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Political Economy of Trade Liberalization: The Case of Postwar Japan

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Abstract

How did post-War newer democracies, whose governments faced both pressures from vested special interests and voters, achieve trade liberalization ? Exploiting the case of trade liberalization in 1960s Japan, this paper addresses this question. Because the benefits and costs of trade liberalization are unequally distributed among the population, generating winners and losers, trade liberalization is inherently a highly political issue. The Japanese government and the LDP leaders used two tactics to build a coalition of legislators for trade liberalization. While they used sequencing of liberalization to buy off support from legislators of the Upper-House, they relied on side-payments for legislators of the Lower-House. This strategy choice was consistent with the difference in the sizes of electoral districts between the Upper-House and the Lower-House.

Key words: political economy, trade liberalization, democracy, side-payments, Japan
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1. Introduction

How did postwar newer democracies, whose governments faced both pressures from vested special interests and voters, achieve trade liberalization? Although economists more or less agree that trade liberalization improves efficiency and the general welfare of citizens in the long-run, in the short-run, the benefits and costs of liberalization are unequally distributed among the population, generating winners and losers. In democracies, from legislators' point of view, this means that those who represent constituents who benefit from trade liberalization will support liberalization, and those who represent constituents that are hurt by it will oppose it. Party leaders, who seek to collectively maximize their party's chance of political survival, often need to gain support by buying off legislators who oppose liberalization (Evans 1994; 2004, Nielson 2003).

This paper investigates two tactics governments can use to build such a coalition for liberalization: sequencing and side-payments to buy off support from legislators. The sequencing strategy refers to the government unilaterally designing and controling when and which commodities are liberalized to ease the economic and political costs of liberalization. The side-payment strategy refers to the government distributing material benefits, such as public work projects and subsidies, to mediate the income shock of trade liberalization and hence buy off support (or temper the opposition) to liberalization. The two strategies work as a substitute: the government can either delay liberalization ("Protectionism") or implement liberalization and grant side-payments ("Liberalize & Compensate"), but not both. What are the conditions under which a government decides to use a sequencing or side-payment strategy?

To answer this question, this paper examines the government's choices of liberalization strategies in post-War Japan. Postwar Japan provides an ideal case to address this question for three reasons. First, the government unilaterally liberalized many commodities between 1961 and 1964, which allows for a cleaner test of the government's political motivation underlying their strategy choice than would be the case with bilateral or multilateral trade liberalization. Second, post-War Japan is an important case in that it involves legislators, not an executive body, designing and implementing trade liberalization. The conventional wisdom suggests that an executive, not a legislative body, initiated and implemented post-War trade liberalization (Johnson 1982). External pressures (*gaiatsu*) from the United States and international organizations were also cited as the main impetus for trade liberalization in Japan (Schoppa 1997; Davis 2004). When the literature gave any credit to the role of legislators in trade policy-making process, they portrayed their role as protectionist

forces captured by the special interests (Uriu 1996).

Our paper challenges this wisdom by showing that party leaders' concerns for the collective benefits of their respective parties (i.e., minimizing vote losses, maximizing seat gains etc), rather than individual legislators' rent and vote-seeking concerns, drove the liberalization process. Finally, postwar Japan is a laboratory of electoral systems. The Lower-House had a multi-member district system, where same-party legislators competed for the same seats. The Upper-House had a mixed electoral system, with local tiers had a large multi-member district system, where legislators had to campaign for either the entire prefecture (equivalent of the U.S. state) or, in the national tier, the entire nation. The difference in district size between the two Houses provides an ideal research design to examine how governments respond to vote gains and losses from trade liberalization and adjust their strategies.

The remainder of this paper proceeds as follows. The next section provides the background of postwar trade liberalization in Japan (and our theory on how it occurred). Section 3 summarizes our data and variables. Section 4 summarizes our results. Finally, the last section concludes and discusses the broader implications of our findings.

2. The Sequence of Trade Liberalization

Just after World War II, international trade by private firms was prohibited and the Japanese government itself carried out trade under the supervision of GHQ, the occupation authorities. Private trade was resumed in 1947, albeit with strict government controls. Trade controls were a part of the general economic control including controls on price and distribution, which had started during the Sino-Japanese War. Then in 1949, the "Dodge Plan," a series of policies aimed at transitioning the Japanese economy to a market economy, was implemented, and as a part of the Plan, direct government control on international trade was abolished.

As a new legal framework for private international trade, the Foreign Exchange and Foreign Trade Administration Law (*Gaikoku Kawase oyobi Gaikoku Boeki Kanri Ho*) was enacted in December 1949. Article 1 of the law prescribed that its purpose was developing normal foreign trade, and administrating foreign exchange and foreign trade, in order to secure a balance of payments, stabilize the currency value, and establish effective utilization of foreign exchange (MOF 1976, p.616). This law provided the legal basis for the government to intervene in international trade through regulation of foreign exchange.

