

MITI or Other Factors? A Post-War Japanese Camera Industry Historiography

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Until after World War II, Germany dominated the camera industry. Even though most major Japanese camera companies were founded during the pre-war era, the Japanese camera industry did not overtake Germany in production and export until the 1960s.¹ This essay will assess various factors attributed to the impressive growth of the Japanese camera production industry following World War II, as they relate to political scientist Chalmers Johnson's theory on the influence of the Ministry of International Trade and Industry (MITI) on the success of the Japanese economy after World War II. Considering the scholarship surrounding the growth of the Japanese camera firms, factors beyond the government involvement through MITI help explain Japan's dominance in the global market in the camera industry. This industry domination includes benefits from state-mandated military assistance, a window of opportunity in the camera market, and technological advancements.

Johnson's analysis in *MITI and the Japanese Miracle* serves as the baseline for the case study that is the Japanese camera industry's post-war growth. In his book, Johnson argues why MITI was the driving force for the Japanese Miracle, a period of historic growth for the Japanese economy from the 1950s to the 1970s. First, he notes that the Japanese state, because it was late industrialization, its economy had to take on "developmental functions" instead of regulatory ones.² Johnson claims that "for more than 50 years the Japanese state has given its first priority to economic development."³ In particular, MITI put into place numerous policies prioritizing Japanese enterprise. For example, one developmental policy set in place by MITI prohibited non-

¹ Donzé, Pierre-Yves, "Canon Catching up with Germany: The Mass Production of 'Japanese Leica' Cameras (1933 until 1970)," *Zeitschrift Für Unternehmensgeschichte / Journal of Business History* 59, no. 1 (2014): 27.

² Johnson, Chalmers, *MITI and the Japanese Miracle* (Stanford University Press, 1982), 19.

³ Johnson, *MITI*, 306.

Japanese citizens from owning more than 50% of a joint venture.⁴ This protected Japanese industries and firms from foreign investment and competition, ultimately serving to prop up the Japanese economy.

The Special Measures Law also provides an excellent illustration of the ideology of MITI and the might that the Ministry wielded. According to Johnson, MITI identified a problem: “too many protected enterprises in too many small factories engaged in too vigorous and economically unproductive competition.”⁵ MITI wanted to “set investment rates, promote mergers, discourage new firms from entering given industries, and in general try to build an industrial structure on a par with those of the United States and West Germany, the two prime external reference economies.”⁶ The Special Measures Law, if passed, would have signified Japan swerving away from liberalism against the wishes of Western powers like the United States and Great Britain, who were demanding Japan instead shift towards a more laissez-faire economic system.

Although the law did not pass, MITI nevertheless enacted some of its key tenets through administrative guidance, or “advice” outside of the legal framework. Johnson explains that administrative guidance can come in the form of directives, requests, warnings, suggestions, or encouragements from the government to industries or businesses.⁷ Johnson provides an example of administrative guidance: “On January 29, 1965, the discussion group for petrochemicals decided that new ethylene-producing facilities for fiscal 1965 and 1966 should be limited to 350,000 tons, and that firms already established in the industry should be the only ones to develop such facilities.”⁸ This is a classic instance of MITI's power over industries in Japan. The Ministry

⁴ Johnson, *MITI*, 245.

⁵ Johnson, *MITI*, 255.

⁶ Johnson, *MITI*, 256.

⁷ Johnson, *MITI*, 265.

⁸ Johnson, *MITI*, 267.

decided on a policy that they believed would be beneficial and enforced their will through their vast influence. They also promoted mergers of companies in the automobile, petrochemical, and alloy steel industries.⁹ Johnson describes a Japanese economy thriving as a direct result of MITI's principles. However, after carefully examining the camera industry as a specific case study and including the perspectives of other scholars, they complicate his broad analysis.

Pierre Yves Donzé uses Canon as a case study for the success of Japanese camera companies after World War II, noting that Canon should be viewed as a representative of the Big Five Japanese camera makers: Canon, Minolta, Nikon, Olympus, and Pentax.¹⁰ Prior to and during World War II, Canon was simply trying to replicate the Leica, a leading camera maker based in Germany.¹¹ During the war, the Japanese state required Canon to work for the military.¹² Based on Donzé's article, one can presume that Canon worked for the military in a production role; however, the article is not explicit about the company's role. As Donzé explains, the company's involvement in the war and with the Japanese military turned out to be incredibly beneficial because of the growth of specialized knowledge for Canon during the war.

After the war, business boomed for Canon, but Donzé does not credit MITI for this success. Instead, Donzé highlights the importance of an influx of "production engineers" from "Nikon, the Army and Navy arsenals, and engineering faculties."¹³ In particular, the ex-military personnel at Canon provided the company with knowledge of "mass production techniques."¹⁴ Susukawa Hiroshi, first an engineer who produced torpedoes, ended up working for Canon designing cameras specifically amenable to mass production.¹⁵ His expertise, was a critical advantage for Canon when

⁹ Johnson, *MITI*, 268

¹⁰ Donzé, "Japanese Leica," 29.

¹¹ Donzé, "Japanese Leica," 33.

¹² Donzé, "Japanese Leica," 45.

