

Management Organization in the Japanese Automobile Industry

—Focus on Corporate Structure and Strategy—

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Abstract

Organizational management is a well established subject in the Japanese automobile industry and contributes to its very high quality vehicle production and overall excellence. The world is familiar with Toyota, Honda, Nissan, Mitsubishi, Subaru, Daihatsu, Fuso, Hino, Mazda, Lexus, and many more. The rapid rise of Japan's automobile production demonstrates that economic attitudes among producers rather than the government planners have taken solid root in this industry. As said, this industry possess a unique trust-based *keiretsu* conglomerate structure that gives producers both comparative and competitive advantages. The major car producers have crafted an industrial brand strategy in this country to compete in the global market which is rooted as much in human resources as it is in proper and perfect investments, trade, organizational structure, and management practices. Japan expanded the global auto market which was supported primarily by the *keiretsu* business structure and that made it possible to remain in global competition by keeping costs low and supply-chains guarded.

During the last several decades, the advancement in production and management systems has revolutionized Japan's automobile industry, which has witnessed the opening and growth of several emerging markets. However, this industry is now facing new and pressing challenges. There are significant uncertainties over the impact of COVID-19, the Russian-Ukrainian war, global shortage of semiconductors, and presence of lower profit margins for member-companies. Globalization, digitalization, and increasing competition in the market are exposing further challenges in this and related industries.

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Especially, Japanese automobile producing companies endeavored with the new innovative organization techniques of lean production, just-in-time, TQM, TPM, QC circles, etc. to create competitive advantages in both domestic and global markets. The purpose of this paper is to present an overview of the organizational management in this industry and highlight challenges that have faced it. Finally, it also gives a comprehensive overview of the organization management practices that historically impact productivity in this industry.

Keywords: Automobile industry, keiretsu, lean organization, Japanese, JIT, organization, management, productivity, TQM.

Section 1. Introduction

The automobile industry in Japan is one of the most prominent and largest industries. Japan became the first Asian country to build and export assembly plants to overseas, and then became the world's leading automaker. Currently, it ranks third in the global market of automobile products after China and the United States. According to the OICA (2021), the top three vehicles producing countries are China, the United States, and Japan. In 2022, China was the world's largest automobile producer with 27.02 million vehicles. The United States was the second-largest automaker and produced 10.06 million vehicles. Japan was the third-largest automobile producer with more than 7.83 million vehicles. The largest automobile producers in Japan include Toyota, Nissan, Suzuki, Mazda, and Honda (OICA, 2021). In the context of the increasing influence of globalization, Japanese automobile manufacturers began to give orders to the foreign parts suppliers because of lower production costs, improved quality, shorter lead times for key components, and reliable services (Shimokawa, 2012, 167). Since the 1960s, Japan has been in the top three of the countries with the most cars manufactured, surpassing Germany and the USA, and securing its position as the world leader in automobile production and technology.

Especially, Japanese automobile industry rose to prominence in the 1960s, with a more competitive and aggressive philosophy of organization management based on quality control principles. It rapidly increased throughout the 1970s to the 1990s and oriented products for both domestic and international markets. During the 1980s and 1990s, the Japanese automobile industry overtook the United States; the production was 13 million vehicles per year, which accounted for 28 percent of

the global market share (JAMA, 2022 website). In 2008, Toyota surpassed General Motors and became the world's largest vehicle manufacturer. However, in 2009 Japan lost its top position in total production, being surpassed by China. Japan was the third largest automobile producer in the world with an annual production of 9.9 million automobiles in 2012, and in 2021 its production was 7.84 million units, down 2.7 percent from 2020 due to COVID-19, in particular (JAMA, 2022 website). Furthermore, Japan's automobile sales dropped sharply, and it lost its position as the world's third-largest automobile market in 2022. India, on the other hand, surpassed Japan in terms of vehicle sales of 4.25 million units, whereas Japan sold 4.2 million vehicles in 2022 (Fortune India, April 13, 2023).

Within the backdrop of the above circumstances, this study uses representative data from automobile industries in Japan to provide a prelude to a comprehensive view of organization management practices and their impact on overall management in this industry. The paper is organized as follows. While Section 1 gives the general introduction; Section 2 presents a brief overview of the development of Japanese auto industry; Section 3 examines the characteristics of management organization in this industry; Section 4 evaluates the top management structure in this industry; and, Section 5 makes conclusive remarks about the research on the auto industry management organization in this paper.

Section 2. Development of the Japanese Auto Industry

The history of Japanese auto industry dates to the early 20th century when Japanese engineers built the first gasoline-powered car in 1907. During WW II, the industry was mainly involved in the production of military and industrial trucks and buses. In 1950 the Japanese automobile industry produced 31,597 vehicles, which was a little more than one day's output of the United States. Believing that such low volumes would perpetuate high costs and make it difficult to compete in the international markets, the Japanese Ministry of International Trade and Industry (MITI) adopted two major policies in October 1952, which aimed at introducing new technologies and improving production for passenger cars for competition in the export market. Especially, auto manufacturers started to apply efficient processes to minimize costs, select the right products that created added value, and adopted the lean system in the product value stream. Prices for Japanese-made vehicles dropped during the early 1950s and the early 1970s.