According to the law, the foreign exchange budget system (*gaika yosan seido*)

was implemented. That is, all foreign currencies, precious metals, claimable assets in foreign currency, and foreign currency securities were once concentrated to the government, Bank of Japan, or foreign exchange banks. Then, the government made the foreign exchange budget to use the concentrated foreign currencies efficiently (Bank of Tokyo 1960, p.2). The foreign exchange budget was composed of two parts – one for service imports and the other for commodity imports – the latter of which is relevant to the context of this paper.

The major parts of the commodity import budget, in turn, were basically composed of the budget for "foreign exchange allocation system goods" (FA goods) and that for "automatic approval system goods" (AA goods). The budget for AA goods was allocated in lump form to the entire AA group of the goods, and the import of AA goods was automatically approved, as long as the budget for AA goods was not fully used. In other words, for AA goods, imports were de facto free within the total limit. On the other hand, the budget for FA goods was not allocated in lump form but to each good individually – for instance, to coal, steel, etc.. Hence, for FA goods, the upper limit of import quantity was determined by the foreign exchange budget, given the import price. This implies that there was a de facto import quota for FA goods. Furthermore, in order to import FA goods, one had to apply to the Minister of International Trade and Industry to attain an allotment of foreign exchange ex ante. In other words, the Ministry of International Trade and Industry (MITI) had the authority to intervene in each firm's importations. In this sense, the classification between FA goods and AA goods was crucial. MITI decided the classification for all import goods, and proclaimed the new classifications, as they were revised (Import Proclamation, *Yunyu Kohyo*).

In the context of the international regime of trade and finance, this system was based on Article 14 of the Agreement of International Monetary Fund (IMF) and Article 8 of the General Agreement on Tariffs and Trade (GATT), which allowed a member country "transitional arrangements" to impose restrictions on foreign exchange and international trade. Japan had been allowed this arrangement since it participated in IMF and GATT, but as the Japanese economy recovered from the war damage to grow fast and resolve the deficit of balance of payments in the late 1950s, the IMF and foreign countries began to request that Japan liberalize international trade.

Under these circumstances, the Japanese government drafted the "Outline of the Plan for Trade and Foreign Exchange Liberalization" (*Boeki Kawase Jiyuka Keikaku Taiko*, "Outline," hereafter), where it committed to the target of a "liberalization rate" raised to 80% in three years. "Liberalization rate" here meant the ratio of imports of AA and AFA goods to total imports, which was 41% in July 1960.

AFA (automatic foreign exchange allocation) goods was a category introduced in 1960 as a part of the trade liberalization. When a firm applied to MITI for foreign exchange allocation to import goods of this category, foreign exchange was allocated automatically, and hence trade of AFA goods was regarded as "liberalized" (MITI 1961, p.51; MOF 1972, pp.327-328). The list of AFA goods were announced in the "Import Announcement" by MITI.

The Outline stressed the positive effects of trade liberalization, such as excluding inefficiency with government regulation, easing importation of raw materials at lower prices, forcing firms rationalization, etc.. On the other hand, it also noted that they should be careful about transitory negative effects on the economy, given that there were numerous small-sized farms and firms, and that many industries were still in the infant stage. On these grounds, a sequential liberalization plan by commodity was presented.

That is, the Outline classified the major 104 commodities into the following four categories according to the target year of liberalization; (a) those that should be liberalized promptly, (b) those that should be liberalized in about three years, (c) those for which they should make effort to liberalize soon after three years, and (d) those that would be difficult to liberalize for several more years. The first column of Table 1 shows the number of commodities by category. The number of commodities in the (a)-(d) categories were 41, 24, 21 and 18, respectively. Dividing the commodities by industry, we find that category (d) commodities were concentrated in agriculture, forestry and fishery. In general, manufactured commodities were slated to be liberalized relatively early.

After announcing the Outline, the government rapidly carried out trade liberalization, namely moving commodities from the FA category to the AA or AFA categories three to four times a year (Table 4). During this process, at the request of the IMF, the government decided to accelerate liberalization even further, in September of 1961[1]. That is, while the Outline aimed at raising the liberalization rate up to 80% by June 1962, the new liberalization target was 90% by October 1962.

In April 1962, the government proclaimed the liberalization of 100 commodities, and at the same time it changed the format of "Import Proclamation." While the government proclaimed the list of AA and AFA goods (positive list) before that, it started to proclaim the list of FA goods (negative list) as well. Also, the criterion of

[1] The Japanese government asked to postpone the recommendation that Japan become an Article 8 member of IMF for one year. While the IMF accepted this postponement, it requested that Japan accelerate liberalization.

classification was changed from the SITC to the four digit classification of BTN. This was to clarify the remaining commodities to be liberalized. In February 1963, the IMF recommended that Japan become an Article 8 member, which was postponed in the previous year. Following the recommendation, Japan became an Article 8 member of the IMF in April 1964, which implied that, in principle, Japan could not restrict foreign exchange transactions any more. Given this condition, the government continued trade liberalization in 1963 to achieve the liberalization rate of higher than 90% in August 1963 (Table 2). Meanwhile, in April 1964, the foreign exchange budget system was abolished, and for the remaining FA commodities, the import quota system (IQ system) was introduced (Japan Tariff Association 1964, pp.139-140).

