

A Business History of Soy

Japan's Modernization and the Rise of Soy as a Global Commodity

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Japan began importing Manchurian soy in the 19th century, and the Japanese government, colonial institutions, and big business invested heavily in the development of the soy-industry and the global trade of soy bean, meal, and oil. These actors established large-scale, capital-intensive, mechanical-industrial mass-production and mass-distribution structures for soy products *before* the Japanese diet demanded such products. Instead, the soy-industry needed to pour significant efforts into research and development, expanding the versatility of soy in order to find new markets for the mass-sale of their mass-produced soy oil and meal. The same actors, along with the US government and American soy interests, were also behind the public relations campaigns that disseminated the practices of deep-frying and oil-rich cooking at home and in restaurants in post-WWII Japan, and propagated the “Westernization” of the Japanese diet to build domestic demand for oils/fats and animal products. This contradicts a common belief about food and agriculture, according to which economies import more grain and oilseeds when local consumers demand more oils/fats and animal products due to economic development and increasing incomes.

This book demonstrated how the soy-industry developed to include industrial large-scale agriculture to produce soy as a raw material and global commodity; grain traders (*sogo-shosha* in the case of Japan) to trade the oilseeds; first-stage food-processing industries to crush the soy into oil and meal; second-stage food-processing, feed, and livestock industries, as well as oleochemical and protein manufacturing, to produce a wide range of processed foods and non-food products; and mass-distribution by the supermarket, convenience store, and restaurant industries. The overview of its development and the related arguments are outlined in the Table C.1. In this way, the soy-industry provides much of the foundation of the “industrial mass diet” (Winson 2013), while also comprising a significant part of the “capitalist food system” (Holt-Giménez 2017).

The transformation of soy through mass-production and mass-distribution by “visible hands”

Soy was transformed into a versatile global commodity when modern big business began mass-production and mass-distribution of soy products. When the Japanese companies began the capitalist mode of production and established large-scale production capacity of mechanical-industry, it continuously required large-scale markets to sell its products to realize the value of its investment. The Japanese oil companies put enormous effort, over many decades, into increasing the usage of soy and soy products. In other words, soy was not intrinsically “versatile and cheap” (Prodöhl 2013), nor was it a miraculous or “magic bean” (Roth 2018) from the start; it was *made* versatile and cheap, and whatever magic or power soy may have has been the result of the power of capital.

After establishing themselves as a soy-meal-manufacturing industry and then losing the export markets for oil in the West, the Japanese soy-crushing companies set about creating domestic markets for soy oil and soy meal. They made huge capital investments in cutting-edge facilities and oleochemical technologies to expand the versatility of soy. They continued their research and development, production, and even some investment in new facilities during the wars under the control of the state and military. After WWII, when defeated Japan came under US hegemony, the Japanese oil companies collaborated with the governments of Japan and the United States to develop the markets for edible oils.

In Figure C.1, I depicted how the mass-production structure of modern big business requires large volumes of raw materials, thus impacting agricultural production; and how it requires more markets and mass-sales of its products, thus impacting consumers’ diet.

In the case of the soy-industry with modernizing Japan, the key of this structure, I argue, was the shift of soy-crushing into the capitalist mode of production, which saw the mechanization of the industry for the mass-processing of soy at large-scale factories in the port districts, built with large capital investment in both machinery and technology. To utilize their production capacity, these factories needed a large volume of raw materials, which they supplied with imported soy, first from Manchuria, then from the United States, and later from Latin America. In order to meet the increased demand for raw materials from the processing industries, oil crop agriculture also became a large-scale industry and began mass-producing soy as cash crop and a global commodity, rather than as food for people. This process has been discussed as the capitalist appropriation of agriculture in previous research.

