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AUTOMOTIVE INDUSTRY

The Competitive Challenge to
U.S. Companies

Statement of Allan I. Mendelowitz, Director, International
Trade, Energy, and Finance Issues, National Security and
International Affairs Division



Mr. Chairman and Members of the Task Force:

I am pleased to be here today to discuss issues related to the competitiveness of the U.S. economy in general and the U.S. automobile industry in particular. My testimony today is based on GAO work undertaken for a number of studies. These studies have analyzed causes of the U.S. trade deficit, assessed Japanese economic and industrial policies, reviewed issues concerning foreign investment in the U.S. automobile industry, and looked at management practices used by U.S. firms to improve their competitiveness. I have included an attachment with specific references to the more pertinent reports.

BACKGROUND

There has been considerable press coverage and debate in recent weeks over the ability of U.S. automobile companies to find markets for their cars in Japan. Japanese trade barriers are being depicted as the source of the economic problems of the U.S. auto industry. While some barriers do exist, they are not the primary cause of the competitiveness problem of the U.S. automobile industry. Furthermore, this interest is just the most current example of the broader concern over U.S. competitiveness. This concern has at various times focused on different industrial

sectors--semiconductors, steel, textiles, and machine tools, to name a few.

THE QUESTION OF U.S. ECONOMIC COMPETITIVENESS

The President's Council on Competitiveness has defined an economically competitive country as one that can sell its products on international markets and raise the standard of living of its people. In other words, economic competitiveness deals with the most fundamental of concerns-- the economic well-being of a country's citizens. At the broadest level we should be very concerned over the issue of U.S. competitiveness.

A country can sell its products in international markets and engineer a trade surplus if it curbs domestic demand sufficiently and devalues its currency enough to make its products very cheap on world markets--but such a surplus is purchased at the cost of the impoverishment of a country's people. In other words, a country's products will sell, but its people will not see an increase in their standard of living. In fact, the developing countries of Latin America have experienced such an economic environment. They responded to the debt crisis that began in 1982 with economic contractions and currency devaluations. Brazil, for example, was able to run a trade surplus for several years that generated enough

foreign exchange earnings to meet its international debt service obligations. However, it did so only by contracting its domestic economy to the point where some analysts reported it lost a generation of economic growth.

Therefore, how can a country maintain and enhance its competitiveness? The answer lies in having both the government and the private sector do a number of things right. What has to be done must occur on several different levels: (1) on the level of the government's policy concerning macroeconomics; (2) on the level of the government's policy in key program areas; and (3) on the level of the goals, policies, and management systems of businesses themselves. These different components of a successful competitive country are all interrelated; to succeed they must all be done right. Furthermore, if the United States does not wish to cede its leadership in world economic affairs, its performance on all levels must meet the challenge of ever-rising global standards of competition.

MACROECONOMIC POLICY SETS THE
STAGE FOR A COMPETITIVE ECONOMY

Macroeconomic policy plays a central role in affecting the competitiveness of a country. For businesses considering investments in new plant and equipment, the cost of capital is a

critical variable affected by macroeconomic policy. The cost of capital dictates how a business views investment that is expected to yield a profit sometime in the future. This concern applies to investment in physical assets such as new equipment as well as to investment in research and development.

The advantages that a lower cost of capital provides to manufacturers are varied but easily illustrated. A firm with a lower cost of capital can afford to invest more and to be more patient because it has a longer planning horizon than a firm facing a higher capital cost. A macroeconomic policy that leads to lower interest rates and a lower cost of capital can encourage a firm to adopt a longer time horizon. And, with a longer planning horizon, a business can more easily undertake investments that have long payback periods, such as investment in research and development to commercialize new technology. Products with such new technology often have much higher value added and can support industries that pay higher wages and support a labor force with a higher standard of living.

According to a number of studies, Japanese firms have benefited from a substantially lower cost of capital than have U.S. firms. This advantage has been due largely to differences in national savings rates. These differences reflect both individual savings patterns and levels of government borrowing. High federal government budget deficits have competed with the private sector

for U.S. savings, raising borrowing costs. Other determinants of the cost of capital to firms include differences in the tax system facing corporations, and various aspects of firms' structure and behavior.

Measuring the cost of capital across countries is not a straightforward exercise, however, due to the variety of factors involved. But studies have revealed substantial differences in the cost of capital for Japanese as compared to U.S. firms in the 1970s and early 1980s. While these differences have narrowed in recent years due, in part, to integration of world capital markets and other factors, they still remain.