As the positive list (AA and AFA until December 1961) or the negative list (FA from April 1962) were proclaimed by the government, we can see whether a certain commodity was liberalized or not at a certain time by looking at the lists. With respect to the 104 commodities in the Outline, we identified whether each was liberalized or not at the end of 1961, 62, 63 and 64. To do this, relevant "Import Proclamation" and "Import Announcement" information was collected from the *Official Gazette* (*Kampo*) and the *Official Bulletin of MITI* (*Tsusansho Koho*).

Based on the information from the positive and negative lists, the actual liberalization performance of the commodities in the Outline is shown in Table 1. As the first line for the total indicates, liberalization proceeded sharply in 1962. However, after that the pace became very slow, and even at the end of 1964, the percentage of commodities liberalized was 55.8. It shows that the Outline relatively focused on those commodities whose liberalization was controversial. Also, it is remarkable that the actual liberalization proceeded following the plan. That is, the ratio of liberalized commodities basically correlated with the categories (a)-(d) based on the target years of liberalization, as stated above. It seems to imply that the actual sequence of trade liberalization was deliberately controlled and reflected government policies.

3. Variables and Data

Focusing on the 104 commodities listed in the Outline of the Plan for Trade and Foreign Exchange Liberalization, we explore the economic and political determinants of the sequence of liberalization. For this purpose, we use two variables as the dependent variables. In the previous section, we showed that the schedule of trade liberalization set in the Outline substantially influenced the actual sequence of liberalization. Given that, we focus on the scheduled year of liberalization set for each commodity in the Outline. Representing this schedule, the variable Plan takes a value of 1, 2, 3 or 4, if a

certain commodity was classified into (a) those that should be liberalized promptly, (b) those that should be liberalized in about three years, (c) those for which they should make effort to liberalize soon after three years, or (d) those that would be difficult to liberalize for several more years, respectively. Second, we make the variable Delay which is a dummy variable taking the value of 1, if the actual year of liberalization was later than the scheduled year, and 0, otherwise. That is, for the commodities of category (a), Delay equals to 1, if those commodities were not liberalized at the end of 1961, and 0, otherwise. For the commodities of category (b), Delay equals to 1, if those commodities were not liberalized at the end of 1962, and 0, otherwise. For the commodities of category (c), Delay equals to 1, if those commodities were not liberalized at the end of 1964, and 0, otherwise. Finally, for commodities category (d), Delay is not defined.

The explanatory variables for Plan and Delay consist of economic variables and political variables. As stated in the previous section, the Outline stressed the necessity of taking into account whether or not the industries are in an infant stage. Also, the Ministry of International Trade and Industry, taking charge of trade policy as well as the administration of mining and manufacturing industries, were intent on protecting certain manufacturing industries in their infant stage such as the automobile, aircraft and synthetic rubber, and mining industries that did not have international competitiveness due to natural conditions (Ministry of Internal Trade and Industry1960a, pp.110-114). These documents suggest that in deciding the schedule of liberalizing each commodity, the government took into account the competitiveness of the domestic industry that produced it.

In order to measure the competitiveness of each commodity, we prepare two sets of variables. The first one is the ratio of the domestic price to the f.o.b. import price of each commodity in 1959, just before the acceleration of trade liberalization, which we label as Price Ratio. The primary source of domestic prices is the Bank of Japan (1964), which provides wholesale prices of many commodities. For those commodities whose prices are not available in this source, we used the Ministry of International Trade and Industry (1962a, 1962b, 1960b) and the Ministry of Agriculture and Forestry (1960). From these sources, we collected data on the amount and quantity of each commodity's production, and then dividing the former by the latter, we obtained the price data of those commodities. Import prices were obtained from the amount and quantity of a commodity imports (Ministry of Finance 1960). For the commodities that were not imported, we use export price.

The second set of the competitiveness variables indicate factor intensity, which

determines the comparative advantage in the Heckscher-Ohlin model. As a variable representing labor intensity, we use the ratio of wage to the total value added, and label this variable Wage Ratio. We calculated this variable from the data of the Input-Output Matrix for 1960 (Administrative Management Agency 1975). On the other hand, as a variable representing R&D intensity, we use the ratio of R&D and patent royalties expenditure to sales in 1961. The source for manufacturing industries is the Ministry of International Trade and Industry (1963), while concerning the other industries we simply assumed that the ratio was zero.

These two sets of competitiveness variables capture the economic impact of trade liberalization on each industry. In addition, to measure the regional spread of the impact, we calculated a Hirschman-Herfindahl index of employment by prefecture for each commodity for 1959. For the manufacturing industries, the data source is the Ministry of International Trade and Industry (1962a, 1962b). The Ministry of International Trade and Industry (1962a) provides the number of employees of each three-digit industry, but for many industry-prefectures the data are censored to protect privacy, because there were few establishments in those industry-prefectures. Hence, we first calculated the production share of each prefecture for the commodities corresponding to each three digit industry, using the data from the Ministry of International Trade and Industry (1962b), and then multiplied the total employment of each three digit industry by the production share of each prefecture to obtain employment measures of each three digit industry in each prefecture. For the mining industries, we calculated the employment of each industry in each prefecture by the same procedure, using The Ministry of International Trade and Industry (1960b). Finally, for the agriculture industry, employment data for each product was not available, because usually farmers produce multiple agricultural products. Hence, we first calculated the ratio of the acreage under cultivation of each product to the total cultivated land at the prefecture-level, using data from the Ministry of Agriculture and Forestry (1960), and then multiplied the agricultural employment in each prefecture by the ratio to have the employment for each product in each prefecture. These economic variables are expected to influence the sequence of trade liberalization through the political process.

