The Impact of Industrial Growth on Regional Prosperity: The Case of Japan's Textile Industry and Population Change in the 1930s

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Abstract

There is a question as to whether unexpected fluctuations in exchange rates have a substantial impact on highly trade-dependent sectors within the manufacturing industry in developing countries. This paper examines how labor markets, productivity, and population size in municipalities engaged in the production of export-oriented cotton textiles in Japan responded to the sudden and unexpected exchange rate changes triggered by the suspension of the gold export standard at the end of 1931.

Keywords: Exchange rate, Economic shocks

1. Introduction

Whether exchange rate fluctuations affect the real economy is a crucial research topic in macroeconomic analysis[20][29][4]. Recent studies suggest that exchange rate changes may have substantial short-term effects, and empirical research has highlighted that under specific conditions, fluctuations in the real exchange rate can significantly influence production growth[28][2]

Furthermore, research detailing the transmission channels of these effects has gained attention. One approach examines exchange rate pass-through, analyzing how exchange rate fluctuations affect prices and trade[10][13][3] [12][19] [21] Another perspective considers the financial channel, which posits that a depreciation of the domestic currency against the U.S. dollar may negatively impact economic activity.

Among these channels, the trade channel has garnered particular interest. The trade channel refers to the mechanism through which exchange rate fluctuations impact the macroeconomy via imports and exports, with its relative strength varying depending on a country's level of development. In advanced economies, the impact of exchange rate changes on the real economy primarily occurs through the import channel, increasing labor adjustment costs and unemployment rates for domestic workers competing with imports[5][6][14] . In contrast, studies suggest that in developing countries, exchange rate fluctuations exert their influence mainly through the export channel[7][18][24].

For instance, Bampi and Colombo (2021) [7]constructed a firm-level dataset on Brazil's manufacturing sector and found that the unexpected depreciation of the Brazilian real during the 2008 global financial crisis had a positive impact on output in net-export sectors. Similarly, Egger and Zoller-Rydzek (2020)[18], using regional labor market data from Turkey, demonstrated that increased export exposure accounted for most of the observed labor market effects. While these studies provide valuable insights into the effects of trade shocks in developing countries, their focus has largely been on the 2000s, leaving it unclear whether similar patterns hold in other historical contexts. There is extensive literature on the effects of trade shocks, including exchange rate fluctuations and trade liberalization, on labor markets and urban population size[32][33][5][6][27][16][17].Regarding cyclical recessions, Blanchard and Katz (1992)[9] have analyzed their impact, while studies such as Carrington (1996)[11], Black, McKinnish, and Sanders (2005)[8], Hanlon (2017)[22], and Liu (2020) have examined the effects of temporary shocks. The duration of these effects varies across different cases.

Focusing on Japan provides important insights into the trade channel through which exchange rate fluctuations exert their influence. This is because Japan may differ from European countries in terms of how it experiences and recovers from economic shocks. Davis and Weinstein (2002)[15], for example, examined the impact of World War II bombings on Japanese cities to identify the determinants of urban size and concluded that the bombings had no lasting effect on long-term urban population levels. Their findings suggest that despite experiencing economic shocks, cities tend to revert to their original size. Hanlon and Hebrich (2022)[23] offer a possible explanation for this pattern, noting that compared to the UK (Hanlon 2017[22]) and Germany (Schmann 2014[31]), Japan's geographically rugged terrain may have segmented labor mobility, reinforcing the role of locational fundamentals in

determining urban size.

As for empirical studies on exchange rate shocks in contemporary Japan, Yokoyama, Higa, and Kawaguchi (2021)[34] analyzed how firms adjusted employment in response to exchange rate fluctuations between 2001 and 2012 using firm-level data. Their study found that non-regular workers were more susceptible than regular employees to employment adjustments resulting from firm performance shocks induced by exchange rate changes. However, this study focuses on the 2000s and employs a firm-level perspective, leaving the effects on regional labor markets and municipal population dynamics unexplored.

