

# Influence of Operational Quality on Project Excellence

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## Abstract

In the competitive world of customer' choice, the product are not available at good value-for-money and long lasting. Researchers much focus on Time and Cost aspect of a project but not on the Quality and on achieving Excellence. Project Quality is the philosophy of the adherence of standards throughout the life cycle of a project while Project Excellence is the delivery of sustainable outcomes to key stakeholders during the life cycle of the project, particularly during the final closure stage. Therefore, the purpose of this research is to see the influence of Operational Quality concepts and applications (such as Supply Chain Management, Lean Thinking, and Total Quality Management) on achieving Project Excellence in Information and Communication Technology (ICT) related projects.

## Introduction

As quality of ordinary projects is defined as “conformance to requirements” and “fitness for use”, Basu (2011) defined quality as “it is what customer expects as a lasting experience”. There are publications regarding the success criteria and success factors of project (Almajed & Mayhew, 2013; Touray, Salminen, and Mursu (2013)) but their implications in the dimensions of project quality are not clear. In addition, some studies have shown that many ICT projects in government around the world have resulted in partial and complex failures (Arfeen & Khan, 2009) which may definitely involve the characteristics of quality.

Many projects that are multidisciplinary and complex nature require skills, experience, consultation, decisions of numerous individuals. Therefore, Basu (2014) proposed a new definition as “Quality is the consistent conformance to customer expectation”.

When we search the domain of operations management we may observe some proven paths to follow. The area of operations management enjoys some success stories, of the application of quality based Operational Quality concepts such as Total Quality Management, Six Sigma, Lean and Supply Chain Management (Oakland, 2003). The application of Operational Quality concepts are now extended to non-manufacturing processes/projects.

Supply Chain Management (SCM) is related to the co-ordination of products and information flows among suppliers, manufacturers, distributors, retailers, and customers. By sharing information between suppliers and retailers appropriately and coordinating their replenishment and production decisions under demand uncertainty, it is possible to reduce costs and improve customer service levels. During the past 10 years, SCM and Information Technology (IT) management have attracted much attention from both practitioners and researchers. Moreover, in the market with rapidly shrinking project/product life cycles, firms must continuously find new ways to design and deliver high-quality products and services in a timely manner and within the budget (Kumar & Pugazhendhi, 2012).

The early leader of Total Quality Management (TQM) i.e. Deming, Feigenbaum, and Juran emphasized the importance of people related issues as a dimension of quality. Quality management systems (QMS) have been put into place by large and small corporations where these have proved to be successful (Aichouni, Messaoudene, Al-Ghonamy, & Touahmia, 2014). This improvement can be achieved by implementing QMS such as TQM, Six Sigma, ISO 9001, Partial Least Square, Assessing Project Excellence (Basu, 2014) and also applying the associated tools and techniques.

Lean Management or Lean Thinking is viewed as an important weapon for achieving Project Excellence. It is defined as “a systematic approach to identify and eliminating waste through continuous improvement by flowing the product at the pull of the customer in pursuit of perfection”. It is a set of principles and practices that continuously reduced non-value added activities (waste) in the process (Pandi, Sethupathi, & Rajesh, 2012).

## Purpose of Study/Justification

In the environment of project management, the definitions and dimensions of quality appear to be less pointed. Performance of the product/service/organization in the project can't be achieved only by implementing Six Sigma or Total Management Quality concepts but it includes application, implementation and practicing all the three dimensions of Operational Quality (i.e. Supply Chain Management, Lean Thinking, and Six Sigma/Total

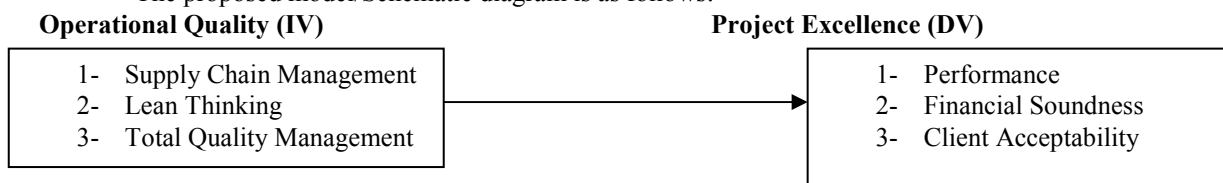
Quality Management). Through this study, Operational Quality concepts would be justified in the way that will lead to achieve Project Excellence.

### Statement of the Problem

It is hereby need to understand the link between Project Quality and Project Excellence. Project Quality is the philosophy of the adherence of standards throughout the life cycle of a project. Project Excellence is the delivery of sustainable outcomes to key stakeholders during the life cycle of the project, particularly during the final closure stage. Project Quality relates to the success factors and enablers and Project Excellence relates to the success criteria and outcomes of the project (Basu 2014).