To test the effect of legislators' and party leaders' reelection concerns on trade liberalization, we include the following political variables. The *Weighted LDP LH Vote Share* is a commodity-level variable that captures the degree to which an industry's employees were represented in prefectures known as LDP strongholds or opposition party strongholds (*Weighted LDP Vote Share*).

We calculate the proportion of commodity-level employment in each prefecture from the 1959 Industrial Census, and use this proportion of industry employment to weigh prefectural-level LDP vote share for Lower-House and Upper-House elections right before the announcement of the Outline (1958 for LH election, 1959 for UH election). The higher the *Weighted LDP Vote Share,* the higher the proportion is of an industry's employees who worked in prefectures known as LDP's strongholds. If the LDP government was concerned with rewarding its core supporters, an industry with higher Weighted LDP Vote Share should be scheduled later in the liberalization plan or in the implementation of the plan (i.e., Weighted LDP Vote Share should have positive coefficients on Plan), whereas if the government was concerned about swing votes, they should be scheduling an industry with lower Weighted LDP Vote Share later (i.e., Weighted LDP Vote Share should have negative coefficients on Plan). Consistent with our argument that party leaders tried to maximize the collective benefits for the party's seat and vote shares for political survival, we expect the latter scenario to hold: that is, the government shielded industries with lower Weighted LDP Vote Share for later liberalization. The example below illustrates how this weighted vote share is calculated for each commodity.

> Example; The machinery industry's labor force is spread across three prefectures, prefecture A (1,000 workers), prefecture B (500 workers), and prefecture C (150). In the 1958 election, the LDP vote share for the three prefectures was 60% (prefecture A), 70% (B), and 51% (C) respectively. This means that the LDP LH Vote Share for the machinery industry as of the 1958 election is:
> 60*(1000/1650)+70*(500/1650)+51*(150/1650)=36.36+21.21+4.64=62.21%.

Similarly, we calculate Weighted Ministerial Positions (%) for each commodity with the same weighting procedure using the proportion of a given industry's employment across prefectures. Higher values of Weighted Ministerial Positions (%) means that more of an industry's employees worked in prefectures where legislators were in high ministerial positions.[2] The hypothesis to be tested is whether the government rewarded

[2] We prefer to use the ministerial appointments rather than seniority scores of legislators here because the seniority-based ministerial appointments was institutionalized a decade later (1972-1976) during Fukuda cabinet. During the early 1960s, which this paper focuses on, there were sufficient numbers of "leap frog" appointments, i.e., junior legislators' appointment to ministerial positions. See Kohno 1994.

commodities with higher Weighted Ministerial Positions by scheduling their liberalization later (i.e., Weighted Ministerial Positions has positive coefficients on the Plan), or, whether the government rewarded commodities with lower Weighted Ministerial Positions by scheduling their liberalization later (i.e, Weighted Ministerial Positions has negative coefficients on Plan). In a nutshell, we test whether the government considered the interests of senior legislators or backbenchers without ministerial perks in scheduling liberalization.

4. Results

(1) Explaining the Plan

Table 1 summarizes the results on the determinants of the Plan announced in the 1960 Outline, only using economic variables. The results suggest that the government was more likely to schedule less competitive industries (i.e. those with a higher Price Ratio) for later liberalization, while it scheduled competitive industries earlier. The results are robust across different specifications (e.g., controlling for capital-labor intensity and declining industry dummies), and estimation methods (OLS and ordered probit). Other economic characteristics of commodities, such as their degree of geographic concentration, capital-labor intensity, and sector (e.g., agriculture), did not turn out to have significant effects. Thus, the industry's competitiveness seems to be the sole significant predictor of Plan.

Table 2 summarizes the results of the same regressions while including a battery of political characteristics of commodities. The results suggest that legislators' electoral concerns to stay in power (as measured by the Weighted LDP Vote Share as of 1958) did not seem to matter at all for the sequencing of the commodities in the liberalization Plan (see Model 4). Instead, the government scheduled the liberalization of commodities with strong ministerial representation (via the electoral districts in which its employees resided) earlier, and scheduled the liberalization of commodities with no ministerial ties later. The competitiveness of industries (*Price Ratio*) is still a strong and robust predictor of the Plan, yet, the results indicate that the LDP party leaders influenced the plan substantially and in a way that defied the conventional wisdom (Pekkanen 2003). First, the LDP party leaders, many of whom held ministerial positions, took the short-term hit by enacting the liberalization and shielded commodities better represented by backbenchers. The party leaders' interests in maximizing collective benefits for the party and its legislators' electoral survival seemed to dictate the political intervention to the Plan, rather than each legislators' individual incentives to secure their reelection. Second, senior politicians did not flex their

muscle to reward their own core constituents, but instead, helped backbenchers survive the process of liberalization.

