
# Aduanas internas: el caso de “extraña jurisdicción” en Argentina

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# Internal Customs: the case of "extraña jurisdicción" in Argentina*

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**Abstract**

This paper explores the effect of internal trade barriers on industrial firm decisions. I analyze administrative tax return datasets and examine the case of "out-of-jurisdiction" ("extraña jurisdicción"), a concept under which Argentine provinces imposed a surcharge on the turnover tax ("Impuesto a los Ingresos Brutos") on interprovincial manufacturing trade until 2017. These surcharges were eliminated in 2018. I find that removing these internal trade barriers increased the volume and the frequency of trade. However, no significant effects are found on the extensive margin, likely due to rigidities.

JEL Codes: H21, H27, F14, F15

Keywords: turnover tax, subnational governments, internal customs, Argentina, Impuesto a los Ingresos Brutos.

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# 1 Introduction

The "Impuesto a los Ingresos Brutos" is a turnover tax imposed by Argentine provinces. It is the main source of own revenue at the provincial level. It collects about 70% of the subnational tax revenue. This tax is implemented, regardless of its opposition to every optimal taxation recommendation. Turnover taxes generate a cascade effect, and imply several distortions, affecting relative prices and resource allocations (Keen, 2013). Indeed, input taxation derives in inefficient vertical integration (Williamson, 1971). Thus, the tax burden fosters inefficiencies and, ultimately, reduces the aggregate productivity of the economy (Hsieh & Klenow, 2009). In this line, (Libonatti, 1998) and (Porto *et al.*, 2014) highlight the anti-export bias of the Ingresos Brutos tax. Thus, if the goal is to reduce efficiency costs, (Bird, 2011) highlights that when it comes to subnational taxation it is desired to levy only on domestic residents.

In the past, the provinces set surtaxes on sales of firms located in jurisdictions other than the one where the taxable event happens. This is called "extraña jurisdicción", which is translated as "out-of-jurisdiction" taxation. Such a decision generated de fato internal customs. Then, the tax burden was transferred to non-residents, fostering distortions. By the end of 2017 the national government, provincial governments, and the Autonomous City of Buenos Aires signed a Fiscal Consensus ("Consenso Fiscal"). In the section III, item "a" it states:

*"The elimination of differential tax treatments grounded in the location of the taxpayers of the Ingresos Brutos Tax".*

Then, the out-of-jurisdiction surcharges were eliminated. Starting on January 1st 2018. Prior to this regulation, provinces used to set higher tax rates for taxpayers located outside their own jurisdictions. Differential taxation schemes took various forms across provinces, depending on economic activities and/or revenue levels (which often determined the applicable tax rate for the following year).

In the case of the province of Córdoba, for the industrial production sector, the 2017 Tax Law established a general rate of 0.5%, but also stated:

*"For taxpayers who do not carry out their industrial activity in establishments located in the province of Córdoba, the applicable tax rate—unless the transactions involve final consumers—shall be:*

1. *Four percent (4.00%) or the tax rate established for wholesale trade in Article 13 of this Law, whichever is lower, when the total taxable base declared or determined by the Directorate for*

*fiscal year 2016—attributable to all activities conducted, including those that would be exempt and/or non-taxable, regardless of the jurisdiction in which they take place—does not exceed one hundred and forty million pesos ($140,000,000.00);*

2. *Four point seventy-five percent (4.75%) or the tax rate for wholesale trade established in Article 16 of this Law, whichever is lower, when the total taxable base referred to in the previous subsection exceeds one hundred and forty million pesos ($140,000,000.00).”*

Thus, during the 2017 fiscal year, industrial production activities were taxed at 0.5% if they belonged to firms located within the district, whereas those classified as "out-of-jurisdiction" paid 4% or 4.75%, depending on their revenue volume in 2016. As of 2018, following the signing of the Fiscal Consensus, the general industrial tax rate was set at 1.30% regardless of the firm's location, and it was subsequently adjusted to 1.25% in 2019. Moreover, the Fiscal Consensus was signed on November 16, 2017, and was not anticipated by the public. Indeed, Google Trends shows no evidence of interest in such an agreement before it was signed. Furthermore, some provinces had to amend their 2018 Tax Law because they had already passed it before the fiscal pact, without incorporating its provisions. This was the case for the province of Buenos Aires, one of the main proponents of the consensus. In contrast, the province of Córdoba passed its 2018 Tax Law on December 13, 2017, after the Fiscal Consensus was signed.