However, since the domestic market grew faster than supply, all companies made significant profits (Cusumano, 1988). During this time, a policy of rationalization encouraging the automobile, steel, machine tool, electric communications equipment industries, and other key industries was designed. The government emphasized the industries tax advantages and made low-interest government loans available to the automobile industrial sector. The cost reductions thus gained by the automobile industry led to the improvement in the quality of products resulting in export competitiveness (METI, website).

However, Japanese cars were not popular in the first few years in the international markets. Although Japan started to produce passenger cars much later than Europe and the United States, towards the end of the 1950s Japanese manufacturers started exporting their products to different countries. The guidance of MITI continued and the automobile industry started to flourish slowly but steadily. From the 1960s, the production and domestic market grew rapidly until the first oil shock of 1973, and from the late 1970s exports increased to about 1 million vehicles per year, especially to the United States (Shimokawa, 2012, 10). During the 1970s and 1980s, the production in the automobile industry grew significantly and Japan became the world-leading producer with 11 million cars, which was 3 million more than US competitors. Fuss and Waverman (1985) compared the Japanese automotive industry with that in the United States and Canada between 1970 and 1980 and found that the total factor productivity of the Japanese industry grew faster than that of those two countries. The Japanese growth rate reached 4.3 percent per annum, compared with 1.6 percent in the United States and 1.4 percent in Canada (Clark and Fujimoto, 1989). The competitive strength of Japanese companies was based on the price and quality of product, driven by flexible and cost-effective manufacturing (Abegglen and Stalk, 1985, 119). In 1980, Japanese automobile production accounted for 28 percent of the global market share (Anderson, 1982).

As automobile industries in Japan began to improve their technology to meet customer demand, several brands became internationally known for their quality and cheapness. Toyota, Honda, and Nissan are examples of these manufacturers. Table 1 shows the development and growth of the automobile industries in this country. The production first crossed the 1 million mark in 1963, having increased sharply from the very low levels of the early 1950s. Consequently, the 1973 oil crises increased the popularity of Japanese cars in the global market as the vehicles

developed had smaller engines and were fuel-efficient. After the oil crisis, it was observed that fuel-efficient cars were highly demanded. At this time, Japan was in a good position to grow and internationalize. It designed new vehicles based on fuel efficiency. Entering the global market helped it reaching more product segments. It rose steadily to a peak of over 11 million units in 1981 and then declined to 10.7 million units in 1982 (Cole, and Yakushiji, 1984).

Table 1: Development and Growth of the Automobile Industries in Japan

(unit: vehicles)

Year	Import		Production		Export		Sales in Domestic Market	
	Cars	Total	Cars	Total	Cars	Total	Cars	Total
1960	3,540	4,329	165,094	481,551	7,013	38,809	145,446	407,963
1965	12,881	13,348	696,176	1,875,614	100,716	194,168	586,881	1,661,826
1970	19,080	19,552	3,178,708	5,289,157	725,586	1,086,776	2,373,054	4,097,361
1975	45,480	46,145	4,567,854	6,941,591	1,827,286	2,677,612	2,728,601	4,309,016
1980	46,285	47,918	7,038,108	11,042,884	3,947,160	5,966,961	2,854,214	5,015,628
1985	52,549	53,475	7,646,816	12,271,095	4,426,762	6,730,472	3,104,066	5,556,878
1990	251,169	252,841	9,947,972	13,486,796	4,482,130	5,831,212	5,102,236	7,776,838
1995	401,836	404,695	7,610,533	10,195,536	2,896,216	3,790,809	4,443,906	6,865,034
2000	283,582	285,428	8,363,485	10,140,796	3,795,854	4,454,887	4,259,872	5,963,042
2005	282,654	284,734	9,016,735	10,799,659	4,363,168	5,053,061	4,748,409	5,852,067
2010	230,791	243,493	8,310,362	9,628,920	4,272,256	4,838,350	4,212,267	4,956,136
2011	203,800	275,644	7,158,525	8,398,705	3,929,904	4,464,413	3,524,788	4,210,219
2012	239,546	315,993	8,554,503	9,943,077	4,198,494	4,803,591	4,572,332	5,369,720
2013	278,846	346,133	8,189,323	9,630,181	4,065,519	4,674,633	4,562,282	5,375,513
2014	336,764	354,704	8,227,070	9,774,665	3,852,178	4,490,724	4,699,591	5,562,888
2015	320,295	336,988	7,830,722	9,278,321	3,970,003	4,578,078	4,215,889	5,046,510
2016	331,207	349,313	7,873,886	9,204,696	4,118,496	4,634,097	4,146,458	4,970,258
2017	336,950	357,713	8,347,836	9,690,674	4,218,429	4,705,848	4,386,377	5,234,165
2018	358,221	385,693	8,359,286	9,729,594	4,357,782	4,817,470	4,391,160	5,272,067
2019	335,766	361,675	8,328,756	9,684,294	4,372,645	4,818,132	4,301,091	5,195,216
2020	282,606	307,264	6,960,411	8,067,943	3,407,999	3,740,832	3,809,981	4,598,615
2021	306,820	339,565	6,619,202	7,846,915	3,367,590	3,818,910	3,675,698	4,448,340
2022	279,323	313,149	6,566,318	7,835,482	3,321,385	3,813,269	3,448,297	4,201,320

Source: *Nikkan Jidosha Shinbunsha*, several issues.