In recent years, studies examining physical shocks such as earthquakes in Japan have gained increasing attention. Imaizumi et al. (2016) [26]analyzed the impact of the 1923 Great Kantō Earthquake, revealing both average and trend-related changes in the share and number of workers in the affected areas. Hunter and Ogasawara (2018)[25] demonstrated that the earthquake shifted both demand and supply, leading to fluctuations in wholesale prices in the disaster-stricken regions, with these effects subsequently propagating to broader areas. However, these studies focus solely on shocks involving physical destruction and do not address trade-related shocks.

In contrast, this paper is the first economic history study to analyze the impact of trade shocks on manufacturing in Japan. A central question in this research area is whether unexpected exchange rate fluctuations have substantial real effects on highly trade-dependent sectors within the manufacturing industry in developing countries. To address this question, this paper examines how labor markets, productivity, and population size in municipalities engaged in export-oriented cotton textile production in Japan responded to the sudden and unexpected exchange rate changes triggered by the suspension of the gold export standard at the end of 1931.

Focusing on this period, industry, and event offers two key advantages. First, the geographic concentration of factories in the cotton textile industry provides a favorable empirical setting. At least two-thirds of Japan's cotton textile production at the time was carried out by geographically clustered small and medium-sized factories. Given that cotton textile production was concentrated in specific municipalities, it is expected that the impact of the exchange rate shock varied between these municipalities and those not engaged in such production. This paper primarily focuses on Hyōgo Prefecture, which contained municipalities involved in cotton textile exports and also had major trading ports.

The second key feature of this study's empirical analysis is the limited policy response to the event. Following the reimplementation of the gold export ban at the end of 1931, the exchange rate sharply depreciated, yet the government did not intervene in the market, maintaining a laissez-faire approach. The only major policy initiative at the time was the launch of the "Emergency Relief Public Works" program (Jikyoku Kyūkyū Jigyō) in the autumn of 1932, aimed at addressing the ongoing rural economic downturn. However, this initiative differed from the Tennessee Valley Authority (TVA) under the U.S. New Deal in several respects. Specifically, the program was implemented on a nationwide scale, covering all prefectures, and focused primarily on municipal road construction and river improvements. Unlike the TVA, the policy did not concentrate budgetary resources on specific regions.

This study's empirical analysis yields three main findings. First, municipalities engaged in export-oriented cotton textile production experienced a statistically significant increase in the number of workers after the event compared to neighboring municipalities. Second, production output was also positively and significantly affected, although the impact on labor productivity was less clear. Third, export-oriented cotton textile municipalities saw a statistically significant increase in population relative to neighboring municipalities.

These findings suggest that in developing countries where exports serve as a key driver of growth, exchange rate fluctuations can have substantial effects on industries, stimulating economic activity in regions where these industries are concentrated and contributing to population growth.

The remainder of this paper is structured as follows. The next section describes the dataset used and the analytical methodology. This is followed by the presentation of results and an analysis of these findings in relation to the study's hypotheses. The final section provides concluding remarks.

2. Data

I constructed an annual panel dataset at the municipal level for Hyōgo Prefecture covering the eight-year period from 1928 to 1935 (414 municipalities $\times$ 8 years = 3,312 observations). In doing so, I excluded Kōbe City, as handling its administrative boundary changes was particularly challenging,

as well as five other municipalities that housed large-scale spinning mills[1]. Large spinning mills often included integrated weaving facilities, but they were primarily influenced by the export of cotton yarn rather than the relatively smaller-scale production of cotton textiles. The exclusion of these municipalities helps to isolate the effects specific to the cotton textile industry.

Hyōgo Prefecture was selected as the study's sample region for two main reasons. First, as mentioned earlier, it was home to a well-established industrial cluster. Second, its proximity to major trading ports made it a key hub for export-oriented production.