Table C.1 Overview of the soy-industry development and the related arguments in Chapters 2–5

	<i>Ch. 2 Japan's modernization and imperial expansion (19th C to WWI)</i>	<i>Ch. 3 Post-WWI recession and Japan's continued militarization and expansion in Asia (interwar period)</i>	<i>Ch. 4 The shift to edible oil and US soy after WWII (1940s–1950s)</i>	<i>Ch. 5 Increasing Japan's edible oil consumption (mid-1950s–1970s)</i>
Main theme	Development of Manchurian soy-industry and export of soy products (bean, meal, oil), as part of Japan's state-building project	Expanding soy's versatility in multiple markets for business survival and as a colonial strategy	Shift of resources from Asian oil crops to US soy Shift of markets from military supplies to food products	The supply side works to create increasing demand for soy oil and soy meal
Products and markets	Beginning of mass-production of soy meal and soy oil by capital-intensive mechanical-industry Meal: fertilizer for cash crops (to accumulate foreign capital) Oil: export commodity to Europe and the US	Soy (bean, oil, meal) and hardened soy oil become raw materials for industrial and military manufacturing: soy-based glue, plastic, paint, etc.; also a few food products (edible soy oil went on sale in the 1920s)	Soy becomes an important source of military materials (oil and protein as petroleum substitute), e.g., lubricant, aviation oil, biofuel, explosives ↓ Japan welcomes US soy and begins using soy to feed the hungry nation (edible oils, margarine, etc. go to food market)	The era of mass-production and mass-consumption of factory-made oil-rich food products Oil becomes an everyday food stuff: Edible soy oil, processed food products (made from imported grain and oilseeds), food services (esp. fast food)

<p>Main companies involved</p>	<p><i>Zaibatsu</i> with “government trader” sectors: Mitsui, Mitsubishi Soy-crushing companies: Nisshin Oil (with Okura), Honen Oil (with Suzuki Shoten) South Manchuria Railway (SMR)</p>	<p>Old and new <i>zaibatsu</i> form <i>Konzern</i>, invest in new oleochemical and military sectors: Nisshin Oil, Honen Oil, Ajinomoto, Kao Soap, Nippon Oil (linked to Suzuki Shoten, Nissan <i>Konzern</i>) South Manchuria Railway (SMR) research and lab sector</p>	<p>Dissolution of <i>zaibatsu</i>; traders become “general trading companies,” i.e., <i>sgyo-shosha</i> including Itochu, Marubeni; Mitsui and Mitsubishi soon reorganize Nisshin Oil, Honen Oil, Ajinomoto, Yoshihara Oil, Nippon Oil and other oleochemical manufacturers become edible oil and margarine suppliers</p>	<p>US government and its soy-industry ASA (American Soybean Association) Japanese government and its big food business in oil, flour, milk, feed, livestock companies <i>Sgyo-shosha</i>: Mitsui, Mitsubishi, Itochu, Marubeni, Sojitz</p>
<p>The “visible hands” of business and government</p>	<p><i>Zaibatsu</i>-invested big business and “government traders” and Japan’s colonial agent, SMR: Their capital investment in powered machinery and new technologies, enabling mass-production of soy meal and oil SMR contributes to soy’s global trade, facilitating a transport system, standardization, quality control, improvement of soy products as higher-quality global commodities</p>	<p>Big business with mass-production capacity needs to expand market to survive: R&D to increase versatility of soy oil and meal products Development of oleochemical and protein technologies SMR lab’s mission to utilize Manchurian resources for Japan’s benefit Competitive markets and economic depression encourage industry concentration, with capital investment from old and new <i>zaibatsu</i></p>	<p>Oil and oleochemical industries designated “important war industries” for military supplies Big business continues R&D and production under military orders during war Resources from Japanese occupation of Asian regions and Manchukuo ↓ US-led occupation government manages oil-crop allocation and markets for the benefit of big business; Japanese oil companies with oversized production capacity welcome US soy</p>	<p>Japan/US governments and big business PR campaigns promote oil-rich foods and the “Westernization of diet” Development of food and livestock industries as big business <i>Sgyo-shosha</i> lead integration of oil crop imports, oil and meal production, food-processing, intensive livestock industries, and food retail and restaurant services</p>

(Continued)

Table C.1 (Continued)

