

Evaluating Innovation: A Framework for Infrastructure Projects

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Abstract:

Innovation is at the heart of today's competitive economy. Infrastructure industry plays a crucial role in economic development thus having understood innovation and their impact on infrastructure projects is very important in current turbulent economic environment. Innovation and infrastructure are both referred to as two main factors to get competitive internationally therefore having innovation evaluated has become one of the priorities for most governments and organizations. Innovation is complex and multifaceted phenomenon and is very difficult to measure. The aim of this study is to develop a framework to evaluate innovation and its benefits in infrastructure projects. As the literature is very fragmented and lacks a consensus on innovation measurement, it will be tried to develop a comprehensive framework with a holistic attitude in mind in order to consider as many as possible interacting elements of the innovation process.

Introduction and Methodology

Innovation as a driver of economic growth has received too much attention in recent years. Financial crisis, population growth and emerging new technologies such as IT are all some of the drivers of innovation. Innovation is viewed by organizations and governments as a prerequisite for competitive advantage and improving productivity in current turbulent economic situation. For example innovation is identified as the fifth lever of productivity in the UK (NESTA, 2009).

A grounded theory method along with cross pollination of three case examples from industry have been adopted for this research project. In grounded theory method the first step is data collection to drive a theory out of analysing them.

Results and Discussion

The first draft of the evaluation framework is shown in Figure1 which has been developed based on the results from industry workshop of three different case projects and a thorough literature search.

The anticipated benefits from refined evaluation framework could be as follows;

- Assisting decision makers as they seek to achieve flexible and robust outcomes when making infrastructure investment decisions
- Improved overall economic productivity from the use of infrastructures delivered
- Greater transparency in how innovation is assessed and likelihood of reduced bidding costs
- Greater level of confidence that real value from investment in innovation is achieved

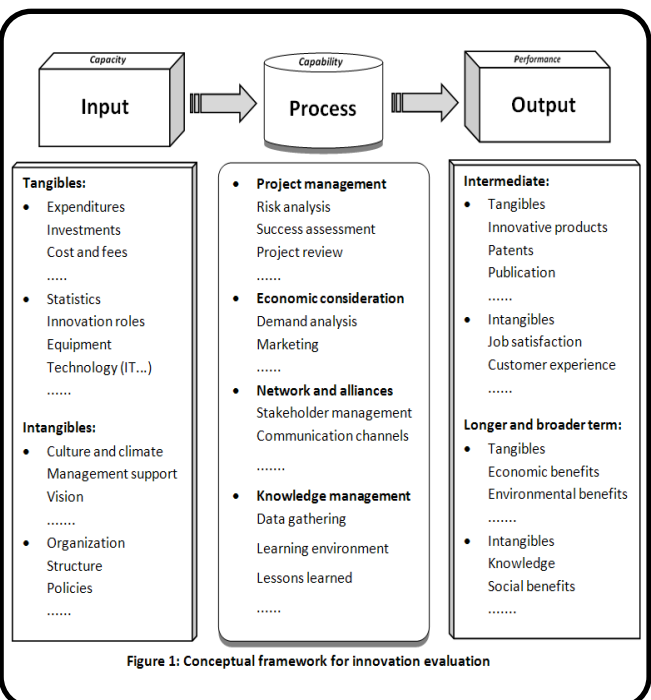


Figure 1: Conceptual framework for innovation evaluation