Data on the number of workers in the cotton textile industry and the production value of cotton textiles were obtained from the *Hyōgo Prefecture Statistical Yearbook*. The availability of production values for specific industries at the municipal level is rare in Japan, making this dataset particularly valuable. Prefectural statistics in interwar Japan were compiled by local governments in response to central government-led surveys, adjusting for overlaps in survey items while also incorporating prefecture-specific data where necessary (Satō, 2014)[30]. The primary source for industrial data was the *Industrial Statistics Survey*, which had been conducted every five years since 1909 but was revised into an annual survey in 1920. During the study period, this survey primarily collected data on factories with five or more workers, meaning that micro-scale workshops employing fewer than five workers were not included. Given that small-scale weaving workshops likely existed to some extent, it is important to recognize that estimates based on this data may understate the actual impact.

Additionally, municipal-level population data for 1930 and 1935 were obtained from the national census. This data is incorporated as a dependent variable in the analysis to examine differences between population trends and the three key industrial variables discussed above.

To illustrate the extent of the exchange rate shock triggered by the re-imposition of the gold export embargo at the end of 1931,Figure1 and Fiugure2 depict the trends in exchange rates, as well as the export volume and value of cotton fabrics. As shown in Figure1, the sharp depreciation of the yen was accompanied by a significant increase in the export volume of

[1]Oda Village, Kawabe District;Amagasaki City;Nishinomiya City;Takasago Town, Kako District;Ako Town, Ako District

Source: Ministry of Finance, Financial Bureau, "Reference Book on Financial Affairs"

Figure 1: Exchange Rate Trends:US Dollar/100Yen,Monthly Average

Source: Bank of Japan Statistics Bureau (1999), "Reprint Edition of Major Economic Statistics of Japan Since the Meiji Era"

Figure 2: Trends in the Export Quantity, Value, and Unit Price of Cotton Fabrics Before WW2

cotton fabrics, which nearly doubled between 1931 and 1935, as illustrated in Figure2 . This clear post-event surge in exports indicates that the rapid depreciation of the yen triggered a substantial export boom in the cotton fabric industry.

The exchange rate shock did not affect all municipalities in Hyogo Prefecture uniformly. Cotton fabric production facilities were concentrated in a limited number of municipalities, while more than half of the municipalities in the prefecture had neither cotton fabric factories nor other textile manufacturing facilities, such as spinning mills, and were therefore less exposed to the export boom. The empirical strategy of this study utilizes the re-imposition of the gold export embargo at the end of 1931 to measure the impact of the exchange rate shock by comparing the number of cotton fabric workers, production value, and labor productivity before and after the event between municipalities with export-oriented cotton fabric production

and their neighboring municipalities.

In the quantitative analysis in the following section, I control for the presence of spinning mills, which might have also engaged in fabric weaving, as well as the presence of other major export-oriented industries such as raw silk and silk fabric production. Controlling for spinning mills is necessary because, as mentioned earlier, these facilities often included fabric weaving operations, exported cotton yarn rather than finished fabrics, and tended to have significantly larger workforce sizes and production capacities than other factories within the same municipality. Although raw silk production was relatively rare in Hyogo Prefecture, it had been a key export commodity for Japan since the Meiji era, making it an important control variable in the analysis.

3. Empirical Analysis

On December 11, 1931, the Wakatuki Reijirō cabinet resigned, and on December 13, the Inukai Tsuyoshi cabinet was established. With this transition, the export of gold coins and gold bullion became subject to government approval, effectively imposing a ban on gold exports. The finance minister of the Wakatuki cabinet, Inoue Junnosuke, had frequently made statements advocating for the maintenance of the gold standard. However, after the political shift, the finance minister of the new Inukai cabinet, Takahashi Korekiyo, urgently implemented the re-imposition of the gold export ban. As a result, the value of the Japanese yen, having detached from the gold standard, rapidly depreciated, and the government adopted a policy of laissez-faire in response to this currency depreciation.

As noted earlier, the sharp depreciation of the exchange rate likely had a significant impact on both the export volume and value of cotton fabrics. This section aims to investigate the following questions: How did the rapid exchange rate change due to the re-imposition of the gold export ban affect the number of workers, production value, and labor productivity in municipalities producing export cotton fabrics? Additionally, what impact did it have on population dynamics?