Both results run contrary to what is expected from the electoral systems argument – namely, that multi-member district systems, such as the one used during the period of rapid trade liberalization in Japan, encourages individual legislators to follow vote and rent-seeking incentives, and discourages their pursuit of collective benefits for the party or the general welfare of citizens (Cox and McCubbins 1986; Dixit and Londregan 1994; Ramsayer and Rosenbluth 1993).

(2) Explaining the Implementation

How, then, did the government implement the Plan? The period between the announcement of the Plan and its implementation (1960-1964) is ideal to test the effect of a changing electoral environment on the implementation of liberalization, because the period experienced two Lower-House general elections (1960 and 1963) and one Upper-House general election (1962). This allows us to estimate how party leaders adjusted the implementation of the Plan, when faced with the need to help both the party and legislators in surviving subsequent elections. We use three dependent variables, one is *Implementation*, which indicates the stage of actual implementation of the Plan in four steps (1: liberalized by 1961, 2: liberalized by 1963, 3: liberalized by 1964, and 4: was not liberalized as of 1964). The second dependent variable is *Delay*, which takes the value of one if a commodity was liberalized later than the Plan, and zero otherwise (i.e., a commodity was liberalized either as planned or earlier than the Plan). *Not Liberalized Contra Plan* is the third dependent variable, and takes the value of one if the Plan scheduled a commodity for liberalization by 1964, but the government did not, and zero otherwise.

We use the same set of political and economic variables for estimation as done for the models shown in Table 2, but with new additions of several political variables that capture the changes in electoral environment. Change LH LDP vote share is the percentage point change in the weighted LDP's vote share from the 1958 Lower-House election (pre-announcement of the Plan) and the 1963 election for each commodity. Change UH LDP vote share is the percentage point change in the weighted LDP's vote share from the 1959 Upper-House election to 1962 Upper-House election. During this time, on average, the LDP vote share for the Lower-House elections slightly declined from 57.8% in 1958 to 54.7% in 1963, due to a slight increase in leftist party votes (35.5% to 40.4%). For the Upper-House elections, the LDP vote share also declined from 51.9% for local districts (multi-member district system with district magnitudes

ranging from one to five) in the 1959 election to 47.1% in the 1962 election.[3] In the face of declining LDP support and the gradual rise of leftist parties, including the Social Democratic Party of Japan, how did party leaders of the LDP implement the Plan?

Table 3 summarizes our results. Model 1 summarizes the results estimating Implementation with only the economic characteristics of industries. It shows that industry's competitiveness in the international economy (*Price Ratio*), which was a strong and robust predictor of the liberalization sequencing in the Plan, no longer accounts for the actual implementation of the Plan. Nor the degree to which an industry was geographically concentrated (as captured by the Herfindahl index) or whether or the industry was declining (*Decline*) were associated with the implementation, either.

Moreover, the weighted LDP vote shares in the Lower-House elections and their changes during the implementation period have no systematic effects on Implementation. However, the increase in weighted LDP vote share for the 1959 and 1962 Upper-House elections (Change UH LDP vote share) was positively associated with the delayed implementation of the Plan (Delay) as well as with the government's likelihood of postponing liberalization after 1964 contra the Plan (Not liberalized contra plan). Substantively, this means that the LDP government delayed or shielded industries from liberalization when employment in these industries was concentrated in Upper-House districts that increased their support for the LDP during the implementation phase. The core LDP supporters, hence, were rewarded by additional years of trade protection. Although the substantive effects of the vote share increase is not large (10% point increase in the weighted Upper-House LDP vote share is associated with 20% increase in the probability of a commodity being delayed or not liberalized contra the Plan), the results are significant at the 5% level and are robust to different specifications and across the three dependent variables.

These results are surprising, considering the scholarly emphasis given to the party's responsiveness to electoral results in the Lower-House elections, and the conventional wisdom that the Upper-House plays only a marginal role in policy-making (Takenaka 2010 for a review of this literature). To address this puzzle, we analyze which commodities increased in their weighted LDP vote shares between the two elections for the Lower and Upper-Houses. The two variables correlate negatively at

[3] In addition to local districts, the Upper-House has had a mixed electoral system with a national tier, which now uses a proportional representation system. The LDP vote share increased in the national tier about 4%.

-0.17, which indicates that the commodities in areas for which there was increased Upper-House LDP support differed from those in areas for which there was decreased Lower-House support.