Theoretical and empirical literature suggests that this type of additional tax introduces distortions in relative prices, increasing the cost of transactions that cross provincial borders and consequently driving economic activity to suboptimal levels. This study, therefore, aims to measure the impact of eliminating this additional tax on economic decisions in the province of Córdoba, using previously untapped administrative databases. Moreover, Córdoba's economic complexity and geographical location enhance the relevance of the findings and their external validity. Furthermore, the probability of reintroducing these internal tariffs is not negligible in the current context, especially given the persistent fiscal weakness of Argentina's three levels of government. In this scenario, this research agenda becomes increasingly relevant as input for the economic policy debate.

This study seeks to contribute to the literature on the welfare effects of cascading taxes (Keen, 2013) and the impact on firm decisions, labor and investment (Xing *et al.*, 2022). In fact, it expands existing empirical research by covering a massive reform that affects the entire manufacturing sector. It connects with empirical literature on distortions and allocative efficiency, such as Hansen *et al.* (2022), who measure the elasticity of vertical integration and the negative impact on production focused on a specific market. Along these lines, Restuccia & Rogerson (2008)

examine various fiscal policy interventions and their effects on output, capital accumulation, and productivity. Furthermore, this study is related to the research of Adamopoulos & Restuccia (2014) on the impact of distortional policies on productivity and firm size. This research is also linked to the work of (Martin *et al.*, 2017) on the elimination of protection regimes for small and medium enterprises and their relationship with employment, investment, and output. Furthermore, this paper complements the distributive approach of other empirical taxation papers, such as (Fernández Felices *et al.*, 2016).

In addition, this paper contributes to the trade literature. More specifically, to the empirical study of the welfare costs of trade barriers (Lee, 1993; Melitz, 2020). Furthermore, the evidence presented is related to the internal costs that generate small segmented markets and the inability of firms to exploit economies of scale (Atkin & Khandelwal, 2020). Likewise, the results highlight the costs of cross-border taxation.

The paper is structured as follows: 2 presents the administrative databases used for the estimates. 3 outlines the empirical strategy. 4 presents the results. 5 provides concluding remarks.

# 2 Data

The data for this study come from the monthly administrative records of the Ingresos Brutos tax across Argentina's 24 subnational jurisdictions. The dataset spans from 2017 to mid-2021 and compiles taxpayers' self-declared monthly tax returns, including key dimensions relevant to tax obligations. Specifically, for each taxpayer, it provides information on the taxable base, the economic activity classification according to the Economic Activities Classifier of the Federal Revenue System (NAES), the applicable tax rate, and the determined tax amount. The taxable base is calculated based on nationwide total sales, apportioned by province using a 50% weight on revenue and a 50% weight on the geographical distribution of costs. This apportionment relies on the most recent financial statements submitted in the previous calendar year.

The database also identifies whether a firm is headquartered within or outside the province of Córdoba, which determines whether the differential rate for "out-of-jurisdiction" firms applies. This identification variable is the same one used by Córdoba for audit and control purposes. Until the end of 2017, economic activities were classified using the Unique Activity Code of the Multilateral Agreement (CUACM) to determine the applicable tax rate. A code mapping was performed to ensure consistency in estimation exercises.

This study examines the impact of internal trade barriers caused by the incremental tax rate applied to industrial manufacturing activities. The analysis focuses on the years 2017 to 2019 to avoid distortions introduced by the COVID-19 pandemic, though future research may extend the study period. For context, Table 1 presents the sample size in terms of both revenue volume and the number of taxpayers. The dataset includes over 60,000 active manufacturing firms, approximately 15,000 of which operate in Córdoba.

Before the intervention, retail's turnover was above 30% of the total (Figure 1). Moreover, manufacturing and services were between 25% and 30%, while the remining sectors represented each a small fraction. However, when it comes to revenue the figures are slightly different (Figure 2). Then, retail reaches 40% and services 30%, while manufacturing reduces to 20%. The other activities are even less relevant. Regarding the geographical relevance of the tax, Córdoba is tied in the third place with Santa Fe, behind the province of Buenos Aires and the Autonomous City of Buenos Aires.

