

**A System Dynamics Approach Linking Employee
Health, Quality Culture and Organizational
Effectiveness**

by

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Abstract

The purpose of this research is to investigate the interactions between organizational effectiveness, quality culture, and employee health. The system dynamics modeling approach is used in order to reveal the complex and dynamic behavior of the system under investigation. Understanding system behavior facilitates policy analysis and management decision-making.

The relationships between the three constructs: organizational effectiveness, quality culture and employee health are non linear and during the research a number of dynamic hypotheses were investigated. For example, illness is the main cause for absenteeism, loss of productivity, ineffective learning, which in turn causes even more stress and eventually more illness. As part of the system dynamics approach a conceptual (qualitative) model and a formal (quantitative) model were built.

The conclusion from analyzing the dynamic hypotheses of this model was that quality culture had a great impact on the performance of the whole system, especially on employees' health and on organizational effectiveness. Furthermore, employees' health and organizational effectiveness concurrently impact each other. However, this research could not show a considerable impact of the employees' health and organizational effectiveness on the organization's quality culture.

The research contributes to the general understanding of complex production systems, since the three constructs investigated in this research face similar issues, i.e., the trade-off between long-term and short-term goals, consequences of managerial actions that are far apart in time and space, and conflicts between measurable outcomes and subjective outcomes. The research adds to the design of effective social systems, where the products and the services are created in a quality fashion, and individuals experience an environment that is conducive to their well-being.

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The process of writing a doctoral dissertation resembles a complex and non – linear process which evolves as a dependent variable from a starting point along a time line until the ending point.

This writing process consists of several elements that impact each other and also affect the quality of work. They include: knowledge, learning ability, time investment and the ability to criticize and to accept criticism, self confidence, perseverance and health. Aside from knowledge, all these elements are arguably non-linear elements that act on their own in a complex manner, making the doctoral dissertation an almost unpredictable system characterized by uncertainty. In my case, having to divide the process between two countries- the academic part in one and the practical research in another, the complexity of those elements reached its peak.

In spite of all the difficulties I had to face due to these elements, the process of writing my dissertation has reached its destination thanks to the support, help and encouragement of many people without whom I could not have completed this task successfully.

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