To address these questions, this section uses an annual panel dataset covering 112 municipalities in Hyogo Prefecture to quantitatively analyze the real-world impact of the exchange rate shock on municipalities producing export cotton fabrics. The dataset spans the 8 years before and after the event, specifically from 1928 to 1935.

Given the focus on municipalities significantly affected by the exchange rate shock, we identify those producing export cotton fabrics. Specifically, we define the treatment group as the 32 municipalities where, as of 1928, the ratio of cotton fabric production (excluding narrow fabrics) to total cotton fabric production exceeds 0.5. Narrow fabrics are excluded because they are used for domestic kimono production and are unlikely to be exported. However, some cotton fabric production, excluding narrow fabrics, was likely intended for domestic use, so the analysis based on this criterion may include an underestimation bias. This potential bias should be kept in mind when interpreting the results.

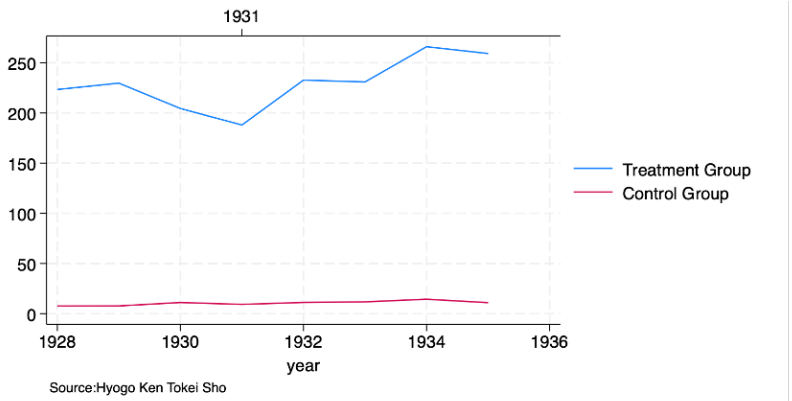

Figure 3: Number of Cotton Labor1928-1935

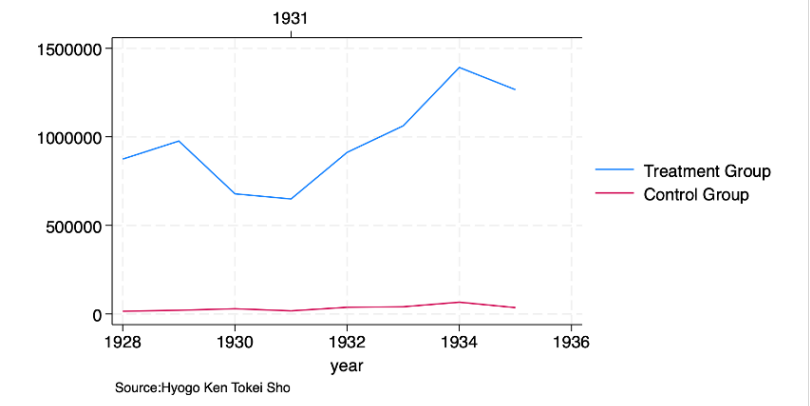

Figure 4: Output(Yen) of Cotton Fabrics

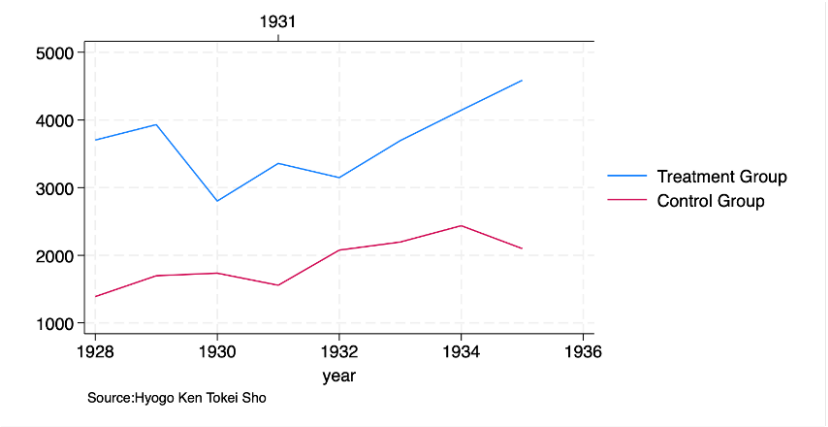

Figure 5: Labor Productivity of Cotton Weaving

Figures 3 to 5 show the changes in the number of cotton fabric workers, production value, and labor productivity in the treatment group before and after the re-imposition of the gold export ban. From these figures, it is evident that in the treatment group, both the number of workers and the production value, which had been declining, experienced a marked increase after the shock and continued to increase as a trend. Additionally, due to the increase in the number of workers not being matched by the increase in production value, labor productivity initially dropped in 1932 but then steadily increased thereafter. The stagnation in the number of workers and production value in the treatment group after 1934 is likely due to declining sales, possibly caused by tariff hikes in export destination countries.