# 3 Empirical strategy

The study analyzes the removal of the surtaxes in 2018 to determine its impact on both the extensive and intensive margins. The 2017 Tax Law of the province of Córdoba established that the general tax rate for the industrial sector was 0.5% for companies registered in Córdoba and 4% for those registered outside the province. Additionally, if a company's 2016 revenue exceeded $140 million (including all its activities within Argentina), the tax rate for the latter case increased to 4.75%. By 2018, the general tax rate for industrial activities was standardized at 1.3%, and by 2019, it remained 1.247% without distinction based on firm location. Furthermore, the tax rate was 1.5% and 1.2% in 2020 and 2021 (respectively). Figure 4 illustrates the evolution of this theoretical tax scheme.

Thus, the empirical strategy focuses on identifying two groups: one referred to as the "treatment" group (which includes firms headquartered outside Córdoba) and another as the "control" group (comprising firms based in the province of Córdoba). By comparing these groups, the analysis first examines whether there was an actual change in the tax rates reported by taxpayers. Second, it seeks to estimate the effects on the intensive margin, that is, on the economic activity recorded by already established firms. Third, it studies the effects on the extensive margin, analyzing whether the composition of the groups changed as a result of the relaxation of the internal trade barrier created by the additional tax rates in place until 2017.

Of the total firms with manufacturing activity in Córdoba in 2017, 17.4% were headquartered there, while 82.6% were based in another jurisdiction. Nevertheless, the former represented 47.2% of the total turnover. Moreover, these figures are very similar along time. In the first stage, the study evaluated the adoption of the tax regimes established by the relevant laws each year. Figure 5 shows that both groups followed the tax regulations in a similar manner. For the local group, there is a clear convergence toward the statutory tax rate. Given the self-declared nature of tax filings, it is expected that firms would adopt the new rate immediately. Additionally, whenever tax benefits exist, they remain unaffected by a higher rate that could otherwise disadvantage the taxpayer. For the treated firms, the reported tax rates also aligned with the updated regulations, although with some adjustment over time. In 2018, the observed average tax rate took some time to fully adapt to the new level. However, from 2019 onward, empirical behavior closely matched theoretical expectations.

This behavior suggests that the transition to the new tax scheme was not uniform among the treated firms, but was instead influenced by the size of the company. Figure 6 shows that larger firms adjusted their tax rates immediately in line with the applicable legislation, while smaller firms experienced a more gradual adoption. This could be explained by the presence of informational asymmetries and associated implementation costs. Larger firms typically have professionals dedicated specifically to accounting and tax management, allowing them to adapt quickly to regulatory changes. In contrast, smaller firms, which do not always have these resources, may face delays in adoption due to the need to familiarize themselves with the new regulations. Since the cost of acquiring this information is a fixed cost, its relative impact is greater for companies with lower business volume.

The representativeness of the treatment and control groups is very similar, with each accounting for approximately half of the revenue before the legal modification. Regarding the distribution of firms, there is a strong concentration of taxable revenue in the highest percentiles (Figure 7). In fact, in the top percentile, the average revenue is about five times higher than that of the immediately lower percentile, and several times higher when compared to smaller firms. This pattern holds when distinguishing between the treatment and control groups (Figure 8 & Figure 9). However, among local firms, the average size is somewhat larger, which (given the similar total revenue between groups) reflects a lower number of firms in the local group.

Regarding the methodology for estimating the effects, a dynamic difference-in-differences approach is used to capture the differential impact of the legislative change. A positive difference in favor of the treated group from 2018 onward will reflect the allocative effect of the tax rate unification. Furthermore, I aggregated the information by quarter to smooth out fluctuations. In

addition, although there are dozens of industrial activities, the total revenue from the manufacturing activity is used for each firm. This approach prevents minor changes in reporting practices from distorting the results. For instance, a firm might consolidate two activities into a single category for tax purposes, which could appear as a drastic change in revenue when, in reality, it is merely a shift in tax classification criteria.

The estimated equation is:

$$\text{Outcome}_{it} = \sum_{t \neq 2017q4} \mu_t \cdot \text{Treat}_{it} + \mu_t + \mu_i + \epsilon_{it}$$

Where the subscript t indicates the quarter and the subscript i represents the firm. The dependent variable reflects the outcome variable being estimated. In the case of the intensive margin, it corresponds to the revenue value used as the taxable base. The coefficient of interest is associated with the first term on the right-hand side, which interacts the identification of treated firms with the time variable. Additionally, fixed effects for both quarter and firm were included. The last term represents the error term.

