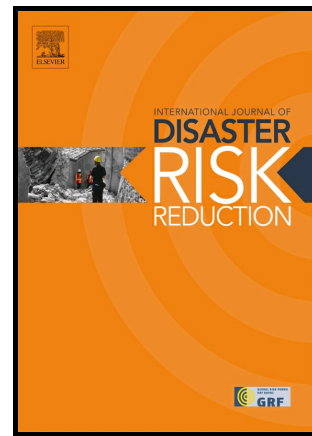


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Managing Institutional Fragmentation and Time Compression in Post-Disaster Reconstruction – the Case of Bam

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Abstract

Several studies have revealed the difficulties often found in defining stakeholders' roles in post-disaster reconstruction projects. Insufficient and ill-timed collaboration are typically identified as the principal source of problems. Borrowing the concept of Institutional Fragmentation (IF) from the field of project management, this paper examines significant obstacles to collaboration and to sharing knowledge and experience in post-disaster reconstruction projects, revealing the causes and effects at four levels of fragmentation: the construction industry, project procurement, design and construction work. The case of the reconstruction program conducted after the 2003 earthquake in Bam (Iran), illustrates these different levels of fragmentation and their short and long-term impacts. Results show that three of the four levels of fragmentation caused unexpected outcomes during program implantation and afterwards; fragmentation increased the divergence between the many stakeholders with their interests and expectations, during and after their intervention. Conflict and confrontation between two controller organizations led to an excessive emphasis on technical requirements at the expense of heritage preservation. Results also explain how specific conditions after the disaster - such as lack of time coupled with socio-political pressures - increased fragmentation. Post-disaster reconstruction projects require systematic and comprehensive procurement to cover the interfaces that will enable tasks to be conducted effectively. The study proposes a conceptual approach to fragmentation that can help academics, practitioners, and decision-makers understand the origins and consequences of institutional fragmentation on the timely use of resources, and to develop governance structures and mechanisms that can help reduce it in post-disaster reconstruction initiatives.

Keywords: Bam (Iran); Case histories; Institutional fragmentation; Organizational design; Reconstruction; Learning organizations; Time compression.

Introduction

Lack of collaboration and scant sharing of knowledge between participants in a supply chain exist in various business sectors, including manufacturing (Christensen et al., 2001), aviation (Haller et al., 2008) and pharmaceuticals (Powell, 1996). The problem is particularly acute in construction (Ofori, 2012), and also in post-disaster reconstruction (Amaratunga et al., 2009). In this paper, we examine this common challenge using the lens of Institutional Fragmentation, borrowed from the field of project management. We focus on the case of the reconstruction of the city of Bam (Iran), after the 2003 earthquake, to illustrate common obstacles to collaboration and to the sharing of knowledge and experience. The case of transitional sheltering and permanent housing reconstruction in Iran helps to explain stakeholders' roles, their sequence of interventions, and the variety of expertise, knowledge and interests they brought. This case helps us also to reveal some unexpected consequences of the generalized fragmentation that prevails in post-disaster reconstruction, enabling us to address the leading causes and potential outcomes of insufficient collaboration and sharing the knowledge and information in reconstruction projects, particularly regarding the use of the limited time available.

This article is divided into four sections. First, the concepts of institutional fragmentation and time compression in the construction sector are explained. This section also addresses critical concepts about stakeholders' roles in the construction industry and in post-disaster reconstruction. The methods section explains data collection and analysis strategies and tools used for the case study. The third section summarizes the main elements of the reconstruction experience in Bam after the 2003

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