu.no (A. Økland), bjorn.andersen@ntnu.no (B. Andersen).

development remain ambiguous as concepts. The ambiguity has had an upside on the global political stage; by allowing for variations in interpretations, governments could sign up for treaties on sustainable development and yet continue to follow their own agenda (Lele, 1991; Victor, 2006). The pressure on businesses to incorporate sustainability principles and objectives into policies and activities is mounting (Labuschagne and Brent, 2005). The motivation for incorporating sustainability principles may be both value and business based. Hart (1997) has developed a sustainable value framework identifying four core dimensions of sustainability strategy emphasizing the potential for creating win-win situations contributing to both shareholder value and sustainability.

The governments in many countries are more and more aware of their responsibility to ensure sustainability, at least locally. Empirical studies have demonstrated how governments require that companies executing projects develop strategies, action plans and performance indicators which will contribute to sustainable development in the host country (Yanarella and Bartilow, 2000). For example, Bossink (2002) showed how the Dutch authorities' sustainable construction policy requirements generated innovative sustainability-based development and design approaches within the construction companies in the Netherlands. In turn, Ross et al. (2010) demonstrated how the engagement of local stakeholders can be facilitated by the host organization through guidelines and incentives in the context of sustainable low-income housing projects in the South Africa.

Ongoing sustainability discourses include the interaction between humans and other resources co-existing on planet earth, taking place in leading popular science journals such as *Science and Nature* (e.g. Ostrom, 2009; Pauly et al., 2002), research focusing on the diversity and development of agricultural soils (Doran et al., 1996; Kennedy and Smith, 1995; Tilman et al., 2002), sustainability in the production and use of energy (Dell and Rand, 2001; Goldemberg et al., 2008; Rosen et al., 2008), sustainability of various industries such as construction (Ortiz et al., 2009) and tourism (Gössling et al., 2002), and sustainability of different emerging technologies such as photovoltaics (Fthenakis, 2009) or fuel cells (Dincer, 2007). Closer to the area of our research interest, researchers working in the field of organization and management have addressed the role of corporations in achieving sustainability (Shrivastava, 1995), the role of stakeholders in shaping sustainability practices (Sharma and Henriques, 2005), and the concept of corporate social responsibility and corporate sustainability (Van Marrewijk, 2003).

Project management methodologies are not excluded from the sustainability-incorporation pressures. It has been argued that current project management frameworks do not effectively take social and environmental issues into account, and thus require revision (Labuschagne and Brent, 2005). Warhurst (2002) has also argued that there is a need to develop indicators that can be used in decision-making to ensure that projects are managed according to practices that will contribute to sustainable development.

While the literature on sustainability has grown quite steadily and the core discourses within it are relatively well known, the situation is very different regarding literature discussing

sustainability in a project context. Sustainability is a fairly new topic in the project management literature, with the majority of publications dating from the last ten years (Silviu and Schipper, 2014). Thus, the objective of this research is to provide a description of what the relevant sustainability-related discourses in the field of project research are. Furthermore, our aim is to identify whether project organizations or project hosts purposefully utilize distinct *sustainability strategies*, i.e. plans focusing on the fulfilment of their sustainability-related goals under conditions of uncertainty. By strategy we refer to choosing different activities to deliver value (Porter, 1996). Strategies are often described as plans and directions to succeed (Artto et al., 2008) and sustainability strategies then deal specifically with the challenges and opportunities of sustainability. We address these challenges by means of a systematic literature review of articles published in five leading journals focused on research on project organizing and sustainable production. Based on our analysis of 68 articles published in these five journals before the year 2016, we identified two distinct perspectives on project sustainability research. The first assumes the perspective of the project organization delivering the investment asset, while the second assumes the perspective of the host organization, which is the regulating body that approves the project and governs the area where the project is located. Furthermore, we identified eight distinct sustainability strategies used by either the project or its host or by both of them to support sustainability goals. We contrast our findings to an illustrative empirical case focusing on the delivery of an innovative fjord-based heating solution in Norway and discuss the implications of our research for both project research and practice.

2. Method

To meet our research objectives, we chose to carry out a systematic literature review (SLR) focusing on the leading journals that publish project sustainability research. According to Cook et al. (1997) the origin of SLR is in medical and health care fields where the approach has been used as basis for policy decisions. As compared to many traditional and less systematic approaches for carrying out literature reviews, SLR is generally considered to be superior in terms of transparency as other researchers can more easily verify the findings of the study by replicating the research setup. During the last two decades organization and management scholars have begun to adopt SLR in their research designs as well (Pilbeam, 2013). In the context of project research, Ahola et al. (2014) and Müller et al. (2014) represent recent examples of studies that have adopted SLR to map the concept of governance.

To ensure a sufficiently thorough coverage of our research field we chose to target our literature search to the following journals: *International Journal of Project Management (IJPM)*, *Project Management Journal (PMJ)*, *International Journal of Managing Projects in Business (IJMPiB)*, *Construction Management & Economics (CME)*, and *Journal of Cleaner Production (JoCP)*. Combined, these journals publish the majority of academic research focusing on project organizing and sustainable production.

Download English Version:

<https://daneshyari.com/en/article/4922144>

Download Persian Version:

<https://daneshyari.com/article/4922144>

[Daneshyari.com](https://daneshyari.com)