In 1980, the first year when Japan led the world in automobile output, Toyota made 3,200,000 vehicles and Nissan 2,600,000, whereas Ford of America made 1,900,000 and General Motors 4,700,000. No less than five of the world's top dozen motor vehicle producers in 1983 were Japanese companies and all of which appeared a decade or two after Japan began to make automobiles (JAMA, website). After the 1990s, during Japan's long recession period, the automobile industry continues to maintain its international competitiveness. This was due to Japanese automakers production approaches and development plans. For the past three decades, Toyota has manufactured 3 million units a year in Japan only. However, its overseas production has grown to 5 million units annually from 200,000 units in the 1980s. Honda, Nissan, Mitsubishi, Suzuki, Mazda, Subaru, and others are also major automobile producers in Japan. At present, the Japan automobile industry is well-known across the world for its innovative ideas, attractive designs, high quality, and latest technologies. Around six out of the top ten leading vehicle makers in the world are Japanese (JAMA, website).

Japanese vehicles are leading in every aspect of automobiles, may it be technology, sales, or production. Toyota was one of the earliest market leaders in the electric vehicle market, releasing the hybrid Prius in 1997 and other upgraded variants in the subsequent years. The Prius was technologically a unique hybrid with 1.5-litre gasoline engine and an electric motor, a combination managed by a power-split device. This car is very fuel efficient with 40 miles per gallon in the city and 51 miles per gallon on the highway. By January 2017, the company reported global cumulative sales of 6.1 million units, although the company appears to be focusing its new development strategies on hydrogen fuel. Honda was also an early champion of electric vehicles, producing the first EV Plus in 1997. But just as its rivals began to ramp up research and development of electric power trains, Honda began holding back and switched its efforts to hydrogen-fueled cars. The next-generation vehicles (NGV) in Japan are Electric Vehicles (EVs), Plug-in Hybrid Electric Vehicles (PHEVs), Hybrid Electric Vehicle (HEVs), Fuel-Cell Electric Vehicles (FCEVs), and others (Chowdhury, 2020, 42). Most Japanese car manufacturers are using these strategies. Nissan has its e-power, Honda e-HEV, and Subaru its e-boxer. Since the beginning of the 21st century, the Fourth Industrial Revolution has been contributing to the newest technologies like robots, AI, drones, internet of things (IoT), including 5G, and business applications of these technologies are also offering companies new ways to avoid disruption and respond

to unforeseen circumstances.

Toyota also deployed its hydrogen fuel cell powered MIRAI and in 2014, it introduced MIRAI to the market as the first commercial model FCEV. However, the demand for fuel-cell models of passenger cars remains low, with carmakers instead focusing on capturing a greater share of the rapidly growing EV market. Even with new technological advances, Toyota faces huge hurdles in marketing the MIRAI as an alternative to battery powered EVs but remains determined to forge ahead with its hydrogen fuel strategy. It is successful with its hybrid vehicle strategy and is keeping its options open by leveraging advanced technologies, including hydrogen. As the EV field heats up, Toyota is betting on hydrogen to remain competitive in the rapidly expanding zero-emission car market (Nippon, October 19, 2021). Nissan has done better than its domestic rivals, leading the group with one of the world's best-selling EVs in the Leaf. But that car will soon have spent a decade as Nissan's only global EV model, to be joined next year by the Ariya electric crossover SUV. So, by and large, Japanese automakers are still focusing on hybrids or even fuel cells rather than battery electric cars.

However, the current albeit moderate growth has been negatively affected by the COVID-19 pandemic, a sharp year-on-year decline in GDP and domestic demand, and a weakening of export markets. It was also affected by the restrictive measures at the beginning of the year 2022, weak external demand and rise in energy, materials, and commodity prices in the context of the Russian-Ukrainian war (OECD, 2022). Under these circumstances, the world has been changing quickly, and Japanese automobile companies have had to adapt to changes by focusing on significant progress. The automobile companies have continuously invested sizeable resources in alternative fuel technologies to reduce vehicle emissions (CO₂, NO_x) (Potter and Graham, 2018). The automobile makers worldwide have been under great pressure to invest in alternative fuel vehicles (Lee, *et.al.* 2018). The Japanese automobile companies have adapted rigorously to reducing carbon emissions in manufacturing processes.

