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Japan vs. the West

Implications for Management

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Implications for Management

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Preface

Japan has been able to improve productivity significantly and enhance the quality of its manufacturing processes to the point where it is providing world leadership in the art and science of management, especially production management. This book provides a thorough background on Japan related to management in general and to the practice of Japanese management in particular. It also provides suggestions and directions for Western management on how to adopt or adapt to Japanese management practices and Japanese-style operations in order to gain substantial potential benefits.

Although there is considerable interest in Japanese management style and practice among Western managers, there is also considerable hesitancy to adopt various aspects of Japanese management practices. This hesitancy is largely a result of the erroneous belief that Japanese management practices are closely tied to Japanese culture. Hence, it is assumed that these management practices are not transferable from Japan to the Western environment. This author firmly believes that all Japanese management practices are transferable to the West, although Western management may not necessarily want nor need to adopt them all.

This book consists of four parts. Part I provides an overview of Japanese industry versus Western industry, explaining how and why Western industry was overtaken by Japanese industry and providing a background on Japanese culture, economy, education, work, and management practices. Japan has reached its present status not by accident but by design; there is an underlying industrial strategy that has provided guidance to Japanese industry. Japan's industrial management practices are guided by several key concepts, such as the focused factory, maintenance of good supplier relations, and a participative management style. The concluding chapter in Part I provides a few illustrations of how several Western firms are keeping up with Japan by emulating some Japanese management practices.

Part II provides an overview of Japanese management as practiced by the Japanese. The concept of *wa,* which means harmony, unity, and cooperation, is discussed in detail. Dependence on employment subcontractors and parts suppliers mandates the maintenance of a harmonious relationship between the

large firms and these subcontractors. One of the model production management systems is the Toyota production system, which is discussed in detail and followed up with an extensive explanation of the Kanban inventory management system, also known as the just-in-time production system.

Part III explores the effects of Japanese influence on Western management practices. First, the Japanese experience as managers of Japanese subsidiary plants in the Western environment is discussed. Next, the experiences of several Western firms with Japanese-style managements are reviewed. The deepest penetration of a Japanese management technique into Western management practices is the quality circle. Quality circles, including the techniques utilized by quality circles, are explored in detail. Part III concludes with an overview of robotics and robotics technology.

The final part of the book, part IV, attempts to take a look into the future. There will be more international integration of manufacturing, and Japan will find increasing competition from its Eastern neighbors, especially for labor-intensive products. As a result, Japanese firms increasingly will move their manufacturing facilities to places where there is an abundance of low-cost labor or, alternatively, where there are markets for its products. This bodes well for the United States, where the Japanese already have substantial market shares of selected products. What can Western management do to react to the Japanese management challenge? Western management must again become as competitive as the Japanese by depending on its own strengths and selectively adopting successful Japanese management practices.

The book is addressed to management scholars and practitioners. There is a need for detailed empirical research of the differences between Japanese and Western management approaches. Management scholars will undoubtedly become increasingly involved in researching the differences. Management practitioners, on the other hand, need to begin experimenting with new management approaches as suggested in the book.

Many contributors have helped shape the ideas presented here. Wherever possible, credit has been given to the sources used. I especially want to express my appreciation to Mr. Joji Arai of the Washington, D.C. office of the Japanese Productivity Center for arranging access to several Japanese firms, and to Philip D. Jones, former Managing Editor of Kluwer-Nijhoff Publishing for helping me restructure a previous draft into the present format. The assistance provided by the research environment of the School of Management of the State University of New York at Buffalo enabled me to produce the book in a timely fashion. I also want to thank Mrs. Marilyn Viau who typed the several drafts of the manuscript.

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1 OVERVIEW OF JAPANESE INDUSTRY VS. WESTERN INDUSTRY

A major breakthrough in industrial performance occurred in the 1970s. Japanese industries proved that it is possible to improve productivity significantly and enhance the quality of the production process for a variety of consumer, business, and industrial products. The growth in productivity and the enhancement of quality had reached a point of zero or very small growth in the West during the late 1970s. About that time, Japan exploded the myth of zero or small growth and showed the world that continuation of improvements in productivity and quality are possible, which resulted in an explosive growth of their export markets.

Western industry is beginning to react to Japanese success, and Western approaches are beginning to change. In some cases, the changes are in response to Japanese approaches, and, in other cases, they are independent of what Japan is doing. Since the Japanese have not attained their level of productivity overnight, Western industry cannot just emulate what Japan is doing and expect improvements immediately. Changes in Western industrial approaches eventually will show improvements in Western productivity and are already beginning to show improvements in the quality of Western products; however, the Japanese will continue to improve their

production facilities and products as well and, thus, are a moving target for Western firms trying to catch up.

In the following five chapters, the reasons behind Japan's success are analyzed, studied, discussed, and evaluated. There are many reasons why Japan has become successful. Each of these reasons is identified and discussed; some are relatively easy to emulate, others are much more elusive.