Table 4 summarizes the results. Models 1 to 3 show how an industry's economic and political characteristics were associated with the increase or decrease in the weighted LDP vote share for the Lower-House elections (percentage point change from 1959 to 1963), while Models 4 to 6 show the results for the Upper-House elections (percentage point change from 1959 to 1962). Model 1 also estimates the effect of the 1961 liberalization decisions on the LDP's vote gains and losses during the general election two years later (1963), and Model 2 estimates the effect of the 1962 liberalization decisions on the same LDP's vote share changes for the 1963 election. The results show that neither the 1961 nor the 1962 decisions to implement or delay implementing the Plan had bearing on the LDP's vote share change for the Lower-House elections. For the Lower-House, moreover, industries that were geographically concentrated (i.e., higher Herfindahl index) were associated with decreased levels of support for the LDP, while declining industries and agricultural sector industries were associated with increased support.[4] Models 1 and 2 suggest that those industries associated with high levels of the LDP support before the Plan, as of the 1958 election, became more associated with decreased support for 1963 election. Substantively, this means that, there a were higher proportion of swing votes (i.e., votes that swung from the LDP to opposition parties) in their strong-hold districts than in districts where the left was already strong, as of the 1958 election.

Models 4 to 6 indicate that this "core mobilization" pattern does not hold for the Upper-House's prefectural districts. First, contrary to the results for the Lower-House, the 1962 decisions to implement or delay implementing liberalization had a robust and significant effect on the LDP's Upper-House vote shares. The LDP's vote share decreased by 3.7% among commodities that were liberalized by 1962, compared to those commodities that were still protected as of 1962. While the 1961 liberalization did not have systematic effects on the LDP vote share changes in the Upper-House elections, this was probably due to the 1961 liberalization having been much smaller (only 16% of the total commodities discussed in the Plan) than the 1962 liberalization (comprising 50% of the total commodities that were liberalized by then). This lends further support to the results on implementation summarized in Table 3. Because Japanese voters

[4] Herfindahl Index and Decline negatively correlate at -0.22, so as Herfindahl Index and Agriculure dummy. Decline and Agriculture correlate positively at 0.32. The negative coefficients of Herfindahl Index are robust and significant at 1% level, even when we dropped both Decline and Agriculture dummies.

seemed to be responsive to the government's liberalization decisions in the Upper-House election, the government was more likely to delay or shield commodities with higher LDP vote shares from trade liberalization after the1962 election. By contrast, voters in the Lower-House election did not seem to punish the LDP for its trade liberalization in 1961 or 1962, and the government's subsequent liberalization decisions

Second, geographical concentration of industries had no robust and systematic effects in regards to increased or decreased LDP support in the Upper-House election (except for in Model 6). The industry's competitiveness in the international economy (Price Ratio; except for he Model 6) had no effects on the change in the LDP support, either. This makes sense, given that prefectural districts in the Upper-House encompass much larger geographic areas (e.g., each of the 47 prefectures comprises one electoral district, in which district magnitudes range from one to five for each mid-term election) than the Lower-House (e.g. each prefecture consisted of several electoral districts and had anywhere from 3 to 27 seats in total). This means that the Upper-House legislators needed to campaign for broader and more diverse constituents than the Lower-House legislators.

Finally, just like the Lower-House, the LDP lost more votes in the 1962 Upper-House election in their traditional strong-holds than they did in the opposition's strong-holds as of the 1959 Upper-House election. Yet, the magnitude of this vote loss was much sharper (i.e., triple the size of effect of the Lower-House) for the Upper-House. On average, a district where the LDP's vote share was 10% point higher saw a 1.5% vote share loss in the subsequent Lower-House election, while a district where the LDP's vote share was 10% higher saw a 5% vote share loss in the subsequent Upper-House election.

Why did Japanese voters appear to punish the incumbent government for trade liberalization in the Upper-House election, but not in the Lower-House? We argue that for the Lower-House election, the LDP leaders' distribution of side-payments to districts with high proportions of trade losers, in the form of public work investments, helped the government reduce the vote losses from liberalization. Because the Japanese Lower-House had geographically smaller electoral districts than the Upper-House, the government was able to target these side-payment efficiently to electoral districts where vote loss from liberalization seemed eminent. By contrast, in the Upper-House with its much larger electoral districts, the targeting of public work projects to ameliorate the income shock of trade liberalization was inefficient. Thus, the LDP government used the sequencing/delaying strategy to address potential vote losses in the Upper-House election, and used the side-payment strategy to reduce the predictable vote losses in the

Lower-House election.

Table 5 uses prefectural-level data and estimates the LDP vote share change from the 1958 to the 1963 elections for the Lower-House, and from the 1959 to the 1962 elections for the Upper-House. Because we focus on the vote share changes as the dependent variables, the two key explanatory variables are the proportion of the total workforce newly affected by trade liberalization from 1961 to 1964 and the government's spending per capita allocated to prefectures between 1960 and 1964. Although precise causal inference requires establishing a benchmark and counter-factual scenario (i.e., how much vote loss would be expected if the government did not allocate more than an average level of government spending), the results lend some support. Models 1 and 2 show that for the Lower-House, the proportion of the workforce that was affected by the trade liberalization had no systematic effects on the LDP vote share changes from 1958 to 1963. By contrast, higher government spending allocation per capita was associated with LDP's vote gains. Models 3 and 4 summarize the results for the Upper-House. Neither the proportion of workforce affected by the liberalization nor the government's spending allocation had a systematic effect on the LDP vote share gains or losses during this time period.