Additional measures are taken to prevent extreme values from biasing the results of the intensive margin estimation. First, turnover is adjusted for inflation. Second, this variable is transformed into natural logarithms. Third, firms with annual revenue in Córdoba below $60,000 at constant 2017 prices are excluded from the estimates. In other words, firms must have operations every year and maintain an average revenue of at least $5,000 per month. Lastly, the analysis covers data up to the second quarter of 2019. In the third quarter, elections took place, leading to a sharp drop in activity and increased instability. Later, in 2020, the COVID-19 pandemic and its mobility restrictions had an uneven impact on the groups considered.

Regarding the extensive margin, local companies cannot serve as the control group. It is reasonable to assume that the parallel trends assumption does not hold. Additionally, the pool of potential companies may differ. For firms located outside Córdoba, expanding operations often simply means entering a new market. In contrast, for local firms, it involves starting a new company from scratch. For this reason, the proposed approach continues to define firms headquartered outside Córdoba that choose to operate (or not) in the province as the treated group. Meanwhile, the control group should be based on companies operating in another province. Specifically, firms headquartered outside province "A" where the tax change observed in Córdoba did not occur or was minimal, and whose home province is "B" (different from A), will be included as the control group.

The first empirical stage was then evaluated for each of the other provinces. More pre-

cisely, the average observed tax rate was calculated for firms headquartered outside each province. The control group should consist of provinces that experienced minimal tax rate changes before and after the Fiscal Consensus of late 2017. It follows that the provinces of La Pampa and San Luis had some of the smallest changes (Figure 10 & Figure 11). The decision to use these provinces as the control group is ultimately based on the fact that San Luis was the only province that did not sign the Fiscal Consensus, while La Pampa was the only one that signed but did not ratify it in its provincial legislature (a necessary condition for implementing the new regulation that equalized tax rates between local and non-local firms). In a nutshell, while 'foreign' firms operating in Córdoba reduced their effective rate by roughly 2 percentage points, in San Luis and La Pampa, the decrease was only 0.5 percentage points.

Then, the model is similar to the one used for the intensive margin; however, the outcome variable is binary. It takes the value 1 if firm i has a taxable base in quarter t and 0 otherwise. To facilitate this, the original dataset is supplemented with 0s for every missing quarter, resulting in a balanced panel.

# 4 Results

First, I analyze the intensive margin. Figure 12 shows the parameter of interest for each quarter, from early 2017 to mid-2019. Coefficients are compared to the last quarter before the reform (Q4 2017). Before the reform, the coefficients are not statistically different from zero. However, once the rates are equalized—thus increasing the profitability of out-of-jurisdiction firms—the coefficients become positive and statistically significant. Moreover, they increase over time, indicating that the reform, which reduced the statutory rate gap by 3.5 to 4 percentage points, led to a relative increase in turnover. Additionally, the effective rate decreased by approximately 2.7 percentage points (see Figure 5), with an effect of about 10% in the first semester and between 15% and 20% in the third semester. I marked the beginning of 2019 because, by then, we can observe medium-term effects after firms have incorporated the new information and made decisions. This includes the apportionment of the tax base between provinces in accordance with the law.

Furthermore, I examined intermediate results by estimating the effect of reducing internal trade barriers on the number of months in which firms report activity. The unification of the tax rate led to firms registering revenue in more periods of the year. This result is robust across several specifications. As shown in Table 3, four different models confirm this finding. The point estimate indicates that eliminating the surcharge increases the number of months with reported revenue by

0.13. When considering a full year after the reform, this effect rises to 0.17. Additionally, when restricting the sample to firms with an annual turnover above $60,000, the coefficients are 0.08 and 0.12, respectively. Summing up, reducing the surcharge increases not only the volume but also the frequency of trade.

Then, I estimated the extensive margin effect. In this case, I assessed the probability of having activity (defined as registering some revenue) for firms operating in the province of Córdoba but headquartered elsewhere, and compared them to a control group composed of companies operating in La Pampa or San Luis but headquartered elsewhere. No statistical difference is observed between the groups after the change in tax rates was enacted (Figure 13). Opening a new market is harder than increasing sales to existing customers. Therefore, it is possible that extensive margin effects require more time to materialize.