CERTAIN GOVERNMENT PROGRAMS

AFFECT A NATION'S COMPETITIVENESS

Government programs that affect the nation's infrastructure and the health and capability of the labor force are also important in defining the environment in which the private sector operates. A healthy and educated labor force is a prerequisite for a competitive economy. In addition, a well-developed and maintained infrastructure is an important ingredient in a country's ability to compete.

The United States devotes 3.4 percent of gross domestic product to public spending on elementary and secondary education, ranking 11th among 15 economically advanced countries. The actual expenditure level is not out of line with that of most competitor nations. However, on measures of educational achievement we lag well behind other developed countries. A labor force that is not well-educated cannot be competitive. At a minimum, industry is burdened with the cost of the extra training needed to teach entry-level workers basic skills that were not learned in the public school system. Therefore, for the long-run competitiveness of the country, across-the-board improvements in the effectiveness of education must be realized.

The situation with respect to health care is analogous. The United States spends a much larger share of gross national product on health care than other developed countries. However, the United States is not number one with respect to the health of its population. The United States lags behind other countries in such indicators of health as infant mortality and life expectancy. A health care system that does not yield benefits commensurate with its costs does not make efficient use of the resources devoted to it and detracts from the nation's ability to be competitive.

In addition, a country with an adequate and well-maintained transportation and communications infrastructure is able to move people, raw materials, finished goods; and information around

quickly and efficiently. To the extent that elements of the U.S. infrastructure--such as bridges, roads, and the air traffic control system--have been allowed to deteriorate or have failed to keep up with growing demand, producing congestion, U.S. competitiveness has suffered.

THE ROLE OF THE PRIVATE SECTOR

The government sets the stage for a competitive economy but, even if the government acts responsibly and does everything right, a country cannot be competitive if the private sector does not do its part. Ultimately, the competitive strength of a country is determined by how well the private sector manages itself.

The decade of the 1980s has been a difficult one for U.S. business. The rules of the game underwent a fundamental change, as the U.S. economy became internationalized. In previous decades international trade and competition were not major concerns of U.S. industry. The U.S. market was so large that most companies gave little thought to expanding internationally. A relatively small number of large multinational companies accounted for most of U.S. international trade and investment. As the typical American businessman would say, "Why should I try to sell in Paris when I don't even sell in Peoria?" Being competitive meant being only as

good as the competitor around the corner. In the case of the U.S. automobile market, being competitive for Ford meant being only as good as General Motors (GM).

With the internationalization of the U.S. economy in the 1980s, imported products began to take ever larger market shares in more and more products. Being competitive has now come to mean being as good as the "best in class" producer, wherever in the world the company may be. Whether a firm chooses to sell in Paris or in any other foreign market, it must now be competitive by world-class standards in order to survive. If a firm does not maintain such standards, its world-class competitor will contest the firm's market in the firm's own backyard.

QUALITY AS A COMPETITIVE FACTOR

Recently, there has been growing awareness of the difference that better management can make in the ability of a company to compete. The quality management model, as propounded by Dr. W. Edwards Deming, Dr. Joseph Juran, and others, offers a way of achieving continuous product improvement and continuous reduction in the cost of production. It is a very different way of managing than U.S. industry has traditionally followed. Japanese competitors who have

been most successful adopted this approach to management early in the postwar era.

Some U.S. industries have responded well to the new management challenge. Others have not. One positive example is the dry paper copier. This is a product that was invented in the United States. The fundamental patents were held by Xerox, which dominated the market in the 1960s and '70s. By the early 1980s, however, Xerox came under tremendous competitive pressure from imports and was rapidly losing market share. Xerox was faced with competitors who were able to sell a competing product at less than it cost Xerox to manufacture it. Furthermore, Xerox's problems were compounded by customer complaints about low product quality.

Xerox responded to the challenge by undergoing a profound transformation in its corporate management. By adopting the quality management model, Xerox was able to begin a process of continuous product improvement and cost reduction. Corporate economic health and lost market share were regained. And, Xerox's achievements were recognized when it became one of the very first recipients of the Malcolm Baldrige National Quality Award in 1989.

Comparable stories can be told about many other companies that responded to the competitive challenge by improving their management systems in order to become world-class competitors. Companies that have not responded to the challenge have seen their

sales decline and their markets shrink. In the most serious cases, these companies have exited the industries in which they had competed.