In December 2020, the Japanese government announced the ban of gasoline-powered cars by 2030. This plan is not yet finalized and will allow for sales of conventional gas-powered hybrids. Japanese manufacturers seem to favor gasoline-electric hybrids over all-electric vehicles. The main reason lies with domestic suppliers or sub-contracting firms and their employees. One argument is that many customers worldwide still lack the infrastructure or demand for BEVs

despite endeavors in Europe and North America. The Japanese government shares the preference towards BEVs and the shift to full EVs could damage the domestic automobile parts industry since EVs require fewer parts than hybrid alternatives. Gasoline and hybrid vehicles are the most complex vehicles with up to over 30,000 parts that need to be built and maintained. Since automobiles consist of a wide range of materials and parts, the automobile manufacturer is unable to manage all manufacturing processes on its own. The parts are made by a vast number of parts suppliers, which ranges well over 10,000 (Abe, 1990). The majority of first-tier suppliers are large-scale businesses with over 1,000 employees. On the other hand, most of the second-tier suppliers who provide parts to the first-tier suppliers are typically medium and small sized businesses with 50 to 100 employees. Further, the third and fourth-tier suppliers who provide parts to them are very small-scale businesses with only 5 to 10 employees. The important role of parts suppliers and material suppliers is that all these businesses together support the competitiveness of the automobile industries sector (Abe, 1990).

The EV normally requires less than half components and parts of gasoline and hybrid vehicles. As is well-known, the Japanese car industry is based on hundreds of small parts manufacturers spread throughout the country. The automobile industry buys parts from these small enterprises and small family-owned businesses. It is directly and indirectly responsible for the income of all Japanese and foreign workers in the parts manufacturing industry in this nation. Although Toyota's statement in December 2021 to accelerate the shift towards BEVs attracted much attention, the whole industry remains prudent towards an all-electric centered product lineup.

Section 3. Characteristics of Management Organization in the Japanese Auto Industry

The Japanese automobile industries sector has experienced unprecedented growth throughout its history through changing technologies, introducing new business models, inventing production tools and techniques, changing buying behaviors, relocating production bases, and transforming marketing strategies. The member-manufacturers in this industry have adopted strict control about quality, production cost, on-time delivery, and technology through Japanese style management. There exists a historical long-term inter-company business relations

represented by business groups and *keiretsu* affiliations. In this section, we will examine two different organizational mechanisms prevailing in this sector, which are characterized by *keiretsu* and *shitauke* and lean organization.

Keiretsu and shitauke structure

Keiretsu is an interconnected network of companies characterized by strong alliances and cross-shareholding that originated in Japan and dominated its economy during the last half of the 20th century, particularly after World War II (Figure 1). The Japanese automobile industry is popularly known for its efficiency in the organization of the parts and components supply system (Pegels, 1983). The *keiretsu* system, characterized by long-term relationships between manufacturers and suppliers from the same business group has been widely adopted by Japanese automobile manufacturers and credited for their success. *Keiretsu*'s structure could be in both horizontal and vertical directions (Figure 1). A horizontal or inter-market *keiretsu* includes conglomerates in different or related industries. A vertical *keiretsu* includes a vertically integrated conglomerate that operates in the same industry. The horizontal model sees banks and trading companies at the top with significant control over each company's part of the *keiretsu*. Shareholders replaced families that controlled the keiretsu cartel as Japanese law allowed for holding companies to become stockholding companies. Around 70 percent of the parts and components manufacturing is outsourced to keiretsu parts suppliers.

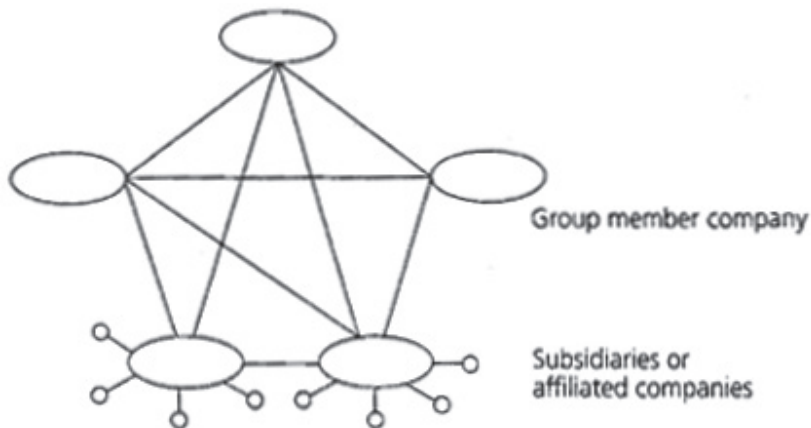


Figure 1: Keiretsu Formation

Source: Hattori, 1989 (taken here from Chowdhury, 2019, 73).

An important Japanese success factor in the competitive environment has been the ability of assemblers to sustain close and long-term relationships with their suppliers. Started in the above way, the *keiretsu* structure still exists in the 21st century and has undergone innumerable changes since its formation.