¹³ Donzé, "Japanese Leica," 36.

¹⁴ Donzé, "Japanese Leica," 37.

¹⁵ Donzé, "Japanese Leica," 38.

he switched careers. Working in the armaments industry turned out to be a training ground for Canon, as they took what they learned and applied it with great success to their business after the war. Donzé also stressed the importance of mass production. The Japanese cameras were designed to have high-quality, interchangeable parts, which favors mass production, and aided Canon's rise globally.

In their article "Innovation and recurring shifts in industrial leadership: Three phases of change and persistence in the camera industry," Hyo Kang and Jaeyong Song credit two windows of opportunity for Japan's eventual dominance in the camera industry. The windows that the Japanese camera firms capitalized on: technology and demand. German companies produced rangefinder cameras, which were limited technologically because they contained two lenses. The first lens captured the image, and the second lens created the image that the photographer sees when users looked through the viewfinder. This introduces what is known as the parallax problem. In other words, the image photographers are creating is very similar, but not identical, to the image being seen through the viewfinder. Japanese firms solved this issue with the development and perfection of the single-lens reflex (SLR) camera, thus eliminating the parallax problem.¹⁶ This technological innovation and new product is partially what Kang and Song attribute the Japanese camera industry's rise to.

The second window of opportunity is what Kang and Song describe as "policy and institutions."¹⁷ They note that during World War II, German optical engineers visited Japan.¹⁸ They write, "Nikon acquired most of its early technologies for optical products with the help of German firms before the war, and this technological aid was further accelerated during World War

¹⁶ Hyo Kang and Jaeyong Song, "Innovation and Recurring Shifts in Industrial Leadership: Three Phases of Change and Persistence in The Camera Industry," *Research Policy* 46, no. 2. (2017): 376-387, 379.

¹⁷ Kang and Song, "Innovation," 379.

¹⁸ Kang and Song, "Innovation," 379.

II when Nikon began producing optical instruments for military use.” The authors agree with Donzé’s analysis that Canon and Nikon’s mobilization for the war prepared the companies for success afterwards.¹⁹ They also note that during the Korean War, many American journalists who were covering the war used Nikon cameras.²⁰ This became an advertising opportunity, and word spread about Nikon’s excellence. It also further cracked open the door to the vast market in the United States. The Korean War aspect of the development of the Japanese camera industry is a unique factor because it is so close geographically. Other nations did not have the opportunity to benefit from this geographical proximity.

It’s important to note that Song and Kang do not fully disagree with Johnson’s analysis. They recognize the Japanese state’s active involvement in the camera industry’s success after the war. They write, “Japan strongly protected its camera industry by imposing a duty on imported optical products. The import duty for camera products was 50% from 1911 until World War II; it was even temporarily increased to 100% in 1924–1925.”²¹ They also note that camera imports were restricted and even banned in the case of “luxury cameras.”²²

Paul Windrum, Michelle Haynes, and Peter Thompson focus on a new technological innovation caused by the vertically integrated Japanese firms in their article “‘Breaking the mirror’: interface innovation and market capture by Japanese professional camera firms, 1955–1974.” They argue that the new automatic exposure (AE) feature gave Japanese firms a critical advantage over their competitors. AE automates exposure information that previously calculated in SLR cameras. Windrum, Haynes, and Thompson write, “The introduction of simple mechanical AE on SLR cameras did not involve, or require, a radical change in product architecture. Furthermore, the

¹⁹ Kang and Song, “Innovation,” 379.

²⁰ Kang and Song, “Innovation,” 379.

²¹ Kang and Song, “Innovation,” 379.

²² Kang and Song, “Innovation,” 379.

degree of product modularity did not change notably.”²³ The modularity and simplicity were important because the lenses remained interchangeable, and the cameras could easily be switched back to manual mode. AE mode attracted photographers because it increases efficiency and exposure accuracy. The authors believe this innovation was possible because “integrated Japanese firms were willing, and able, to invest in the R&D required for AE, European lens and body specialists failed to coordinate a response.”²⁴ The scholars provide insight into how the structure of companies impacts technological innovations, offering a unique perspective to the broader question.

These three articles outline a diverse set of arguments that explain the post-World War II rise of the Big Five Japanese camera companies, crediting technological innovation, windows of opportunity, and wartime brain gain. Notably, there is not much mentioned by these authors of the ceaseless influence of MITI as a factor for the industry's rapid and sustained growth. The scholars do not align themselves completely with Johnson, therefore raising some interesting questions regarding potential oversights or generalizations in historical debates. Would case studies of other industries reveal similar variations within their scholarship? Does Johnson's analysis of the Japanese Miracle only function when looking at it from a broader perspective? Further research into MITI's involvement specifically with the camera and optics industry may be required in order to achieve a more complete, thorough understanding of the Japanese post-war economy.

²³ Paul Windrum, Michelle Haynes, and Peter Thompson, “‘Breaking the mirror’: interface innovation and market capture by Japanese professional camera firms, 1955–1974,” *Industrial and Corporate Change* 28, no. 5 (October 2019), pp: 1029–1056, 1034.

²⁴ Windrum, Haynes, and Thompson “Breaking the mirror,” 1034.