Therefore, Basu (2014) proposed that Project Excellence can be achieved through Project Quality, Operational Quality concepts and applications, and Self-assessment and Knowledge Management. Here we will study that how can the success of Operational Quality concepts, such as Supply Chain Management, Lean Thinking, and Total Quality Management/Six Sigma be gainfully deployed in enhancing/achieving Project Excellence.

The proposed model/Schematic diagram is as follows:



Stability involves achieving consistent and, ultimately, higher process yields defined by a metric or a set point through the application of an improvement methodology and continuous review and ensured by minimizing the variation of the set point. Thus, sustainability of project outcomes is comparable to the stability of a process. In this regard, the objective of this research is to find the relationship between the Operational Quality and Project Excellence. Further, the specific objectives of this study will be:

1. An in-depth insight/review of the dimensions and importance of Operational Quality.
2. To find out the relationship between Operational Quality and Project Excellence.

### Study Area

We know that quality is needed everywhere in the project and everyone needs to achieve excellence in the project. Therefore, area of this study will be the projects of Information and Communication Technology in Pakistan that are more diversified in nature.

### Research Design (Methodology)

This research is based on inductive research approach, and the design for this research is correlational. The reason to choose correlational research designs is that Operational Quality concepts and applications are correlated with Project Excellence/delivery of sustainable outcomes to key stakeholders during the life cycle of the project.

Data will be collected through questionnaires. Respondents of the ICT field will be interacted to obtain data. Population is very important in any research study. Therefore, the populations of this study will be the ICT sector in Pakistan. Convenience sampling technique (a non-probability sampling technique) is to be used to collect data since subjects are selected because of their convenient accessibility and proximity to the researcher. For data collection purpose, well-maintained questionnaire will be developed which hold the complete information relating to study. STRUCTURED QUESTIONNAIRE (.Questionnaire will be pilot test for its feasibility and validation on twenty respondents. Questionnaire result will be collected and analyzed to know the relationship between Project Excellence/delivery of sustainable outcomes to key stakeholders during the life cycle of the project. Statement of questionnaire will be rated on rating scale (5-point Likert Scale). The questionnaire will be tested to know the content and face validity. Reliability of data will check through Cronbach's Alpha test. These will be improved on the basis of feedback from the respondents. Online questionnaire is also prepared for facilitation of respondents to submit their responses at their free time.

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**Appendix (Adopted Questionnaire)**

<b>Project Excellence(Dependent Variable)</b>		1	2	3	4	5
<b>Sustainable outcomes</b>						
<b>Q.1</b>	Have you used in the significant projects in which you have been involved to assess project effectiveness or excellence:					
<b>Q.2</b>	Recognition of the supply chain management principles, with dedicated resources if appropriate, in procurement, forward planning and supplier partnership.					
<b>Q.3</b>	Proactive application of Lean Thinking in minimizing non value added activities and process cycle times.					
<b>Q.4</b>	Evidence of processes and initiatives to instil TQM culture (especially if Six-Sigma is not applied) within Project Teams and suppliers.					
<b>Q.5</b>	For the significant projects/programs in which you have been involved you have applied operational excellence (OE) initiatives such as:					
<b>Questions adapted from: Managing Quality in Project: An empirical study</b>						
<b>Operational Quality(Independent Variable)</b>						
<b>Total Quality Management</b>						
<b>Q.1</b>	Top managers in this organization allocate resources to improve quality					
<b>Q.2</b>	There is a strong commitment to quality at all levels of this organization					
<b>Q.3</b>	People in this organization constantly look for ways to improve their work					
<b>Q.4</b>	Continuous quality improvement is an important goal of this organization					
<b>Q.5</b>	This company encourages people to listen to customer when they need to make decisions					
<b>Questions adapted from:Impact of TQM and organizational learning on innovation performance in the high-tech industry</b>						
<b>Supply Chain Management</b>						
<b>Q.1</b>	Seeking new ways to integrate supply chain management activities					
<b>Q.2</b>	Establishing more frequent contact with supply chain members					
<b>Q.3</b>	Communicating your future strategic needs to your suppliers					
<b>Q.4</b>	Communicating customers' future strategic needs throughout supply chain					
<b>Q.5</b>	Extending supply chain membership beyond immediate suppliers/customers					
<b>Questions adapted from:Just in time, total quality management, and supply chain management: understanding their linkages and impact on business performance</b>						
<b>Lean Thinking</b>						
<b>Q.1</b>	Evaluate the importance of “Waste Reduction” principle to enhance the overall performance of the project.					
<b>Q.2</b>	Evaluate the importance of “Reduce Variability” principle to enhance the overall performance of the project.					
<b>Q.3</b>	Evaluate the importance of “Increase Transparency” principle to enhance the overall performance of the project.					
<b>Q.4</b>	Evaluate the importance of “Flow Variability” principle to enhance the overall performance of the project.					
<b>Q.5</b>	Computer-Aided tools are used in your project to improve the project Performance and continuous improvement.					