In 1939 Toyota organized its first-tier suppliers into an official association and refused to deal directly with second and third tier suppliers. This approach was supported by the Japanese government and was robustly imitated by other automobile industry member companies (Wada 1992). Toyota is well known for its *keiretsu* group (Figure 2) and depends on its suppliers and manufacturers to supply parts and raw materials. Toyota plays the role of the anchor company, and it is possible that other smaller firms may not exist without Toyota. Increasingly automotive companies are seeking new ways of managing their supply chains that offer greater flexibility and transparency. Yamashina (1995) argues that Japanese automotive companies have adopted *keiretsu* systems that help them to improve their manufacturing performance, like total productivity maintenance and total employee participation. As an example, Denso Corporation, a global Japanese automotive components manufacturer, adopted this system in the 1960s to enhance its manufacturing performance and to create an advantage over its competitors (Sharma and Shudhanshu, 2012).

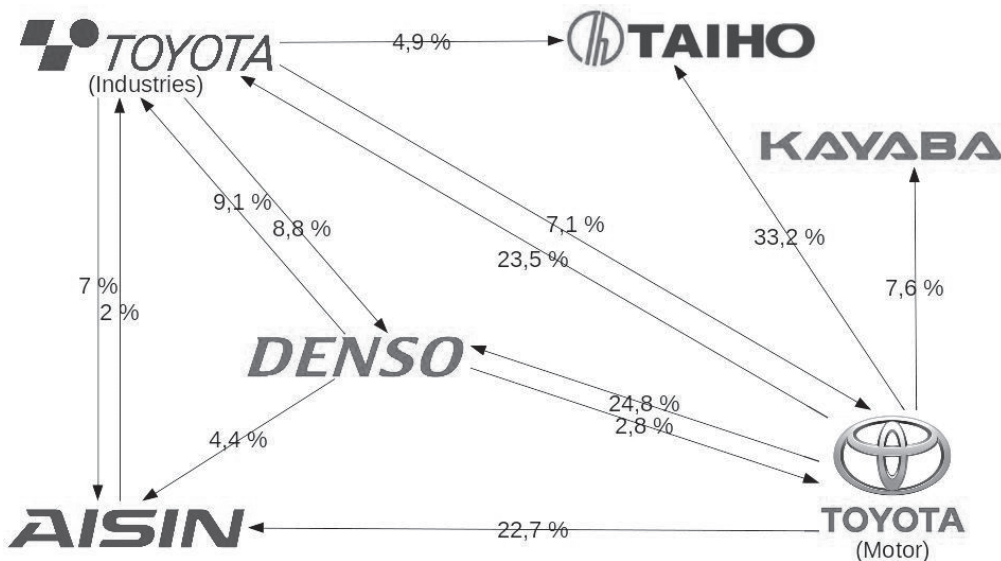


Figure 2: Keiretsu System in Toyota Group

Source: Corporate Finance Institute (2020)

The first meeting of the Toyota Kyohokai, Subcontractors' Round Table Conference was held at Tokyo's Kuramae Industrial Hall in November 1939. The *Kyohokai*, (supplier association) an organization of parts suppliers which had started during the war, in 1943 (Toyota website). These Kyohokai or suppliers' association memberships are broader than *keiretsu* groupings. Toyota and Nissan, have Kyohokai, in their respective associations. Toyota's Kyohokai had three purposes: (1) information exchange between member companies and Toyota, (2) mutual development and training among member companies, and (3) socializing events. In addition, Toyota has created three separate regional associations, those are: Tokai kyohokai (150 members), Kanto kyohokai (65 members) and Kansai kyohokai (29 members). Toyota believes that suppliers must be in close geographic proximity to achieve the association's objectives (Toyota website). Kyohokai contribute to Toyota, to create ever-better cars and development of local communities, as well as to achieve steady and sustainable development for future.

There were other association like *Seihokai* cooperative enterprises apart from parts manufacturers that also formed cooperative associations similar to the *Kyohokai*. The *Seihokai*—an association of companies that manufacture molds, gauges, jigs and other equipment—was established in 1962 and the *Eihokai*—an association of companies in areas including public works, construction, and plant and equipment—was formed in 1962. In 1983, the *Seihokai* and *Eihokai* were combined to form a new *Eihokai* (Toyota website).

Since the collapse of the bubble in 1990, the Japanese economy entered a period of stagnation called the “lost decade” and *keiretsu* relationships have undergone significant changes. They ceased to function as effectively as they once did due to rapid globalization, digitalization of the world economy, and gradual deregulation of the Japanese economy. With sales and profits falling, some automakers went in search of capital, opening themselves to investment by foreign companies such as Renault, Ford, and Daimler—which pushed for further cost-cutting. In 1999 Renault became Nissan's major shareholder, and a Renault leader, Carlos Ghosn, became the Japanese company's chief operating officer (COO). He soon launched the Nissan Revival Plan, aimed at reducing costs by 20 percent over a period of three years. Ghosn even told the press that Nissan's *keiretsu* had not functioned well, and it later sold its holdings in most supplier companies. According to Aoki and Thomas (2013), Japan's supplier relationships appeared to be drifting steadily toward the Western model.

