ABSTRACT

Construction projects are under increasing pressure to be delivered within target budget, duration, and expected quality. At the same time, construction experts are also becoming more aware of the fact that a significant part of the construction cost is unnecessary and can be avoided. These unnecessary costs could be the results of product and process deficiencies that can manifest themselves in the form of cost overrun, time delays, and poor quality.

An extensive literature review has shown that very limited research effort has been undertaken to address failure costs related to quality of the process. Despite being seminal, published research however has some limitations in that the mechanisms behind failures have not been adequately explained and that the identification of failures is done in retrospect rather than proactively.

This paper delineates a proposed theoretical framework to develop a conceptual model which aims at pro-actively manage failure costs in construction projects. The paper summarises the findings of the early stage of an ongoing research study on the described topic. The objectives of the research study are to identify the main failure sources; to understand their relationships and dependencies with each other as well with product and process deficiencies; and to determine their contribution to failure costs. By means of the understanding of these mechanisms, the study proposes to develop a model for identifying potential failures in projects. The model is described and suggestions for further work are discussed.

Keywords: Control, failure, improvement, process, quality

FAILURE COSTS IN CONSTRUCTION

Background

Construction projects are under increasing pressure to be more efficient and to be delivered within target budget, duration and without compromising the quality of their works. The construction industry in the UK, for example, has been criticised for delivering projects with high costs overrun, extensive time delay, and poor quality (Egan, 1998, Latham, 1994). Certainly this phenomenon is not restricted only to the UK market. The literature provides extensive evidence of construction projects worldwide that have faced problems of cost overrun, time delay, and poor quality. Project cost, time, and quality are not mutually exclusive, but in fact closely inter-related. The emphasis on one of these three factors without considering the remaining,