

Trade shocks, import-substitution, and power in the periphery: strikes in Buenos Aires 1907-1939

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1. Introduction

From the First Globalization to the US-China commercial war, trade shocks have prompted diverse political reactions worldwide. Through alterations of structural change patterns, trade disruptions have influenced the distribution of local political power and heightened social struggles (Autor, Dorn et al. 2013, Autor, Dorn et al. 2020). In recent years, historical studies about role of trade shocks have proliferated (Lehmann and Volckart 2011, Gomellini, Missiaia et al. 2022, Bräuer and Kersting 2024). However, most studies have concentrated on Western economies, leaving limited research on the connections between trade shocks and local political economy processes in periphery countries. Focusing on the case of Argentina this paper examines the impact of the international trade disruptions that followed World War I on labor conflicts, by looking to strike activity.

In Argentina the shock of WWI marked the end of the export-led era and accelerated industrialization (Di Tella and Zymelman 1967, Díaz-Alejandro 1970). Trade disruptions and the resulting protectionism boosted small and medium-sized industries, particularly of labor intensive sectors such as textiles (Villanueva 1969). However, when trade resumed the expansion of many of these industries was hindered. The shock-induced structural transformation was particularly accelerated in the city of Buenos Aires, where most of industrial establishments were concentrated. The rapid expansion of manufacturing activities in the capital was accompanied by an intensification of striking activities (Munck 1987, Andreassi 1991, Cordone 2021). The shock amplified the role of the urban working-class Argentina's economic and political life. Upheaval took place in a context of increasing political rights, as the country entered its first democratic period between 1916 and 1930. However, a significant portion of industrial workers were immigrants with limited political representation. Despite electoral rights, striking remained a key political tool for disenfranchised groups (Sánchez-Alonso 2013).

This article examines the role of trade shocks in fostering labor conflict. The main hypotheses tested are:

- Industries that experienced larger trade shocks saw a more pronounced increase in strike activity.
- Industry characteristics (nationality of workers, plant-size, capital intensity...) influenced strike patterns.

To test these hypotheses, this paper utilizes a novel database of approximately 2,000 establishment-level strikes in Buenos Aires from 1907 and 1939. The data has been used to generate indicators of strike activity for 12 sectors, including: frequency of strikes, worker's involvement, and volume of strikes. Strikes have been matched to census information, such as the nationality and gender of workers and capital owners, plant-size, and capital intensity. To assess the impact of trade shocks, the article integrates strike and census data with trade statistics. An instrumental variable has been used to deal with endogeneity problems, by using Uruguayan trade data. This database provides a basis for evaluating whether the trade shock of WWI bolstered the power of workers in a context of import substitution, mass migration, and transformation of the Argentinian economic structure. The article's results show that trade shocks had a significant and positive impact on the three measures of strike activity during this period. Thus, industries under pressure of foreign products were more likely to experience severe labor conflicts, explaining the decrease during WWI, and the sharp rise immediately after it. Moreover, higher presence of migrant workers enlarges the effect of shocks for frequency and involvement indicators.

2. Conflict, the Great War shock, and social transformations

From the late 19th century to World War I, Argentina experienced remarkable economic growth driven by agricultural exports (Díaz-Alejandro 1970). Despite growth, prosperity was unevenly shared, workers faced exceptionally high living costs and living standards of rural working classes were particularly low (Solberg 1974, Lanata-Briones 2023). Frequent economic crises and the poor living standards of the working class fueled social unrest during this period. Although strikes did not expand significantly until the 1890s, labor movements organized since the 1870s. Immigrants played a pivotal role in shaping these movements, spreading socialist ideas, and founding the country's first labor organizations (Poy 2014). The economic crises of 1890-1892 triggered the first wave of strikes in the country (Poy 2010).