Moreover, supply chain software and online procurement systems, enabled companies to automate away some of the hands-on and face-to-face communication and monitoring tasks that under the *keiretsu* system had bound customer to supplier. Moreover, the globally conspicuous success of the Japanese “lean production” paradigm, comprising of just-in-time, continuous improvement, total quality management, and tight supply chain coordination, itself factored in the vertical keiretsu decline. For decades, Japan’s competitors have been absorbing the lessons of that model, such that Japanese-style operations management have become the global standard and afforded the Japanese system few advantages than in the past. Moreover, the Japanese yen appreciated from 120 yen per US dollar in 2006 to 76 yen in 2011 making cars produced in Japan more expensive in the global markets (Matous and Todo, 2015). Exchange rate fluctuations, labor and transportation costs, and local content rules together drove Japanese manufacturers to move production abroad and in so doing there appeared a drop in domestic keiretsu suppliers for newly found foreign bases. Manufacturers like Toyota experienced that they could transfer their home-grown *keiretsu* capabilities in cultivating high-trust and long-term partnerships with foreign suppliers (Matous and Todo, 2015).

According to the *Financier Worldwide Magazine* (2021), the automotive sector faced significant challenges including issues such as changes in technology, the form of digital transformation, electrification, and the development of self-driving vehicles, customer habits, and international trade relations. Due to international affairs, there were significant uncertainties over the impact of COVID-19 and the Russian-Ukrainian war on a global shortage of semiconductors even at the cost of lower profit margins for producers. The war in Ukraine encompassing weaker growth, stronger inflation, and potentially long-lasting damage to supply chains due to COVID-19, a collapse in demand for new vehicles was being experienced worldwide (Khondaker and Chowdhury, 2022, 13). The automobile industries sector has not only been struggling to rebuild inventories but has faced a variety of challenges, including the dramatic weakening of the yen against the dollar, increase in the cost of raw material imports that hurting the retailers and households. In 2023, the yen surpassed 150 level, its lowest point in 32 years, representing a loss of some 23 percent of its value against the dollar (Japan Times, 2022, October 21). Japan’s trade deficit widened in October, as the country’s import bill continued to rocket upward, fueled by a historic slide in the yen that has already helped push

the economy back into reverse. The trade gap grew to ¥2.16 trillion (\$15.5 billion) from ¥2.09 trillion (Japan Times, 2022, November 17). Under these circumstances, due in part to soaring commodity prices and yen depreciation, the *keiretsu* relationship at both home and abroad was highly impacted.

As mentioned above, the automobile industry depends heavily on suppliers, which provide it with raw materials, parts, accessories, and other products (Khondaker and Chowdhury, 2022,14). Japan is a country that depends largely on Asian countries, and especially Chinese suppliers, and thus it is easily affected when something happens in that country (Nippon Express, 2020, May 7). Automotive manufacturers have moved to just-in-time (JIT) or lean operations that contain costs and improve supply chain operations. Consequent delays in delivery might impact the market at multiple levels from postponed new car model launches, shattered supply chains, financially drained *keiretsu* groups, and dampened vehicle markets. The effects may spill over with unfulfilled order deliveries due to the slowdown of production (Khondaker and Chowdhury, 2022,18). Under these circumstances, the Japanese METI has been trying for several years to reduce the country's dependence on China and the need has been much accentuated during the corona time. The automobile companies and their *keiretsu* suppliers need to adapt to the markets and to consumer demands. There is a need to further pursue their strategies of developing better power engines which is causing them to lag in the field of self-driving and other digital driving technologies (Khondaker and Chowdhury, 2022,18). This will demand further restructuring of *keiretsu* and major producers' relationship to accommodate their respective needs and challenges.

Section 4. Top Management Structure in the Japanese Automobile Industry

Every organization needs a vision and a set of goals and implements those in practical management. The Japanese management practices make use of the general management practices such as long-term planning, well organized structures, and control systems. It is well known that many of the manufacturing practices in Japan which has emphasized bottom-up decision processes characterized by teams, empowerment of multi-skilled workers on the shopfloor, and demand-pull and horizontal decision-making mechanisms. The top management and labor productivity in this automobile industry had a positive correlation between efficient labor management and increasing labor productivity.

Toyota strongly focused on employee engagement and even strained relationships between employees, union, and management in the big three, namely Ford, GM, and Chrysler enterprises (Richardson and Richardson, 2017, 202). In this company, the entire leadership process is decentralized and the role of the board of directors is overlapping; and it follows a top-down leadership process (Jeffrey and Gary, 2012). According to a study by Lieberman *et al.* (1990) on the top management and labor productivity in three Japanese automobile companies during the early 1950s and the 1980s, there was a positive correlation between efficient labor management and increasing labor productivity. Indeed, Japanese work organizations were characterized as team working. Working as a team at the shopfloors in factories in this country was not artificially designed; it was indeed the United States aggregation of the daily work patterns in which both management and workers tried to achieve a good work performance. The Japanese team work was not a form of organization designed apart from the workplace, rather the work practices were adopted by management and workers through their experiences in the workplace.