To properly attribute these changes to the exchange rate shock, an appropriate control group must be established. The control group consists of municipalities adjacent to the treatment group that do not have factories for other important export items such as spinning, raw silk, or silk fabrics, and where the ratio of cotton fabric production (excluding narrow fabrics) to total cotton fabric production is less than or equal to 0.5. Municipalities with little relation to trade should not have been significantly affected by exchange rate fluctuations. As a result, 80 municipalities constitute the control group. As pointed out by Hanlon et al. (2022)[23], if the mountainous geography tends to segment labor markets, the importance of similar geographical conditions between the treatment and control groups becomes heightened. Moreover, the population size of the municipalities in both groups is approximately

5,000 to 6,000, and there is no significant difference. The city of Kobe, the largest in Hyogo Prefecture, is excluded from the empirical analysis in the next section due to the difficulty of dealing with administrative boundary changes. This exclusion is also meaningful in terms of removing outliers in population size. Since the variation in population size is not large, no weighting is applied.

The treatment and control municipalities are represented on the map in Figure 6.

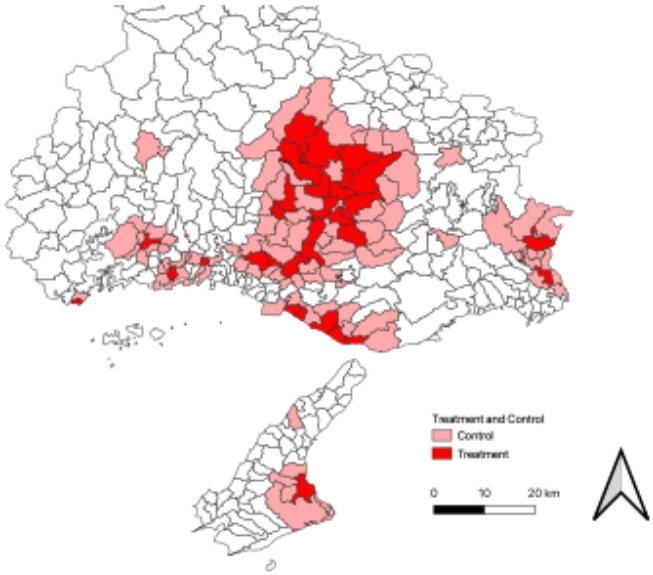

Figure 6: Map of Treatment and Control

From Figure 6, it can be observed that the export cotton fabric production municipalities are concentrated in the central inland area of Hyogo Prefecture, not too far from the port. Cotton fabric was produced in rural areas and transported to the port by trucks, among other means.

To identify the impact of the sharp depreciation of the exchange rate at the end of 1931 on the labor market in the export cotton fabric production municipalities, the following model will be estimated.

$Clabor_{it} = \alpha + \beta Treat_i \times Post_t + \gamma_i + \mu_t + \xi_{it}$

Here, i represents the municipality index (ranging from 1 to 112), and t represents the year index (covering 1928 to 1935, a total of 8 years). The variable $Clabor$ refers to the number of cotton fabric workers, $Treat$ is a

dummy variable indicating whether a municipality is a cotton fabric production municipality, and *Post* is a dummy variable indicating years after 1932. ξ_{it} is the random error term. γ_i and μ_t represent fixed effects for the municipality and the year, respectively. Summary statistics are provided in Table 1.