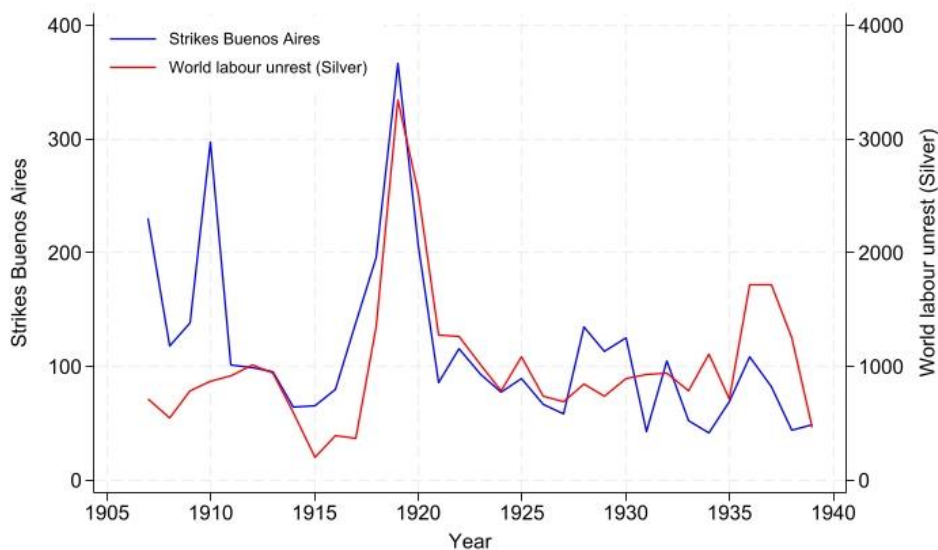
Despite mounting tensions, labor conflicts were not politically important until the early 20th century (Suriano 1989). The concentration of immigrants in cities, their increasing organization, and the rising social tensions, heightened concerns among the ruling classes. Immigrants were perceived as a source of urban unrest, prompting the implementation of restrictive migration policies in 1902 and 1910. By the 1900s strikes had become a firmly established tool for the working class to challenge elites and advocate for their interests (Lobato 2003).

The shock of World War I not only induced changes in the economic structure but also significant social transformation. During the democratic period from 1916 to 1930, political rights expanded to most of the male population. Then, urban working class, particularly in Buenos Aires, grew in prominence. A substantial share of these workers were European migrants. Although immigrants were excluded from direct political participation, they expressed their political voice through labor and social unrest (Sánchez-Alonso 2013).

In this context, social strife intensified remarkably. During the later stages of the conflict, strikes reached unprecedented levels (Figure 1). The 1914 shock is considered a transformative moment

for labor conflicts in Argentina (Andreassi 1991). Before that year, strikes were less organized, more spontaneous, and often driven by extra-economic factors (i.e. state repression). In contrast, post-1914 labor conflicts reflected both the economic structural economic changes and a political shift favoring working and urban classes (Andreassi 1991). The expansion of plant size and the geographical concentration of manufactures, particularly in Buenos Aires, are identified as key drivers of this increased labor strife (Cordone 2021). The government’s approach to labor conflict combined repression and enhanced control mechanisms with attempts to socially integrate workers and their protests within the framework of state regulations (Suriano 1989). Despite government openness to some of the workers demands, episodes of severe repression were frequent (Tragic Week in Buenos Aires (1919) and Patagonia Rebelde (1921) (Cantón 1973)).

Figure 1. Strikes in Buenos Aires (city) and World Labour unrest



Source: “Departamento Nacional de Trabajo” and Silver (2003).

Several aspects of Argentinian labour conflict during this period align with findings from major studies on strikes in other countries. Silver (2003) highlights that 1919 and 1920 were peak years for striking activity in metropolitan nations, while 1898 to 1904 and the war years saw low levels of activity. World War I created conditions that intensified labour conflicts. Identities—such as nationality, gender, and race—played a crucial role in shaping labour movements (Arrighi 1990). In Argentina, the procyclical nature of migration might further explain reduced conflict during economic downturn and the surge in labor unrest following WWI (Munck 1987).