Drucker in the early 1970s paid attention to specific features of Japanese-style human resources management as well as its aspects which could serve as a model to follow for managers and economic strategists in other countries. He emphasized such elements of Japanese management as employment stability, effective system of employee's motivation, efficient process of decision making, constant qualifications improvement, as well as flexibility of labor costs (Drucker 1971). According to McKinsey (2018) Japanese companies are "middle-up" rather than top-down. Many senior leaders of traditional Japanese corporations hold their positions in recognition of their past contributions and their ability to navigate disparate divisions of the organization through long rotation programs. Pressure from shareholders is lower; many companies still do not have independent boards that represent them. A culture of harmony values coordination and smooth collaboration rather than standing out or pushing unilateral initiatives. This culture makes it less likely that change leaders will emerge and assert themselves by taking risks and role-modeling new ways of working (McKinsey, 2018).

Table 2 shows that Japanese management differs sharply with that of the Western counterparts in the main areas of their philosophy, processes, people relations, and problem-solving techniques. Japanese managerial style and decision making in large companies emphasizes the flow of information and initiative

from the bottom up, making top management a facilitator rather than the source of authority, while middle management remains as adjunct to top management and facilitate making of policy. Consensus is stressed as a way of arriving at decisions, and close attention is paid to workers' well-being. Rather than serving as an important decision maker, the high-ranking officer of a company has the responsibility of maintaining harmony so that employees can work together. A Japanese chief executive officer is a consensus builder.

Table 2: Western leadership compared to Toyota leadership

Western leadership	Toyota leadership
Quick results	Patient
Proud and conquering hero	Humble and learning
Climb ladder rapidly	Learn deeply and horizontally and gradually work the way up the ladder
Results at all costs	The right process will lead to right results
Manage by the numbers	Deeply understand the process at the <i>gemba</i>
Accomplish objectives through people	Develop people to work effectively in teams to solve problems
Overcome barriers	Take time to deeply understand problem and root cause before acting
Manage by numbers and graphs	Deeply understand the process by go and see what happens in the first place (<i>genchi genbutsu</i>)

Source: Jeffrey and Gary, 2012, 232.

The post-bubble economic circumstances in Japan with few growth prospects have been particularly difficult for Japanese manufacturers who are still constrained by the traditional long-term employment practice and various *keiretsu* relationships. These business practices often prevent firms from restructuring by adopting flexible and timely decisions on employment and suppliers. The stable and unchanging workforce and suppliers, who are particularly helpful when firms face growing product demand, often become a burden during a stagnant economy (Nakamura, 1993). Such an unchanging corporate environment creates undesirable behavior such as complacency among workers, managers, and suppliers alike. These practices include Just-in-Time (JIT) and quality management practices such as total quality management (TQM). Pioneered in Japan and popularized by Toyota in the 1970s, the JIT method aims to avoid excess inventory by ordering products

and raw materials only when needed to minimize costs and maximize efficiency. The JIT concepts aims to produce and deliver the right parts, in the right amount, at the right time using the minimum necessary resources. This system reduces inventory and strives to prevent both early and over production.

Another important aspect of the Toyota Production System (TPS) was established based on two concepts: “*jidoka*” (which can be loosely translated as “automation with a human touch”) as when a problem occurs, the equipment stops immediately, preventing defective products from being produced; and “Just-in-Time”, in which each process produces only what is needed for the next process in a continuous flow. The Japanese management practice on the other hand addresses all the aspects of management comprehensively and this has been seen in the success of Toyota. It uses JIT, TQC, *Kaizen*, and the Quality Control Circles (QCC) among others to achieve efficiency in its production processes. Just like the human relations approach, the Japanese management practices are anchored on strong human resource policies. They, therefore, advocate for long life employment practices and well-defined career paths that are based on seniority (Chowdhury, 2019).

These best practices have been gradually filtered out of the broader set of Japanese management practices and have been renamed in culturally neutral ways. The best example of this appropriation mechanism was the creation of the English term “lean management”, which described the management and production practices employed in factories of Toyota and other Japanese automakers. A side effect of this process was a split in the debate on Japanese management into the practices of the organization of production (called work practices) and human resource management practices (called HRM practices). The former included job rotation, group work arrangements, employee suggestion schemes and quality circles, while the latter consisted of selective hiring, intensive training, labor relations, and egalitarian pay schemes. This new stream of academic literature focusing on production practices was called High Performance Working Practices or High Involvement Working Practices and its main objective was to confirm the correlation between the work practices and the company’s financial performance (Olejniczak, 2013, 34).