THE U.S. AUTOMOBILE INDUSTRY

Over the past decade and a half, Japanese automobile manufacturers have expanded their share of the U.S. automobile market from 8 percent to almost 33 percent of all cars sold. This growing share of the U.S. market has important implications for the U.S. economy. The automobile industry represents a substantial share of the U.S. economy and has traditionally been the source of large numbers of well-paying jobs.

Why Japanese companies have been so successful in the United States has generated substantial debate. A long list of possible reasons for this success has been offered, including Japanese government support, an undervalued yen, a highly skilled and disciplined Japanese labor force, docile single-company unions, advanced manufacturing technology, special techniques like just-in-time inventory and quality circles, and "Japanese management."

Most of the possible reasons contain an element of truth. Japanese industry had a developmental period in which trade barriers

protected its home market from foreign competition. The yen was weak for a long time. Japanese auto companies do have well-trained and disciplined employees. Some Japanese companies did develop highly automated assembly plants. And, Japanese auto companies do manage their operations differently from U.S. auto companies. However, it was not until Japanese auto assemblers arrived in the United States in the 1980s that the primary reasons for their competitiveness became clearer.

Currently, there are seven Japanese-affiliated auto assemblers operating in the United States. One of the seven, New United Motor Manufacturing, Incorporated (NUMMI), is a 50/50 joint venture of General Motors and Toyota that produces cars based on the Toyota Corolla. The plant is located in Fremont, California, at the site of a GM assembly facility that was shut down in 1982. An examination of that joint venture is instructive. Absenteeism at that plant prior to its shutdown is reported to have routinely been 30 percent, productivity and quality were very poor, and labor grievances were running at the rate of 7,000 a year.

After a couple of years of standing idle, however, the plant was reopened as the joint venture, which put in place Toyota management and operating systems. The new NUMMI labor force consisted almost entirely of employees who had worked at the Fremont plant when GM was solely in charge. With this work force and with Toyota's operating and management systems, the new joint venture started

producing cars which, according to GM's own assessments, were the most efficiently produced and highest quality cars in the GM inventory.

Those cars are produced with United Auto Workers (UAW) laborers who receive industry scale wages. In addition, many parts and components are purchased from U.S. suppliers. And yet the cars' quality is indistinguishable from that of cars built by Toyota in Japan. Thus it appears that the competitiveness of the Japanese companies does not rest on any special skills or superior discipline within the Japanese labor force, nor does it depend on the absence of a strong, industrywide union. Moreover, it is not due to any special national characteristics of Japanese suppliers. Neither does it rest on some advanced technology, since U.S. automobile manufacturers view NUMMI as a fairly low-technology operation. The primary source of the production efficiency and product quality of NUMMI--and of the other successful Japanese auto companies operating in the United States--appears to be the management systems introduced by the Japanese companies.

Fundamental to the success of these companies is the commitment to total quality control, under which products are designed to meet customer expectations and are produced with a goal of zero defects. The zero-defect goal was adopted because it was considered and proved to be the production solution with the lowest cost. The zero-defect goal underlies all aspects of company operations--

design and engineering, assembly operations, human resource management, and relations with suppliers. All employees and suppliers are encouraged and expected to seek ways to improve the product as well as the economy and efficiency of the production process.

Parts and component suppliers play an important role in the system, too. Parts suppliers design components to meet size and performance specifications. Standards for quality, cost, and service are exacting--with suppliers expected to provide perfect parts on a just-in-time basis. It is also the responsibility of suppliers to reduce the cost of production as well as the price charged over the product's life cycle. Suppliers are also expected to improve the components.

Just-in-time delivery of parts is important not only because it reduces inventory costs but also because it is central to quality control. In return, a zero-defect standard for components permits smooth operation of the assembly line without maintaining large inventories.

Like American companies, every Japanese automobile company has a vertical hierarchical structure. However, the hierarchy often operates differently. One key to a successful corporation is the flow of information throughout the organization. The better the information flow, the more efficient the operation will be. In

typical hierarchical corporations, officials at every level of the hierarchy appropriate symbols to widen the distance between themselves and the level just below. These symbols are often a bigger office, a closed door, a secretary to screen calls, an executive washroom, and an executive dining room. This process of building barriers between levels of the hierarchy impedes the flow of information in the organization. However, at NUMMI and at the Honda plant in Marysville, Ohio, these barriers do not exist. Everybody wears the same work outfit, from the person sweeping the floors to the president of the company. What passes for white-collar work is conducted in a large, open bull pen. All the company officials are there. Furthermore, there are no executive dining rooms and no reserved parking spaces.