	Mean/Prop.	SD
cotton_labor_all	73.03	202.29
cotton_output_yen	302543.86	1025014.60
treat	.29	.45
post	.50	.50
treat_post	.14	.35

Table 1: Summary Statistics

The focus is on the coefficient β. It is expected that β will be positive, indicating that changes in the exchange rate had a positive impact on the number of cotton fabric workers in municipalities that produce cotton fabric. Since the exchange rate change was a nationwide macro shock and occurred at an unpredictable time, it can be considered exogenous to the variables of interest.

The results of the difference-in-differences analysis, using the number of cotton fabric workers as the dependent variable, are shown in column (1) of Table 2. The estimated coefficient for $Treat \times Post$ is 32.661, which is statistically significant at the 5percent level. This result suggests that in the treatment group, the number of cotton fabric workers increased by about 33 people compared to the control group after the event. Given that the average number of cotton fabric workers in the sample municipalities is about 73 (as shown in Table 1), this represents a 45percent increase, which is a substantial change.

As a check of the assumptions for the difference-in-differences analysis, trend plots were generated, resulting in Figure 7. Additionally, the result of the pre-trend check yields a p-value of 0.1763, meaning that the null hypothesis, which states that the trends are parallel, cannot be rejected. Therefore, when considering the plot in conjunction with this result, it can be concluded that the parallel trends assumption is satisfied.

	(1) Labor	(2) Output	(3) Productivity	(4) Population
treat_post	32.661**	3.30e+05**	-125.730	1619.099**
	(15.955)	(1.63e+05)	(390.162)	(802.873)
year=1928	0.000	0.000	0.000	
	(.)	(.)	(.)	
year=1929	1.866	33070.393	185.967	
	(6.836)	(26149.015)	(215.916)	
year=1930	-2.020	-4.59e+04	-736.633**	0.000
	(8.914)	(33601.786)	(281.169)	(.)
year=1931	-8.955	-6.28e+04*	-429.295	
	(8.786)	(33417.254)	(340.203)	
year=1932	-4.117	-7.01e+04	-392.594	
	(6.819)	(43657.301)	(392.534)	
year=1933	-4.233	-2.52e+04	-40.184	
	(6.881)	(32445.421)	(368.579)	
year=1934	7.695	87437.568**	400.545	
	(7.875)	(39362.686)	(407.701)	
year=1935	3.284	25640.881	602.040	-576.067
	(6.815)	(25216.766)	(557.015)	(718.032)
Constant	69.286***	2.61e+05***	3175.633***	5252.725***
	(6.459)	(35246.445)	(209.067)	(252.255)
Observations	896	896	344	218

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

Table 2: Estimation Results

Next, when using cotton fabric production value as the dependent variable, a similar regression was performed, and the results are shown in column (2) of Table 2. The production value significantly increased in the cotton fabric-producing municipalities compared to neighboring municipalities. The results when using labor productivity as the dependent variable are shown in column (3) of Table 2. In this case, there is no clear increase or decrease. When dividing production value by the number of workers, if the denominator is zero, the calculation cannot be performed. This limitation resulted in the sample being restricted to 344 observations, excluding those with zero laborers. This likely explains the unclear differences between the cotton fabric-producing municipalities and their neighboring municipalities.

Next, when using population as the dependent variable, the results are as shown in column (4) of Table 2. The population in the cotton fabric-producing municipalities increased significantly compared to the neighboring municipalities. As mentioned earlier, the population size of the sample municipalities was on average 5,000–6,000, so the increase of about 1,600 people represents a substantial change.