# 5 Concluding remarks

This paper presents new evidence on the economic costs of taxation and its impact on trade. I highlight the distortive effects of internal customs imposed through turnover taxation between Argentine provinces. Using an unexplored administrative database of tax returns, I provide novel empirical insights.

I find that a reduction of 2.5% of tax costs in the manufacturing sector generates an increase in the intensive margin above 15% after the first year. Moreover, I find an intermediate effect: reducing the surcharge increases the frequency of trade. Finally, I do not find effects on the extensive margin. Probably, do to rigidities: it takes longer to open new markets than to increase the activity of established customers.

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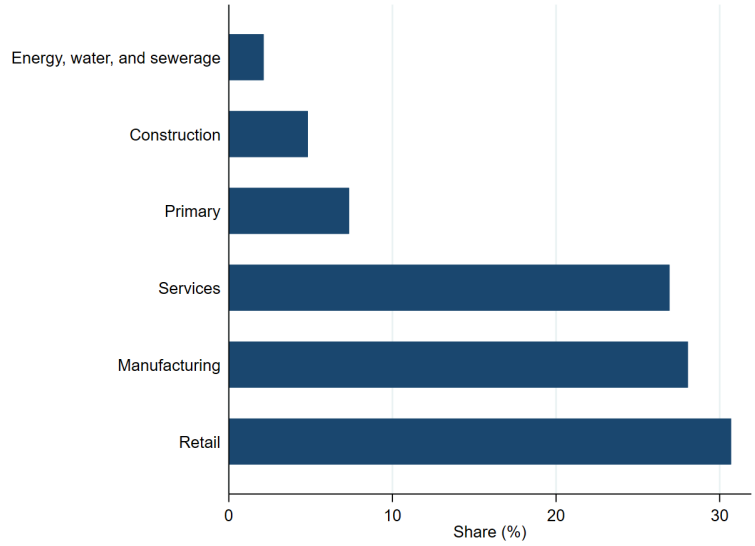
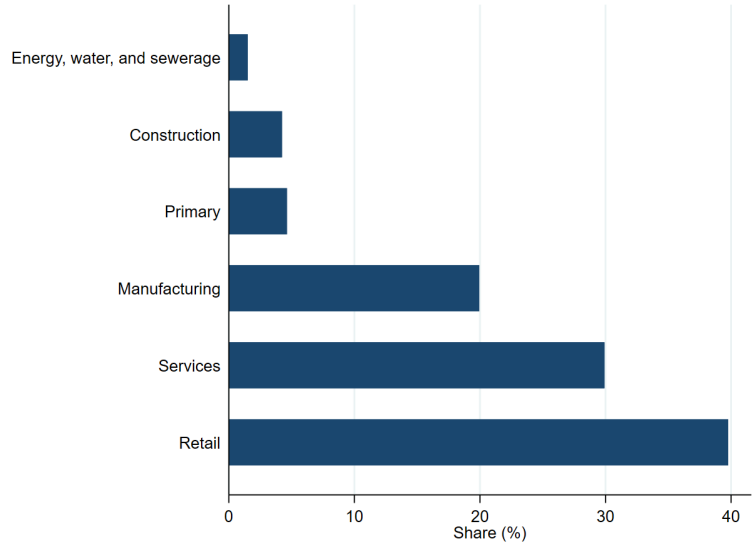
# Appendix: figures and tables