While these practices continue to be useful and effective under appropriate circumstances, the drastic appreciation of the Japanese yen that has taken place since the 1980s and the prolonged recession following the burst of the bubble have

forced many Japanese manufacturers to adopt new methods to improve their production efficiency (Aoki, 1988). Many of the recent adoptions of TPM (Total Productivity Maintenance) by Japanese manufacturers clearly reflect the firms' desires to shake up their organizations so that such undesirable behavior which prevails in their organization units can be destroyed.

In the 1990s, after the collapse of the bubble economy, however, the Japanese-style management was described as somewhat inefficient. While the environment surrounding Japanese companies has changed due to the growing globalization of business operations and relevant legal and accounting system reforms, the economic slowdown in the 1990s has forced companies to reduce their recruitment of new graduates, raising the average age of employees, and increasing overall personnel costs. The decline in the competitiveness of Japanese companies in the last thirty years demonstrates a need for changes in their management strategies (Keizer *et al.* 2012). This has prompted many companies to eliminate a seniority-based automatic wage increment and introduce performance-based wages, leading to changes in the employment system (Cabinet Office, website).

In the early 2000s, performance management in Japanese automobile industries had increasingly focused on individual performance by using incentives like promotion, compensation, and decreasing the dependency on seniority, which has caused a significant transformation from an institutionalized seniority system towards a performance orientation system (Pudelko and Mendenhall, 2007). Japanese manufacturing companies have also increasingly concentrated on customer interaction, i.e., engaging customers in the quality improvement process. According to Nobeoka *et al.* (2002), the performance of Japanese automobile companies improves when strong ties are built with their customers and customer-oriented strategies are adopted.

The comprehensive management practices that cover all aspects of the organization has been the driving force to success in the country's manufacturing industry, which has seen Toyota growing rapidly to become the world leading automobile maker. Although Western management practices are also very important, they are disjointed and only address specific areas of management. This makes them somewhat inappropriate for global management challenges.

The coronavirus pandemic is changing many aspects of the ways in which Japan works. Like most countries, Japan has struggled to contain the spread of COVID-19. Several waves of the virus prompted emergency measures that

restricted public activities. In 2020, the global labor market was forced to undergo dramatic changes. COVID-19 will make big impacts in corporate managements and companies have no experience in dealing with pandemics like it before. According to Nomura Research Institute (2020), personnel management systems must be changed to adopt to new circumstances. Until now, work attendance was managed, and performance appraised in a physical office environment where employees' work can be verified on site. To shift telework efforts into high gear with online communication as the norm, plans must be made for reforming attendance management, performance appraisal, and other elements of personnel management systems as well. However, it is a fact that Japanese companies have survived the crisis so far by taking advantage of the characteristics of Japanese style management. Another change in the work environment has been working from home. This new working style rapidly spread after the declaration of a state of emergency in April 2020, amid the novel coronavirus crisis. Some types of job may not be suited to working from home. From recent experiences, however, even those who engage in jobs that have been unfit for remote work, found it easier than expected to work from home.

The authors believe that acquiring knowledge from the lessons learned from success and failure will be a great guideline for future management. Many Japanese companies still rely on practices and processes learned through apprenticeship, over years of collaborative work, rather than through structured corporate capability-building programs. Role descriptions are often vague, and responsibilities are shared among many employees; as a result, accountability is diluted. Changing this unwritten way of working, established at companies where many employees have spent years working together, is harder than changing a well-articulated, periodically refreshed business process. To drive change, leaders need to be more specific about what is expected from whom.

Section 5. Conclusion and Remarks

According to Japan Automobile Manufacturers Association (JAMA), Japan is always in the top three countries with the highest number of motor vehicles produced including cars, trucks, and buses. The fundamentals of Japanese Management are sound and more than worthy of implementation and study. But the system of *keiretsu* appears to be unsustainable in the long term, given

the present growth in the Japanese and international marketplace. While it is true that there is strength in numbers, as proven by the success of *mochiai* (the authors expand the meaning as used), the *keiretsu's* inbreeding of the system inevitably fails to adapt to cultural and environmental challenges. Ironically, the *keiretsu's* system of trusting other related companies may be a less effective system than the cut-throat truth, which the open market provides. The *keiretsu* organization provides trust and requires trust. But trust is not always the truth. Japan's culture, especially the younger generation, is adapting to those changes. As lifetime employment becomes ever more difficult to achieve, individuals find themselves fending for themselves. The *keiretsu* system also involved rethinking the boundaries of the firm, in particular its relationship with its suppliers. The classic form of Japanese supply-chain management, again pioneered by Toyota Corporation, works in a different way. The suppliers can be formally separate companies, or they can be members of the same *keiretsu*. The suppliers provide the goods, parts, etc. "just in time", in return for long-term relationships with the main manufacturers. Companies make these relationships concrete by sending mid-career managers to high-level positions in supplier companies or other members of the *keiretsu*. This means all parts of the supply chain can pool resources and share information--thus once again cutting down on *muda*, *muri*, and *mura* in all aspects of management. The lean system will have to adapt to outside forces to provide the required checks and balances as any healthy management system requires. In that process, it needs solid collaboration and cooperation from all its organizational and managerial sub-systems.

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