To more carefully control for the effects of other export products, such as cotton yarn (spun yarn) and raw silk, the sample was adjusted to exclude not only large spinning factories but also all municipalities producing cotton

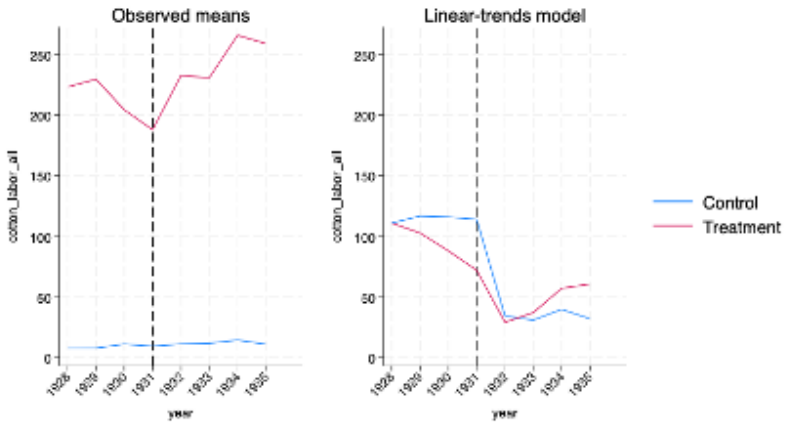

Figure 7: Graphical diagnostics for parallel trends

yarn and raw silk, i.e., Akashi City, Jyonan Village in Shikama District, and Shikama Town in Shikama District. The results after excluding these municipalities are shown in Table 3.

As shown in Table 3, the effects on cotton fabric workers and production value are almost identical to the results in Table 2. However, the impact on population is not as clear as in the previous results. This can be attributed to the fact that Akashi City's population size is significantly larger than that of the other sample municipalities, and its exclusion from the treatment group likely contributed to this discrepancy.

4. Discussion

In this paper, we have primarily focused on one of the direct channels through which exchange rates affect trade, specifically the trade channel. But what about other channels, such as the financial channel? The impact of the increase in external debt by cotton fabric companies was mitigated to some extent by the fact that the companies used domestic spun cotton yarn as raw material, rather than imported cotton. Since the spinning industry absorbed the cost increase of raw cotton, the price of cotton yarn circulating domestically did not rise significantly. Therefore, the increase in raw material costs did not become a major burden for the operations of fabric factories. Additionally, credit provided to prominent machinery traders when selling cotton fabric yarn through cotton fabric yarn traders to pro-

	(1) Labor	(2) Output	(3) Productivity	(4) Population
treat_post	34.889**	3.57e+05**	-137.054	1544.297*
	[16.391]	[1.68e+05]	[404.334]	[861.387]
year=1928	0.000	0.000	0.000	
	[.]	[.]	[.]	
year=1929	2.864	34329.670	173.798	
	[6.202]	[28693.354]	[220.941]	
year=1930	-4.321	-5.39e+04	-732.836**	0.000
	[9.030]	[32995.555]	[290.285]	[.]
year=1931	-8.972	-6.34e+04*	-421.814	
	[9.028]	[34331.283]	[348.771]	
year=1932	-5.681	-7.91e+04*	-370.470	
	[6.835]	[44100.305]	[403.378]	
year=1933	-5.767	-3.48e+04	-39.397	
	[6.846]	[31813.118]	[399.291]	
year=1934	5.841	72097.681*	389.591	
	[6.652]	[36486.014]	[410.333]	
year=1935	3.123	28395.811	596.368	-642.297
	[6.172]	[25811.803]	[567.618]	[724.787]
Constant	79.678***	2.68e+05***	3124.694***	4890.117***
	[6.584]	[35895.253]	[213.763]	[256.567]
Observations	872	872	332	213

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

Table 3: Estimation Results:excluding 5 municiparities

duction wholesalers was relatively small, and the impact on the factories and workers involved in the weaving process was further alleviated. As for the issue of banks refraining from lending due to the increase in external debt denominated in dollars, the impact on the cotton fabric industry as a whole was minimal because only a small number of prominent machinery traders, who had transactions with local banks, were affected due to the small scale of most cotton fabric businesses.