3. Sources and data

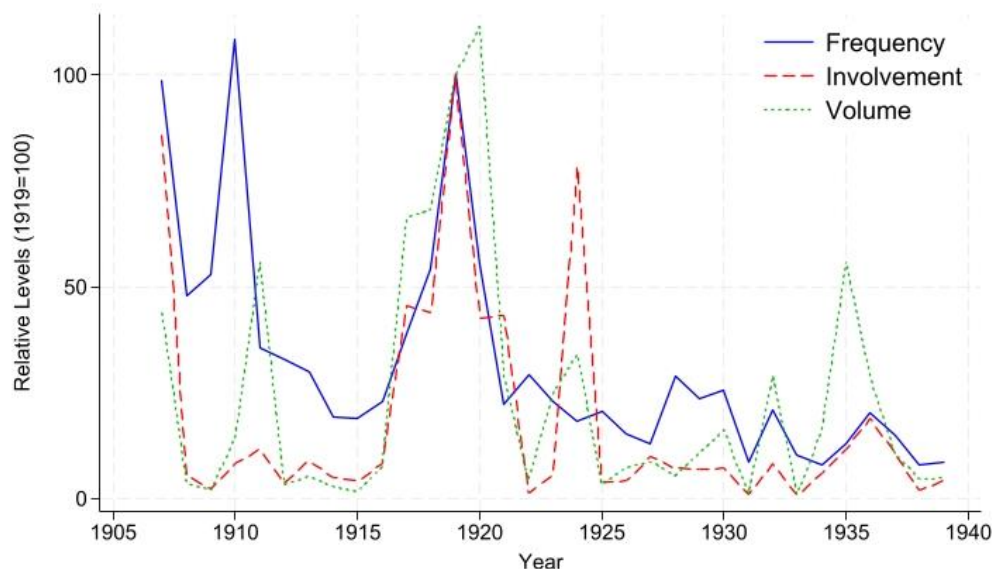
This article looks to industry-specific patterns to study the influence of the trade shocks that followed WWI on strike activity in the city of Buenos Aires. For this purpose, a database about establishment-level strikes was constructed. The information comes from several publications by the "Departamento Nacional del Trabajo" between 1907 and 1939. The dataset details the number

of strikes and strikers, duration (in days), and the causes and outcomes of each conflict. The database comprises 1,930 strikes, with establishment-level strike episodes grouped by industry and production sector. This grouping allowed the strike data to be matched with census information from 1914 and 1935. The census variables incorporated into the database include the nationality and gender of workers, capital intensity, number of employees and owners, and plant size.

Using this data, aggregate indicators of strike activity were constructed (Figure 2), which align with those commonly used in studies for other countries (Screpanti 1987, Silver 2003, Hamark 2006). The three main indicators are:

1. **Frequency of strikes** – stoppages of work relative to sector size. This indicator provides a picture of how frequently workers were strike. It is the simpler measure, but it does not consider the size and length of the conflicts.
2. **Involvement** – workers involved in stoppages of work relative to sector size. This indicator shows the total number of workers involved in strikes.
3. **Volume** – days lost in stoppages of work relative to sector size. It combines the number of strikers and the duration of conflicts, to show the severity of strikes.

Figure 2. Frequency, involvement, and volume 1907- 1939 (1919=100)



Source: own data based on “Departamento Nacional del Trabajo”

4. Method and Results

The next step is to test empirically the relationship between strike activity, trade shocks, and industry characteristics. The three dependent variables are measures for *Frequency* (number of strikes relative to the size of the sector), *Involvement* (number of workers involved in strikes), and

Volume (days lost in strikes relative to the size of the sector). I exploit the 12 sectors' heterogeneity over the 3 strike activity indicators. The estimating equation (1) is used to test the relations¹:

$$(1) \text{ Strike activity indicator}_{it} = \beta_0 + \beta_1 \text{Trade shock}_{it} + \beta_2 \text{Immigrant workers}_{it} + X_{it} + u_p + \epsilon_{it}$$

The immigrant workers variable is constructed based on the information provided by the 1914 census at industry level. To deal with the endogeneity from using Argentinian trade statistics, I built the trade shock variable using the percentual annual changes in import values from Uruguay by sector. Concerning other controls (X_{it}) I have used information about plant size of each sector, capital intensity (capital by industry relative to the number of workers of each industry), share of women and children's workers, and the percentage of inputs from foreign origin.