**Figure 1:** Share of turnover by economic sector (2017)



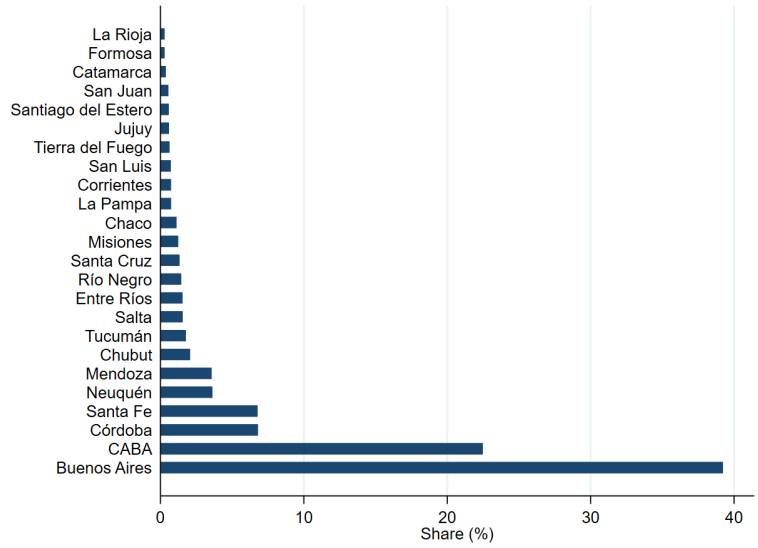

*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.
*Notes*: share total sales by economic sector (in all 24 provinces), according to Ingresos Brutos tax returns in 2017.

**Figure 2:** Share of tax revenue by economic sector (2017)



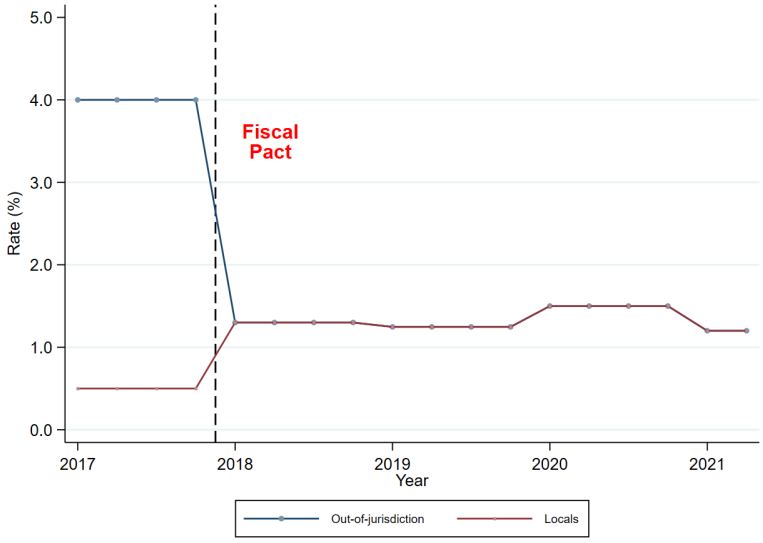

*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.
*Notes*: share total Ingresos Brutos tax revenue by economic sector (in all 24 provinces) in 2017.

**Figure 3:** Share of tax revenue by province (2017)




*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.
*Notes*: share total Ingresos Brutos tax revenue by province (in all 24 provinces) in 2017.

**Figure 4:** Theorical first stage



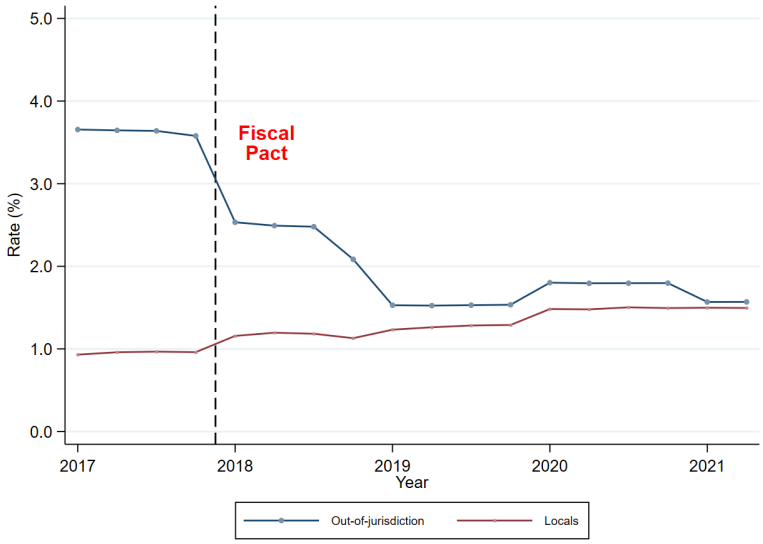

*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.
*Notes*: quarterly statutory Ingresos Brutos tax rate for manufacturing activities in the province of Córdoba.