Moreover, this paper contributes to the study of the indirect channel, particularly in relation to exchange rate pass-through. Exchange rate pass-through refers to the extent to which fluctuations in exchange rates are reflected in the prices of traded goods. If exchange rate fluctuations are fully reflected in the prices of traded goods, it is referred to as "complete pass-through," while only partial reflection is referred to as "partial pass-through." For example, if a country's currency depreciates by 10percent, and the local currency price of traded goods also decreases by 10percent, that would constitute complete pass-through. On the other hand, if the local currency price only changes by 5percent, it would be considered partial pass-through. It is known that in cases of partial pass-through, the effects of monetary policy are weakened[10].

As seen in Figure 2, the yen-denominated export price of cotton fabrics

did not change significantly before and after the re-imposition of the gold export ban. On the other hand, Figure 8 shows the trend in the local currency-denominated price of cotton fabric in the Dutch East Indies, which was one of Japan's main export destinations in the late 1920s and early 1930s. The local currency price declined, suggesting that the pass-through was almost complete. This result contrasts somewhat with many studies on advanced economies, which report cases of partial pass-through. For example, Mary Amiti, Oleg Itskhoki, and Jozef Konings (2014)[3] used data from Belgium to show that export firms with a higher share of imported inputs tend to have lower exchange rate pass-through to export prices due to the offsetting effect of exchange rate fluctuations on marginal costs. Following this reasoning, it would not be surprising if Japan's cotton fabric industry, which relies heavily on imported cotton as its primary raw material, had a low pass-through rate. However, since the cotton yarn used as the direct input is spun domestically, this may explain the differing result observed in this study.

One reason for the lack of change in yen-denominated export prices is discussed by Abe (1989)[1]. Abe suggests that promising export destinations such as the Dutch East Indies and African countries had impoverished populations, which made the demand in these markets highly price-elastic. As a result, Japanese cotton fabric producers refrained from raising their markups. This paper supports that viewpoint.

In addition to low-income demand factors, supply-side considerations also played a role. It is likely that Japanese producers avoided raising prices because doing so could have led to poor sales, leaving them with unsold inventory. Moreover, it would have been difficult to win in price competition with other regions. This structure, where multiple producers compete to export low-value, inexpensive goods to low-income countries, likely prevented Japanese exporters from increasing their markups.

In addition to markup, supply-side factors such as rising production costs can push product prices higher. Although the depreciation of the exchange rate increased the cost of imported cotton, efforts within the spinning industry helped stabilize cotton yarn prices. As a result, the textile industry as a whole did not experience significant price pressure from rising raw material costs. Moreover, in the aftermath of the 1930s depression, labor costs continued to decline, and due to the nature of the production organization, wage demands from workers were largely unmet.

Regarding the decline in labor costs, Japan faced a rural recession in the 1930s, and income stagnation in rural areas helped suppress wage growth

among industrial workers in urban areas. This situation aligns with the concept of "unlimited labor supply" in the Lewis model. Many female weavers came from rural areas, working in small to medium-sized factories located in rural regions, where they used power looms and performed weaving and related tasks under the direction of factory owners to earn processing fees. These women often worked for multiple factory owners rather than being employed by a single employer.

Due to the characteristics of this production organization, labor unions were not formed within individual factories or across industries, except in the case of large enterprises. Wages were instead set uniformly by trade associations of factory owners. These institutional factors helped suppress wage increases and contributed to keeping the prices of export goods low.

5. Conclusion

In this paper, I addressed the issue of whether unexpected exchange rate fluctuations have a significant impact on trade-dependent manufacturing sectors in developing countries. Specifically, I analyzed how the sudden exchange rate changes caused by Japan's re-imposition of the gold export ban in late 1931 affected labor force numbers, production output, productivity, and population size in export cotton textile-producing municipalities. The results revealed a significantly positive impact on both cotton textile workers and production output. Furthermore, there was generally a positive effect on population size as well. These findings suggest that exchange rate changes can have a substantial effect on export-driven manufacturing industries and their regional economies in developing countries.

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