<p>Ch. 2 <i>Japan's modernization and imperial expansion (19th C to WWI)</i></p>	<p>Ch. 3 <i>Post-WWI recession and Japan's continued militarization and expansion in Asia (interwar period)</i></p>	<p>Ch. 4 <i>The shift to edible oil and US soy after WWII (1940s-1950s)</i></p>	<p>Ch. 5 <i>Increasing Japan's edible oil consumption (mid-1950s-1970s)</i></p>
<p>The role of soy and oil in food and capitalist history</p>	<p>Soy-industry in and trade from Manchuria (soy meal to Japan, soy oil to the West, and soy bean to Japan and Europe) helped Japan accumulate capital for industrial development and expansion in Asia as part of Japan's state-building project The First Food Regime in the Asian context</p>	<p>Soy, rapeseed, castor, and other oil crops managed by the military-government, and oil-related industries consolidated into a wartime institution, to provide the supplies for Japan to wage wars ↓ US soy becomes a commodity to incorporate Japan into the Second Food Regime under US hegemony</p>	<p>Japan realizes rapid economic growth while making food and agriculture cheaper by increasing imports of grain and oil crops from North America; Japan copies US models and integrates into US soy-corn-animal complex and durable (processed) food complex in the Second Food Regime</p>

Source: Produced by the author.

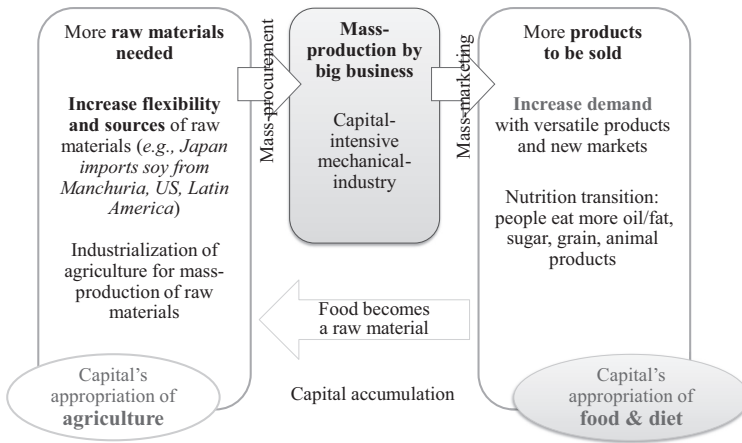


Figure C.1 How the soy mass-production structure actively transforms agriculture and food systems.

Source: Produced by the author.

The deep forests of Manchuria were cut down beginning in the 19th century to grow more soy for export, when Manchuria was connected to the world market by railways, including Japan’s South Manchuria Railway. Manchuria became the world’s largest source of soy exports by the 1930s. Then, the United States increased its soy cultivation, and it became a major producer and exporter of soy after WWII. In the 1970s, vast land in Latin America were “developed” to mass-produce soy. The process of soy cultivation impacting local society and environment has begun more than a century ago in Manchuria, long before globalization or neoliberal projects began in the 1980s.

Turning to the consumption side of Figure C.1, once the soy-industry had established as a capital-intensive mechanical-industry, it requires large-scale markets to sell its mass-produced soy products continuously. So the industry devoted great efforts to increasing the usage of soy meal and soy oil and developed a wide range of soy products for industrial, military, and food applications. The industry made soy into what the current academic discourse argues is the most prominent and established of the “flex crops,” that is, crops that have “multiple uses (food, feed, fuel, fiber, industrial material, etc.) that can be flexibly interchanged while some consequent supply gaps can be filled by other flex crops” (Borras et al. 2016, 94). In addition to expanding the versatility of soy in multiple markets, the development of related industries, especially the processed food and intensive

livestock industries, helped create larger volume demand for soy products, which, in turn, led the industry to further increase the supply. An oil-rich diet was promoted by government campaigns and some nutritional experts. In this way, the “nutrition transition” (Popkin 2002) to eating more oil and fat and more animal products, often called the “Westernization of diet,” was promoted by the supply side rather than demanded by the consumers as part of a “natural” progression.

It is a common practice and a matter of course for businesses to develop new products and expand markets. Capitalism “can and must constantly accumulate, constantly search out new markets, constantly impose its imperatives on new territories and new spheres of life, on all human beings and the natural environment” (Wood 1999, 97). The issue is that, although we live in a capitalist food system, we tend to overlook its imperative of “competition, accumulation, and profit-maximization” when discussing food and diet, and instead blame the “usual suspects”: consumer tastes and a “nutrition transition.”

In this capitalist world-economy, soy and the related industries that developed along with the modernizing Japan survived a century of time by flexibly shifting their products and markets. The huge capital investment from *zaibatsu* and the collaborating works of their traders (later *sogo-shosha*) worked together, as well as Japanese government and its military and colonial institutions at some stages. These “visible hands” of big business and government actively intervened in, and promoted, the transformation of soy as they impacted agriculture and our diet. It was a common practice and a matter of course as a capitalist system. It should not be confused with natural development or people’s demand only because soy is an agricultural crop and eaten as food.

