

Internalization of transferred technology in construction: The case of Ready Mix Concrete

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A technology is acquired either by generation or by importation. As far as developing countries are concerned the way of acquiring technology through importation is more effective than generation. The main aim of this study is to evaluate the extent of internalization of technology transfer in the construction industry of Sri Lanka. The ready mix concreting technology, which was transferred to Sri Lanka from developed countries since late 70's, was selected as a case study. Four ready mix concrete suppliers were selected based on purposive sampling methodology. The operations of these four suppliers were studied using two panel data sets. The effectiveness of internalization of technology was evaluated based on the basic components and the technological capabilities. The four basic components are "Technoware", "Humanware", "Inforware" and "Orgaware". The four main technological capabilities are "Operative" capability, "Transaction" capability, "Innovative" capability, and "Supportive capability, which provides the foundation for the development of "Operative", "Transaction" and "Innovative" capabilities of a firm. The extent of the internalization of transferred technology has been found in terms of basic components of technology transfer and technological capabilities. The results are summarized in Table 1

Table 1: Extent of the internalization of Technology Transfer

1. Basic components of technology transfer		2. Technological capability	
1.1 Technoware	<i>High</i>	2.1 Operative	<i>Good</i>
1.2 Humanware	<i>Little</i>	2.2 Transaction	<i>Satisfactory</i>
1.3 Inforware	<i>Not much</i>	2.3 Innovative	<i>Poor</i>
1.4 Orgaware	<i>Not at all</i>	2.4 Supportive	<i>Poor</i>

Above results clearly show that, except "Technoware" other components of technology have not been fully internalized. In addition, only the "Operative" capabilities have been internalized to a greater extent leaving other three in abeyance. The internalization of the technology transferred from developed countries will not only reduce further dependence on such countries but will improve the learning mechanism of the locals as well. The major barriers identified for the internalization are poor management capabilities, increased institutional gaps between the parties, inappropriate transfer of technology, poor research and development activities, and very high level of bureaucracy and political interference in the organizations.

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