**Table 1:** Main descriptives of the manufacturing sector

| | | 2017 | 2018 | 2019 |
|---|---|---|---|---|
| All provinces | Firms | 60,519 | 61,490 | 63,682 |
| | Turnover (mill. $) | 145,886 | 110,995 | 97,643 |
| | Tax liability (mill. $) | 2,970 | 1,762 | 1,408 |
| Córdoba | Firms | 14,497 | 14,655 | 15,140 |
| | Turnover (mill. $) | 12,034 | 9,441 | 8,486 |
| | Tax liability (mill. $) | 168 | 79 | 67 |

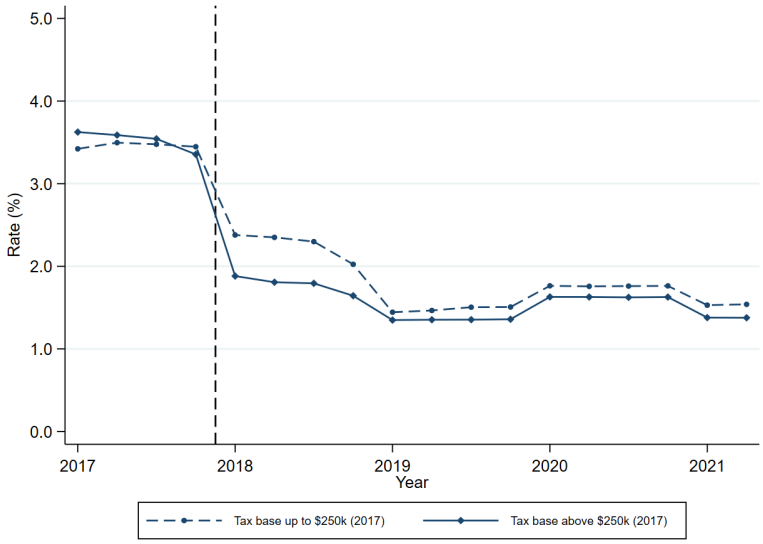
*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.

**Figure 5:** Empirical first stage



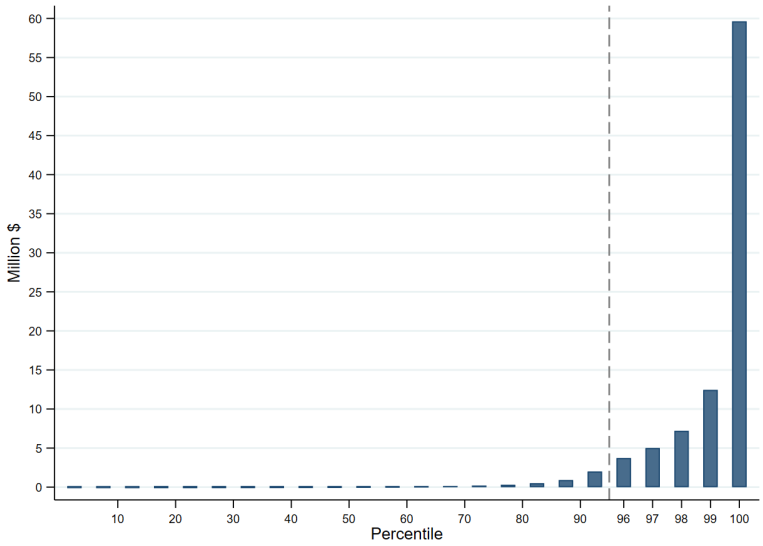

*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.
*Notes*: quarterly effective Ingresos Brutos tax rate for manufacturing activities in the province of Córdoba.