1 WHY WESTERN INDUSTRY WAS OVERTAKEN BY JAPAN'S INDUSTRY

Relatively minor events in history create major impacts on the future. The invention of the telephone, wireless communication, the automobile, and television, as well as the development of these and other products into mass usage, have created massive changes in the way we live, work, communicate, and spend our leisure time. Similarly, the development of mass production during the first part of this century made many of these products available and affordable to most of the population. In more recent years, the development of the computer is changing our lives and is causing changes in virtually all aspects of what we do and how we live. A more subtle change that is occurring at present and that largely originated in Japan is the further development of mass production methods for consumer products. This development is lowering costs and, simultaneously, improving the quality of these products.

The United States generally is given credit for the development of mass production methods and techniques. The assembly line was made famous by Henry Ford. Following Henry Ford's example, other manufacturers quickly adopted the efficient means of mass production by adopting assembly-line techniques. Unfortunately, few drastic changes or improvements occurred in Western manufacturing methods. To be sure, automation was introduced following World War II, and mechanization of production methods increased wherever feasible,

resulting in growing labor productivity. By the end of the 1960s, however, American industry found that it essentially had reached the end of productivity growth. Further improvements were not pursued actively and the growth of labor productivity came to an end.

During the 1950s and 1960s, the Japanese had begun an industrial development campaign largely built on their own industrial base but also built on technology and knowledge acquired from the West. Using this combination, the Japanese were able to develop first a strong steel industry, followed by rapid growth and development of the shipbuilding, motorcycle, camera, automobile, and electronic product industries, and more recently by the machine tools and computer-related production industries. Table 1–1 illustrates the rapid growth of manufacturing and specific high-growth industries in manufacturing. The year 1955 is used as the base index of 1.00; note that the highest growth occurred in electrical machinery.

The jury is still out on why the Japanese have been so successful in the production of traditional products that had been on the market in other countries for years. Some claim the Japanese faced strong internal competition and thus developed high quality, low-cost products that were very competitive on the world markets once they were exported. Others claim that the Japanese pride in workmanship is at such a high level that they would never allow inferior products on the market. Still another view states that the Japanese must export to survive and are forced to build a superior product to be competitive on the world market.

Whatever the reason, over a period of about 25 years the Japanese have developed an industrial machine that is able to produce high quality and reasonably priced consumer and industrial products. This ability on the part of the Japanese has caused considerable, temporary havoc for Western industry, which now finds itself in a position to have to play catch-up.

Table 1–1. Illustration of Growth Rates of Japanese Industry Indices

Year	*Manufacturing*	*Machinery (except Electric)*	*Electrical Machinery*	*Precision Equipment*	*Transportation Machinery*
1955	1.00	1.00	1.00	1.00	1.00
1960	2.18	2.95	6.08	2.43	2.98
1965	3.82	5.11	11.21	4.71	7.56
1970	7.95	14.03	36.29	9.03	17.02
1975	8.62	13.33	41.67	11.24	23.36
1979	11.49	19.16	73.83	28.21	25.84

Adapted from: *MITI Statistics, Mining and Manufacturing Index,* 1980. Ranking Note: the year 1955 is used as a base index of 1.00.

The manufacturing revolution that has taken place in Japan during the past 25 years may have as much impact on world society as the development of mass production techniques by Henry Ford more than half a century ago. In the short run, the Japanese will benefit from the successful transformation of their industries. In the long run, everyone in the world will benefit because success causes emulation, and emulation causes increased competition with its attendant benefits to the consumer.

The attention being focused on Japan's industrial prowess may give many the idea that all of Japan's human and capital resources are mobilized to run this vast industrial enterprise. This just is not so. Table 1–2 shows percentage of employed persons in manufacturing and other areas of economic activity. Note that the percentage of employed persons in manufacturing has remained fairly constant during the past 20 years and constitutes only about 25 percent of the employed population.

The benefits discussed above do not only accrue to the Japanese. Lower cost production with attendant higher quality also benefit the developing countries, especially as it applies to their needs to develop industry and provide services for their respective populations. Therefore, we must not look at the Japanese economic and competitive success as something that does damage to industries in other countries, especially those whose industries are in decline. To be sure, there will be temporary dislocations, but in the long run we will all benefit from the progress in industrial production achieved by the Japanese. We shall discuss and

Table 1–2. Percentage of Employed Persons by Economic Activity — Japan 1956–1979

Economic Activity	*1956*	*1962*	*1968*	*1974*	*1979*
Agriculture	42.0	30.1	22.2	14.3	11.0
Mining & Construction	6.2	7.0	7.8	9.0	9.8
Manufacturing	17.7	24.1	25.7	26.9	24.7
Transportation, Communication & Utilities	5.3	6.3	6.9	7.1	7.0
Marketing, Banking, Insurance & Real Estate	15.4	18.2	20.9	23.6	26.1
Services	10.7	11.3	13.4	15.6	17.9
Government	2.7	3.0	3.1	3.5	3.5
Total	100.0	100.0	100.0	100.0	100.0

Source: Statistics Bureau, Prime Minister's Office, *Report on Basic Research of Structure of Employment*, 1980.