Global food regimes and the formation of Japan’s modern food system

Food issues are often regarded as issues of agricultural supply and consumer demand within a certain nation. In order to overcome this mindset, this book purposely focused on the business history of soy and positioned the development of the soy-industry in a global “food and capitalist history” (McMichael 2013), that is, within the Food Regime frameworks. The book thus illuminates how the modern soy- and oil-industries developed as Japan “regulated” its capital accumulation for their development, and how this process took place within the global Food Regimes, rather than just as a result of Japan’s domestic agriculture and food issues.

Japan was a closed country for about two centuries in the feudal era (from the 1630s to the mid-19th century). During that isolation, the country was more or less self-sufficient in food, and its commerce and

economy developed within its own borders. By the time Japan opened its markets in the mid-19th century, the global trade of wheat and sugar had been established around the Atlantic Ocean; this was the First Food Regime discussed by the previous literature (Friedmann and McMichael 1989 and others). Soon enough, Japan was importing wheat flour from the United States (it was literally called “American flour,” *meriken-ko*, in Japan) and sugar as well. The Japanese *zaibatsu*, including Mitsui, Mitsubishi, and Suzuki Shoten, handled these international trade while developing their trading sectors. They were supported by the newly established Japanese government, and together they expanded into other parts of Asia. As part of this state-building project, the *zaibatsu* invested in the soy-crushing industry, mainly to produce soy meal for fertilizer. Increased import and production of soy meal, based on Manchurian soy, contributed to Japan’s industrial revolution by providing the fertilizer input that enabled the country to increase its exports of silk products and to accumulate capital and keep it in Japanese hands. I argue that this incorporation of Manchurian soy into the structure of Japan’s capital accumulation was the First Food Regime in the Asian context (Hiraga and Hisano 2017).

During the transitional period between the Food Regimes, the same large companies survived by reshaping soy into a flexible crop that could be used in many ways, mainly in non-food industries, including munitions manufacturing to wage wars. Then, after WWII, Japan became deeply embedded in the Second Food Regime under US hegemony. Japan was not a passive receiver of US soy and grains, however. On the contrary, this research reveals the active involvement of Japanese actors, who “copied” US models and worked to “integrate” the nation into the US grain and oilseed complexes: both the soy-corn-animal complex and the durable (processed) food complex. Japanese oil companies, which had built large-scale production capacity for soy products before and during the world wars, welcomed both US soy and the US-centered agri-food complexes. As a result, Japanese oil companies began to market large amounts of edible vegetable oils in Japan, and the Japanese large food and trading companies grew even larger on the basis of imported grain and oilseed. All of these processes have deeply impacted the Japanese diet.

In conclusion, I argue that the Japanese government and big business contributed significantly to transforming soy into a versatile global commodity beginning in the 19th century. The previous literature tends to consider how soy became a destructive political commodity in the recent decades of globalization or in neoliberal projects. As this book has demonstrated, however, soy had already been transformed, a century ago in Asia, even before it expanded beyond the region and was introduced to the Western world. Sure, soy used to be a wonderful traditional food that could be sustainably grown and was healthy for people. Such a soy is still possible but

describes only a tiny fraction of the soy grown and used in today's world, both in the West and the East. The century-long development of the soy-industry and its global dissemination did little to advance the health and well-being of the population. It was rather a means for big business and governments to gain power along with capitalist development.

The key purpose of food and farming is, or should be, to advance the health and well-being of the population (Lang and Rayner 2002, 3–4). However, the current agriculture and food systems, including soy cultivation and the soy-industry, are criticized as destructive systems responsible for the ill-being of the population and the global climate crisis. This situation is not because the systems are broken; on the contrary, they are working very well, as capitalist food systems are supposed to, to accumulate capital while exploiting society and the environment, as Holt-Giménez (2017) argues. Further research is being conducted by many scholars on the current relation of soy with progressing inequality and the climate crisis, as well as the shift of powerful players of the soy-industry to Latin America and China, and now to Africa. I hope this book's business history of soy entwined with modernizing Japan sheds new light on the fundamental understanding and the underlying logic surrounding soy's transformation that applies to current issues as well.

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