In sum, the government responded to electoral results in the Lower-House and Upper-House differently due to the fact that its programs for offsetting income shocks from trade liberalization are effective for the Lower-House districts, but not for the Upper-House districts. The bicameral legislature in Japan made the government use a mixed strategy of sequencing and side-payments in implementing the trade liberalization.

5. Concluding remarks

The management of trade barriers at the national boarder has a substantial impact on the welfare of the people. While trade liberalization enhances the welfare of the general public in the long-run, as the economic theory demonstrates, it has negative impacts on some groups at least in the short-run, including those who work for industries that are faced with tougher international competition. Hence, trade liberalization is inherently a highly political issue. As described in section 2, in the early 1960s, Japan experienced rapid trade liberalization, that is, drastic abolition of a de facto trade quota through the foreign exchange allocation system.

Exploiting this case, we show how democracy worked to address a political issue with serious conflicts of interest. We focus on two government tactics to build coalitions of legislators for trade liberalization, namely sequencing and side-payments.

The main findings are as follows. First, in making a plan for sequential liberalization, the government seemed to levy the earlier liberalization burden more heavily on the constituencies of the party leaders themselves. It implies that maximizing collective benefits for the party and its legislators' electoral survival had priority over each legislator's individual incentives to secure their personal reelection. Second, the sequence of implementing liberalization was associated with the result of Upper-House elections, and not with Lower-House elections. This runs contrary to conventional wisdom in the political science literature contending that the governing party is more responsive to the results of Lower-House elections, and that the Upper-House plays a marginal role in policy-making. Finally, we find that the use of side-payments by means of government spending was positively associated with Lower-House vote gains, but not with Upper-House vote gains.

We can interpret the second and the third findings by focusing on the differences in the geographical sizes of electoral districts between the Upper-House and the Lower-House. Whereas a delaying strategy was chosen to reduce the predictable vote losses in the Upper-House, with its larger electoral districts, the LDP government utilized a side-payment strategy for reducing such losses in the Lower House, which featured smaller and more targetable districts.. Through this strategic balance of buy-off measures, the Japanese government in the early 1960s was able to achieve rapid trade liberalization (without sacrificing its electoral majorities).

Lastly, our results have implications for majority coalition-building under the current, mixed-member district system, which combines the single-member districts with proportional representation. We submit that there are two offsetting effects of the mixed-member system. The single-member district system and proportional representation system enhances the power of party leaders over backbenchers, and thus facilitates majority coalition-building for trade liberalization. Yet, the larger geographic size of single-member electoral districts per a Lower-House legislator means that the use of pork barrel projects is less effective in changing the trade policy positions of legislators. Instead of using the side-payment strategy for legislators, we predict that party leaders will need to enact policies to compensate for the income losses of their constituents, in order to build majority coalitions. Testing this prediction, however, is beyond the scope of this paper.

Table 1: Explaining Liberalization Plan w/ Economic Characteristics

	(1:OLS)	(2:OLS)	(3:OLS)	(4:OLS)	(5:Oprobit)
	Plan	**Plan**	**Plan**	**Plan**	**Plan**
Price Ratio	0.448***	0.445***	0.429***	0.411**	0.443***
	(0.155)	(0.156)	(0.157)	(0.156)	(0.168)
Herfindahl Index	0.308	0.332	0.222	0.303	0.136
	(0.721)	(0.727)	(0.737)	(0.732)	(0.751)
Decline	0.414	0.391	0.333		0.312
	(0.272)	(0.278)	(0.285)		(0.302)
Wage Ratio		-0.245	-0.107	0.346	-0.150
		(0.562)	(0.581)	(0.663)	(0.604)
RD Ratio			-0.219	-0.209	-0.498
			(0.232)	(0.229)	(0.395)
Agriculture				0.649	
				(0.406)	
Constant	1.287***	1.389***	1.476***	1.291***	
	(0.296)	(0.378)	(0.390)	(0.423)	
cut1					0.293
Constant					(0.418)
cut2					0.834*
Constant					(0.429)
cut3					1.690***
Constant					(0.453)
R^2	**0.131**	**0.133**	**0.144**	**0.158**	
Standard errors in parentheses	* p<0.10	** p<0.05	*** p<0.01		

Note: The dependent variable is the Plan, which takes value 1: scheduled for liberalization within a year, 2: within

Table 2: Explaining Liberalization Plan w/ Economic & Political Characteristics

	(1)	(2)	(3)	(4)	(5)
	Plan	Plan	Plan	Plan	Plan
Price Ratio	0.446**	0.429**	0.410**	0.405**	0.424**
	(0.175)	(0.175)	(0.176)	(0.181)	(0.183)
Herfindahl Index	0.261	0.404	0.495	0.216	0.384
	(0.711)	(0.719)	(0.750)	(0.758)	(0.737)
% Ministerial Positions	-6.615*	-7.557*	-6.342		-8.831**
	(3.843)	(3.913)	(4.063)		(4.308)
Wage Ratio		-0.670	-0.431	-0.0269	-0.808
		(0.565)	(0.606)	(0.615)	(0.608)
RD Ratio			-0.128	-0.203	
			(0.236)	(0.234)	
Decline			0.300	0.332	
			(0.286)	(0.289)	
LDP vote share (1958)				0.0260	
				(0.0315)	
_cut1					-0.699
					(0.553)
_cut2					-0.149
					(0.557)
_cut3					0.694
					(0.561)
Constant	2.054***	2.396***	2.146***	-0.0409	
	(0.424)	(0.511)	(0.555)	(1.955)	
r2	0.108	0.125	0.146	0.125	

