

Review: Competing on Quality and Environment

By Christian N. Madu

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Christian N. Madu. *Competing on Quality and Environment* . Fairfield, CT:
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Almost all commercial activities in the world revolve around products and services, which involves physical items and human efforts respectively. Quality in both cases is very valuable to the customers and is thus responsible for survival of an organization. The new era of communication and globalization has affected the meanings of quality in a broader sense that also includes the influence of the environment and vice versa. Thus "quality" and "environment", which seem to be two distinct issues, are in fact superimposed on each other; one cannot be achieved without the other. *Competing on Quality and Environment* , by Christian N. Madu, has integrated these two important issues that are shaping the future of business in the new millennium, and focused on what organizations need to do in order to create value to customers.

The book is divided into thirteen chapters. In the first chapter the basic concepts about total quality management (TQM) are presented with details on Deming's, Juran's, Crosby's, Kaoru Ishikawa's and Genichi Taguchi's approach to quality management. The history and definitions of quality function deployment (QFD) are presented in Chapter 2. Introduction to the International Organization for Standardization (ISO) with its origins and evolution of ISO 9000 and 14000 series, along with their elements, are presented in the next chapter. Introduction to the fundamental concepts of statistical quality control is presented in chapter 4. The discussion is divided into two components: acceptance sampling and statistical process control that includes four popular control charts for attributes, namely the p-chart, c-chart, np-chart and u-chart. The dimensions and features the customer uses to assess the quality of a virtual service or operation, typically Internet, is presented in chapter 5.

The next five chapters are dedicated to issues relating to increased pollution due to massive use of the earth's natural resources such as fossil fuel. First the author presents the issue of sustainable manufacturing, which was initiated by the United Nations 1987 publication known as the "Brundtland report". The case studies of the popular success stories from the leading manufacturers such as Kodak and Xerox are also elaborated.

In the next chapter, the author discusses some of the strategies that are currently being adopted to achieve environmentally conscious manufacturing. Planning issues involved in environmental management are discussed in chapter 8, along with the Plan-Do-Check-Act cycle and the role of man, machine, methods, and materials ("4ms") as a means to effect a new organizational change to achieve sustainability. Chapter 9 presents the concept of life cycle assessment with the use of product stewardship where the manufacturer takes a cradle to grave approach toward its product. Two definitions provided by the Society of Environmental Toxicology and Chemistry (SETAC) and ISO are included.

Finally, the author explores how environmental management can benefit from the exploding use of the Internet. The book also discusses manufacturing strategies such as Agile, Lean and Flow Manufacturing. It has been shown that these new strategies can help a firm to improve its quality, minimize waste, and also remain competitive, which is the theme of the book. The role of supply chain management and enterprise resource planning is discussed in the buffer chapter 12. An final integrative chapter is presented to tie both quality and environment practices together in achieving business competitiveness.

Competing on Quality and Environment is written in easy language and could serve as a good reference book for those interested in the study of quality management and sustainable practices. Undergraduate as well as postgraduate students can benefit from this collection. Owners of large and small firms, consultants, managers, and engineers interested in quality and environmental management practice will find this book to be very useful.

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