Table 1 presents the OLS estimates. Columns 1 to 6 show that trade shocks coefficients are positive and significant for all three measures. The coefficients in columns 4 to 6 indicate the following relationships: a 2.64% increase in imports (the mean trade shock) is associated with an increase of 5.4 strikers every 1,000 workers.² Similarly, it corresponds to an increase 1.415 strikes every 100,000 workers, and a rise of 7.2 working days lost per worker. While the coefficients may appear small, this is primarily due to the indicators being expressed on a per-worker basis. It is important to note that trade shocks ranged significantly, from -93% to +142%. Consequently, the impact of large shocks on labor outcomes per 1,000 workers is far from negligible.

Table 1. OLS Regressions:

VARIABLES	(1) Involvement	(2) Frequency	(3) Volume	(4) Involvement	(5) Frequency	(6) Volume
Trade shock	0.00209** (0.000981)	4.78e-06* (2.70e-06)	2.301*** (0.511)	0.00206** (0.000986)	5.36e-06** (2.64e-06)	2.726*** (0.692)
Immigrant workers share	0.0113* (0.00580)	5.54e-05*** (1.60e-05)	-0.868 (2.673)	0.0117** (0.00587)	4.82e-05*** (1.57e-05)	0.421 (3.236)
Dummy post-1914				0.0266 (0.0618)	-0.000535*** (0.000166)	71.64* (37.79)
Plant Size	0.00221* (0.00113)	3.30e-06 (3.12e-06)	-0.120 (0.499)	0.00216* (0.00114)	4.27e-06 (3.06e-06)	-0.279 (0.615)
Constant	-0.295 (0.382)	-0.00288*** (0.00105)	98.18 (173.9)	-0.344 (0.399)	-0.00190* (0.00107)	-32.69 (218.8)
Observations	208	208	148	208	208	102
R-squared	0.073	0.102	0.136	0.074	0.149	0.206
Number of Sectors	12	12	12	12	12	12

*** p<0.01, ** p<0.05, * p<0.1.

¹ Using sector specific fixed effects.

² Calculated from column (4): (0.00206*2.64*1000)

The share of migrant workers has a positive and significant impact on both *Involvement* and *Frequency*. Furthermore, the coefficient for migration is larger than that for trade shocks in explaining these two variables. This suggests that, within the context of trade shocks, the involvement and frequency of strikes was largely triggered by the presence of immigrant workers. However, the lack of significance of the migration variable for the Volume indicator indicates that the severity of strikes was determined by trade shocks.

Concerning other variables, only *Plant Size* is significant for *Involvement*. This implies that higher concentration of migrant workers in larger industries led to higher militancy. Larger plant size may have increased the economies of scale of labor organization, fostering stronger worker involvement. Finally, the *post-1914 dummy*, reveals that since 1914, strikes became less frequent but more violent. This last finding aligns with the notion that strikes may become more organized and less spontaneous than before 1914.

5. Conclusions

Drastic shifts in international trade flows have historically been linked to changes in the distribution of political and economic power among countries. The trade shock of the Great War triggered a global process that allowed peripheral agricultural economies to diversify their productive structures. Argentina exemplifies these transformations. Industrial development intensified after World War I, leading to the expansion of working and middle classes who began to enjoy broader democratic rights. Also, immigrants became deeply integrated into the nation's political life. Consequently, the disruptions in global trade elevated Argentina's urban and working classes to central position in the country's economic, social, and political landscape.

The quantitative evidence presented in this article demonstrates that trade shocks increased workers' involvement in strike activity, the frequency of strikes, and the overall volume of labor conflicts. Additionally, the presence of migrant workers significantly amplified the involvement and frequency of labor struggles. Thus, trade shocks and the presence of immigrant workers helps to explain the surge in strikes immediately following World War I, as well as the lower levels of labor conflict before the war and during the 1920s.

Interestingly, Argentina's experience during and after World War I bears similarities to India during this period. In both cases, the conflict spurred import substitution, setting the groundwork for labor conflicts in coming decades (Bhavnani and Jha 2011, Vellore, Lampe et al. 2020). Future research should explore comparisons between the political economy of these two nations—one under the British Empire and the other within the “Informal” Empire.

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