Standard errors in parentheses

* p<0.10 ** p<0.05 *** p<0.01"

Table 3: Explaining the Implementation

	(1:OLS)	(2:OLS)	(3:OLS)	(4:Probit)	(5:Probit)	(6:Probit)
					Not	Not
	Implement	Implement	Implement	Delay	Liberalized	Liberalized
Price Ratio	0.303	0.192	0.0255	-0.0516	0.0801	-0.0724
	(0.244)	(0.281)	(0.288)	(0.234)	(0.220)	(0.235)
Herfindahl Index	-0.484	-0.300	-0.190	-0.460	-0.983	-0.409
	(1.132)	(1.200)	(1.170)	(1.035)	(1.058)	(1.031)
Decline	0.683	0.717	0.523	-0.0711	0.266	-0.00262
	(0.426)	(0.453)	(0.446)	(0.379)	(0.362)	(0.378)
RD Ratio			-0.491	-0.573	-0.592	-0.651
			(0.362)	(0.428)	(0.448)	(0.471)
Wage Ratio			0.604	1.066	1.478*	1.132
			(0.950)	(0.808)	(0.818)	(0.802)
LH LDP vote share 1958		-0.00844			0.00296	
		(0.0486)			(0.0387)	
Change LH LDP vote		0.00904			-0.0780	
Share		(0.0720)			(0.0638)	
UH LDP Vote Share 1959			0.0120	0.0355		0.0266
			(0.0335)	(0.0316)		(0.0309)
Change UH LDP vote			0.0680**	0.0840**		0.0715**
Share			(0.0312)	(0.0354)		(0.0338)
Constant	1.555***	2.156	1.179	-2.226	-1.256	-1.837
	(0.465)	(2.837)	(1.771)	(1.616)	(2.406)	(1.585)
r2	0.0590	0.0518	0.137			

Standard errors in parentheses * p<0.10, ** p<0.05, *** p<0.01

Table 4: Industry Characteristics and Changes in the Weighted LDP Vote Shares

	(1)	(2)	(3)	(4)	(5)	(6)
	Change LH LDP Vote	Change LH LDP Vote	Change LH LDP Vote	Change UH LDP Vote	Change UH LDP Vote	Change UH LDP Vote
Liberalized 61	-0.220			-0.365		
	(0.808)			(1.848)		
Liberalized 62		0.210	-0.0202		-3.755**	-3.729**
		(0.662)	(0.670)		(1.445)	(1.572)
Price Ratio	-0.00814	0.0183	0.188	1.572	1.310	2.435**
	(0.468)	(0.470)	(0.463)	(1.082)	(1.038)	(1.086)
Herfindahl Index	-3.957**	-3.927**	-3.787*	-5.236	-4.408	-8.938*
	(1.955)	(1.941)	(1.958)	(4.474)	(4.236)	(4.591)
Decline	1.495**	1.560**	0.877	0.947	0.464	2.553
	(0.739)	(0.736)	(0.784)	(1.667)	(1.586)	(1.837)
Agriculture			1.753*			-6.472***
			(1.014)			(2.378)
LDP LH vote share 1958	-0.142*	-0.144*				
	(0.0788)	(0.0788)				
LDP UH Vote share 1959				-0.504***	-0.481***	
				(0.112)	(0.107)	
Constant	5.099	4.993	-3.539***	23.10***	24.35***	2.650
	(4.669)	(4.672)	(0.919)	(5.546)	(5.318)	(2.156)
r2	0.172	0.172	0.168	0.314	0.374	0.269

Standard errors in parentheses * p<0.10 ** p<0.05 *** p<0.01"

Table 5: The Role of Govt. Spending in Changes in LDP Vote Share for LH and UH

	(1)	(2)	(3)	(4)
	Change LH LDP Vote	Change LH LDP Vote	Change UH LDP Vote	Change UH LDP Vote
% Liberalized	0.131		-0.140	
Workforce	(0.0910)		(0.239)	
Num. Liberalized		3.79e-08		-0.000000108
Workforce		(4.93e-08)		(0.000000127)
Spending PC 60-64	2.889**	2.876**	-4.867	-5.238
	(1.222)	(1.264)	(3.207)	(3.247)
Constant	-0.146***	-0.119**	0.194	0.193
	(0.0501)	(0.0459)	(0.132)	(0.118)
r2	0.138	0.109	0.0541	0.0623

Standard errors in parentheses

="* p<0.10 ** p<0.05 *** p<0.01"

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