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## Abstract

### Purpose

The purpose of this paper is, first, to utilize institutional theory to assess motivation for the adoption of Six Sigma. Second, to examine the role of an organization's innovation implementation climate and the fit between the innovation considered and the values of the organization's members on the implementation of Six Sigma. Third, to study the impact that the adoption and implementation of Six Sigma has on organizational performance.

### Design/methodology/approach

Methods advocated in case study research were employed in the conduct of seven case studies. The research protocol consisted of identifying organizations in a variety of manufacturing industries, and conducting focused interviews with a minimum of three respondents in each company in order to improve validity.

### Findings

This paper suggests that institutional theory proves to be an effective means by which to examine the adoption of Six Sigma. In addition, support for innovation implementation model suggested by Klein and Sorra is found. Each of the studied firms reported performance improvements as a result of the adoption and implementation of Six Sigma.

### Originality/value

This paper contributes to a better understanding of Six Sigma adoption, implementation, and implementation effectiveness of Six Sigma by exploring how it is applied in different manufacturing contexts.

## Keywords

Quality management Six Sigma Organizational processes Organizational theory Manufacturing industries

### Citation

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– This paper suggests that institutional theory proves to be an effective means by which to examine the adoption of Six Sigma. In addition, support for innovation implementation model suggested by Klein and Sorra is found. Each of the studied firms reported performance improvements as a result of the adoption and implementation of Six Sigma. Originality/value. – This paper contributes to a better understanding of Six Sigma adoption, implementation, and implementation effectiveness of Six Sigma by exploring how it is applied in different manufacturing contexts. Keywords. Quality management. Six Sigma is a set of management tools and techniques designed to improve business by reducing the likelihood of error. It is a data-driven approach that uses a statistical methodology for eliminating defects. The etymology is based on the Greek symbol "sigma" or " $\sigma$ ," a statistical term for measuring process deviation from the process mean or target. "Six Sigma" comes from the bell curve used in statistics, where one Sigma symbolizes a single standard deviation from the mean. If the process has six Sigmas, three above and three below the mean, the defect rate is c Institutionalism, New Institutional Theory. Institutional emergence, conformity, conflict, change, isomorphism. Processes which establish schemas, rules, norms and routines. Institutional theory attends to the deeper and more resilient aspects of social structure. It considers the processes by which structures, including schemas, rules, norms, and routines, become established as authoritative guidelines for social behavior. It inquires into how these elements are created, diffused, adopted, and Statistical Perspective of Six Sigma The Six Sigma management method was developed and applied by knowledgeable statisticians. Harry (1997), Hahn et al. Six Sigma represents a very heroic target for many organizations, technologies, operations, processes, and projects (Lucas 2002). Business Perspective of Six Sigma In the business world, Six Sigma can be defined as a "business strategy used to improve business profitability, to improve the effectiveness and efficiency of all operations to meet or exceed customer's needs and expectations" (Anthony and Banuelas 2001).