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# Assessing the effects of Japanese industrial policy change during the 1960s\*



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#### ABSTRACT

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This paper provides a systematic analysis of the effects of the industrial policy change in the 1960s in Japan. We utilize a panel of 227 manufacturing industries between 1960 and 1969. We find that on the one hand, the removal of de facto import quotas had significantly negative effects on real output, real output per establishment, and employment. On the other hand, for those industries where import quotas were removed, tariff protection was effective in maintaining real output and employment. However, this does not necessarily mean the success of industrial policy change because neither tariff protection nor the removal of quotas contributed to productivity growth. In that sense, the industrial policy change had limited effects. *J. Japanese Int. Economies* **40** (2016) 31–42. Keio University and RIETI, Keio Economic Observatory, 2–15–45, Mita, Minato-ku, Tokyo, 108–8345 Japan; The University of Tokyo and RIETI, Faculty of Economics, 7–3–1, Hongo, Bunkyo-ku, Tokyo, 113–0033 Japan.

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#### 1. Introduction

Quantifying the effects of industrial policies is one of the most important research issues in various fields of economics including industrial organization, international economics, development economics, and economic history (Noland and Pack, 2003).<sup>1</sup> Of the industrial policies applied in various periods and countries, one of the most controversial is Japanese industrial policy during the postwar period.<sup>2</sup> This controversy arises because the success of some Japanese industrial policies has been used to justify such targeting policies in other countries, including the United States.<sup>3</sup> Accordingly, several studies have

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<sup>&</sup>lt;sup>1</sup> We use the term "industrial policies" in the broad sense of "policies that stimulate specific economic activities and promote structural change" (Rodrik, 2008). As we will discuss later, among the various types of industrial policies, this paper focuses on the removal of de facto import quotas through the foreign exchange allocation system in Japan.

<sup>&</sup>lt;sup>2</sup> The Japanese government implemented industrial policies to control international trade, investment, technology imports, foreign exchange, etc. (Johnson, 1982; Komiya et al., 1988; Okimoto, 1989; Noland and Pack, 2003).

<sup>&</sup>lt;sup>3</sup> "In fact, it is the success of Japanese targeting that is often used as the justification for targeting in the United States" (Beason and Weinstein, 1996, p. 286).

attempted to quantify the effects of Japanese industrial policy (e.g., Beason and Weinstein, 1996; Kiyota and Okazaki, 2005, 2010).

Even though these previous studies are insightful, there is some room for improvement. For example, Kiyota and Okazaki (2005, 2010) utilized firm-level data, but the scope of these studies is not necessarily broad because Kiyota and Okazaki (2005) focused on large firms, while Kiyota and Okazaki (2010) focused only on cotton spinning firms. Beason and Weinstein (1996) utilized relatively aggregated industry-level data (13 manufacturing industries) from 1955 to 1990. This makes it difficult to control for heterogeneity within those aggregated industries, despite the fact that targeting was conducted at a detailed industry level. Furthermore, it should be noted that during the period that they examined, there was a substantial change in the industrial policy regime (Ito and Kiyono, 1988; Asai, 2007). That is, before the early 1960s, with respect to most commodities, imports were regulated by the foreign exchange allocation system.

The primary purpose of the foreign exchange allocation system in Japan was to secure the balance of payments and to stabilize the currency value. However, this system was also used as a tool for industrial policy (Ministry of International Trade and Industry) (MITI, 1991; Okazaki and Korenaga, 1999). The amount of foreign exchange available for the importation of each commodity was determined ex ante by the foreign exchange budget, and furthermore, each firm was required to apply to the MITI for foreign exchange allocation to import each commodity. The MITI utilized this system for various policy goals, including protection of domestic industries from international competition, giving the strategic industries priority access to high-quality imported equipment and inputs, promotion of exports, and regulation of domestic competition. In the context of this paper, it is particularly important that the allocation of the foreign exchange budget to each commodity effectively determined the maximum import quantity of the commodity, given its import price. In other words, the foreign exchange allocation system worked as a de facto import quota system and was used to protect domestic industries from international competition.<sup>4</sup> From the late 1950s, the International Monetary Fund (IMF), General Agreement on Tariffs and Trade (GATT), and foreign countries requested the Japanese government to abolish the regulation of foreign exchange, and as we will see below, in the 1960s, the foreign exchange allocation system was reduced in size and finally abolished. Given the role of the foreign exchange allocation as a de facto import quota system, its abolition meant a substantial change in industrial policy. Furthermore, the MITI intended to improve the efficiency of industries by removing de facto import quotas from their products at the appropriate time.

This policy change in the 1960s, often called "trade liberalization," has been regarded as an epochal point in postwar Japanese economic history (Ito and Kiyono, 1988; Nakakita, 1993). However, to our knowledge, only a few studies have systematically analyzed the effects of this policy change. In this paper, we attempt such an analysis using detailed industry-level data. Whereas the policy change occurred over a relatively short period, there were variations in the timing of the removal of the de facto import quotas across commodities, and hence across industries. We exploit these time-series and cross-sectional variations within and across industries in assessing the effects of the policy change. Furthermore, it is noteworthy that we can precisely identify the timing of the quota removal for each commodity, using original government documents. Moreover, this paper utilizes detailed industry-level data from the *Census of Manufactures*, matching this with information on trade protection (i.e., tariff rates and import quotas). This enables us to control for industry heterogeneity while covering the majority of manufacturing industries. Controlling for tariff rates is particularly important in assessing the effects of the policy change, because as we will see later, the government intended to mitigate the expected negative impacts of de facto quota removal on industries by raising tariff rates.

To examine the effects of quota removal, we follow the empirical framework of Head and Ries (1999). Their study tested whether or not the observed trend in output per plant and the number of plants are systematically related to tariff reductions in Canada, by analyzing 230 industries. They found that output increased, while the number of establishments decreased in the Canadian manufacturing sector after trade liberalization. Their results indicate that a smaller number of establishments were able to produce at a larger scale after trade liberalization, which they called the "rationalization effect." Our study also investigates whether such effects were evident during the period 1960–1969 in Japan.

In the Japanese economic history literature, it is widely believed that the abolition of the foreign exchange allocation system in the 1960s contributed significantly to the growth of manufacturing industries (Ito and Kiyono, 1988; Nakakita, 1993). We found positive effects of tariff protection and import quota removal on real value added and labor productivity in the OLS estimates. However, such positive effects disappeared once we controlled for the industry-specific time trend as well as the industry and year fixed effects. Our results imply that this belief may be attributable to a lack of control in terms of unobserved industry heterogeneity and macroeconomic shocks.

We also find that, on the one hand, the removal of de facto import quotas had significantly negative effects on real output, real output per establishment, and employment. On the other hand, for those industries that removed import quotas, tariff protection was effective in maintaining real output and employment. However, this does not necessarily mean the success of industrial policy change because neither tariff protection nor the removal of quotas contributed to productivity growth. In that sense, the industrial policy change had limited effects.

<sup>&</sup>lt;sup>4</sup> In this paper, therefore, "import quota" means the de facto import quota through the foreign exchange allocation system.

<sup>&</sup>lt;sup>5</sup> The effects of trade protection (or trade liberalization) are important issues not only in the literature on international trade but also in the economic history literature. See, for example, Grant and Thille (2001), Irwin (2007), and Davis and Irwin (2008).

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