Labor-management relations also differ considerably. In a traditional U.S. auto assembly plant, there are usually over 100 different job classifications. However, at NUMMI only four job classifications exist, giving maximum flexibility to the production line. Labor is used much more efficiently in Japanese auto assembly plants. Workers function in teams of six to eight, with responsibility for multiple tasks. In contrast, at the traditional U.S. auto assembly plant workers stand alone on the line and perform individual tasks.

Furthermore, quality is the responsibility and obligation of each worker at NUMMI. A clothesline runs the length of the NUMMI

assembly line and, if a worker cannot finish his or her task or if there is a defect in the work, he or she pulls the clothesline. The assembly line comes to a stop, and the team gathers around to correct the problem. Then the line starts up again. If the line is pulled too frequently at any work station, it is taken as a sign that there is something wrong with the work process at that particular station, and that work process is redesigned.

Moreover, the way in which NUMMI responds to downturns in demand for its product is also different from the way in which the traditional "Big Three" automakers respond. The contract between NUMMI and the UAW work force at the plant provides for layoffs of workers as only a very last resort. Before workers can be laid off, work that is subcontracted out must be brought into the factory, and workers can be put on maintenance or given additional training. In addition, before any workers are actually laid off, management must incur a cut in their salaries.

NEW MANAGEMENT STYLES ADOPTED BY SOME U.S. COMPANIES

The success of the Japanese auto companies in the United States is having a significant impact on the traditional American auto manufacturers. Japanese success has been a catalyst for change in U.S. companies. Furthermore, joint ventures between U.S. companies

and their Japanese affiliates have provided a focal point for technology transfer to the United States--not necessarily confined to some new hardware, but broadened to include the management systems that appear to fuel Japanese success. Traditional U.S. auto companies have not caught up yet, but they are responding by changing such things as how they manage, how they define the roles of their workers, what they expect from their suppliers, and how they implement their quality standards.

The critical question is, can they and will they respond quickly enough? The answer is not yet clear. There are some positive signs: General Motors introduced a new Cadillac Seville this year for which there is a reported 3-month backlog of orders; Saturn workers were reported to have forced GM managers to cut the rate of production in order not to jeopardize assembly quality; Ford set out to design a world-class car in the Ford Taurus and has seen a consistently strong market response to the model since its introduction in 1985; and Chrysler claims that it was able to substantially reduce the time needed to develop its 1993 LH midsize sedans by adopting product development methods used by the Japanese competition.

However, the competition is not standing still. The definition of a world-class product is constantly changing. A high-quality product is no longer simply defined as one that is free from assembly defects: It must also be a product whose inherent design

delights the customer. The kind of change that is necessary to successfully compete in such circumstances is profound. It can be done, but it requires more sustained commitment to change than U.S. automobile manufacturers have yet exhibited.

In conclusion, the federal government can do a much better job of establishing the underlying conditions that affect the competitiveness of the U.S. economy. In addition, there have been calls for the federal government to come to the direct assistance of the U.S. automobile industry. However, it is not within the power of the government to change individual companies into world-class competitors--only the managers of the firms themselves have that capability. Some firms in some industries have demonstrated how it can be done. Any federal government initiatives undertaken should seek to encourage auto industry firms to make the needed management changes to be world-class competitors rather than to merely protect them from competition and necessary change.

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Mr. Chairman, this concludes my prepared statement. I will be happy to try to respond to any questions that you or the task force may have.

RELATED GAO PRODUCTS

Japanese-Affiliated Automakers: Management Practices Related to Purchasing Parts (GAO/T-NSIAD-92-5, Nov. 14, 1991).

Management Practices: U.S. Companies Improve Performance Through Quality Efforts (GAO/NSIAD-91-190, May 2, 1991).

Commercialization of Technology by Japanese Companies (GAO/T-NSIAD-91-32, Apr. 30, 1991).

Foreign Investment: Aspects of the U.S.-Japan Relationship (GAO/NSIAD-90-203FS, July 31, 1990).

Foreign Direct Investment in the U.S. Automobile Industry (GAO/T-NSIAD-88-47, Sept. 22, 1988).

Foreign Investment: Growing Japanese Presence in the U.S. Auto Industry (GAO/NSIAD-88-111, Mar. 10, 1988).

International Trade: The U.S. Trade Deficit: Causes and Policy Options for Solutions (GAO/NSIAD-87, Apr. 28, 1987).

Industrial Policy: Japan's Flexible Approach (GAO/ID-82-32, June 23, 1982).

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