**Figure 6:** Empirical first stage by firm size



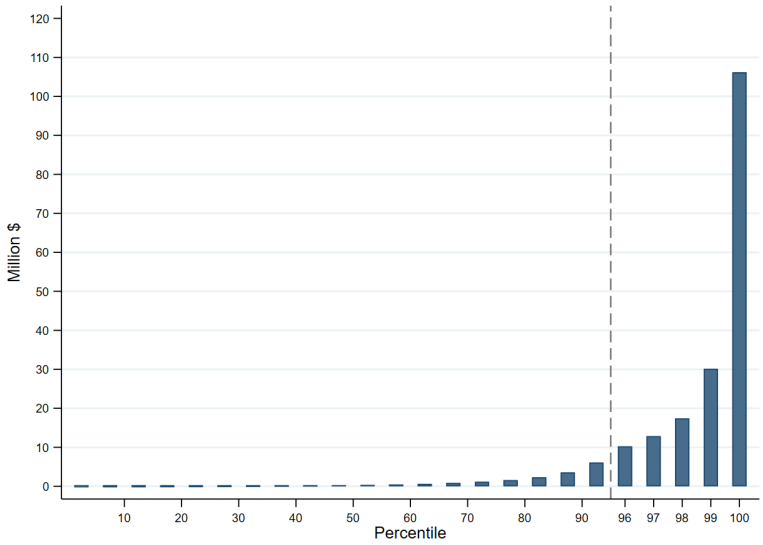

*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.
*Notes*: quarterly effective Ingresos Brutos tax rate for manufacturing activities in the province of Córdoba (firms headquartered outside of Córdoba). The solid line represents firms which annual tax base is above $250,000. The dashed line is the average of firms which annual tax base is below $250,000. The tax base is defined as turnover geographically apportioned.

**Figure 7:** Distribution of firms by turnover in Córdoba (2017)



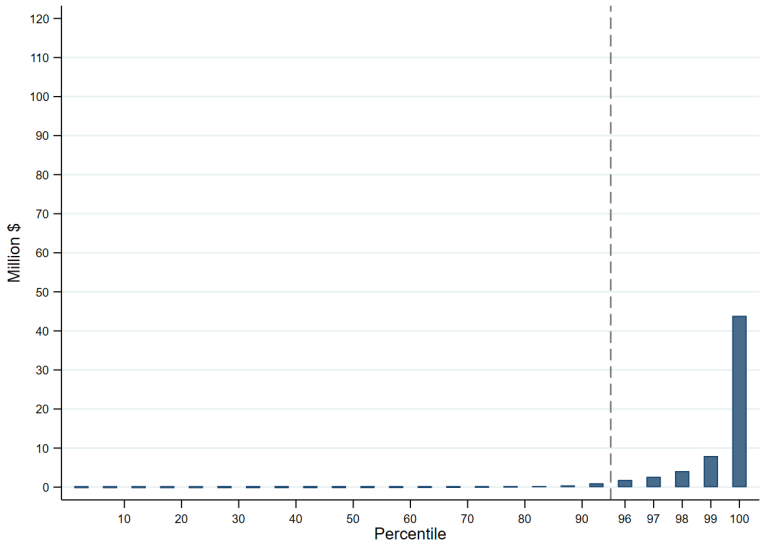

*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.
*Notes*: concentration of turnover by firm in Córdoba. Firms are sorted by tax base. Firms are grouped in 5 percent brackets up to the 95th percentile. The top 5 percent is ordered by percentile.

**Figure 8:** Distribution of local firms by turnover in Córdoba (2017)



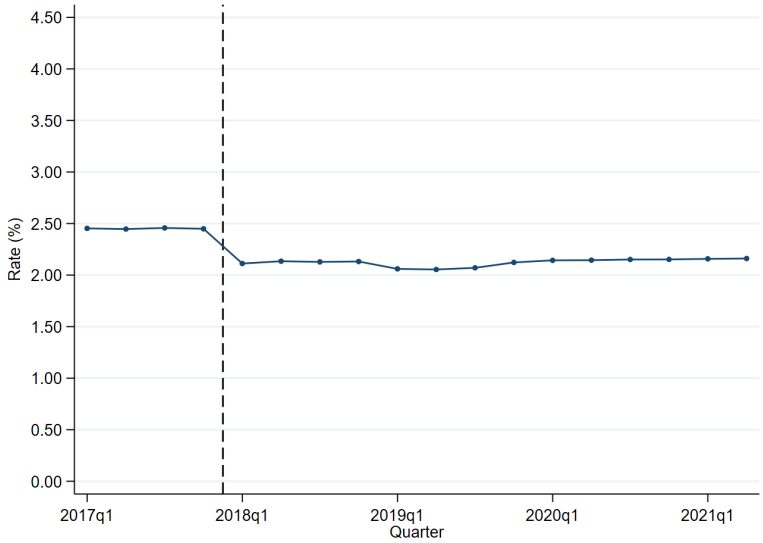

*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.
*Notes*: concentration of turnover by firm in Córdoba (only local firms). Firms are sorted by tax base. Firms are grouped in 5 percent brackets up to the 95th percentile. The top 5 percent is ordered by percentile.

**Figure 9:** Distribution of out-of-jurisdiction firms by turnover in Córdoba (2017)



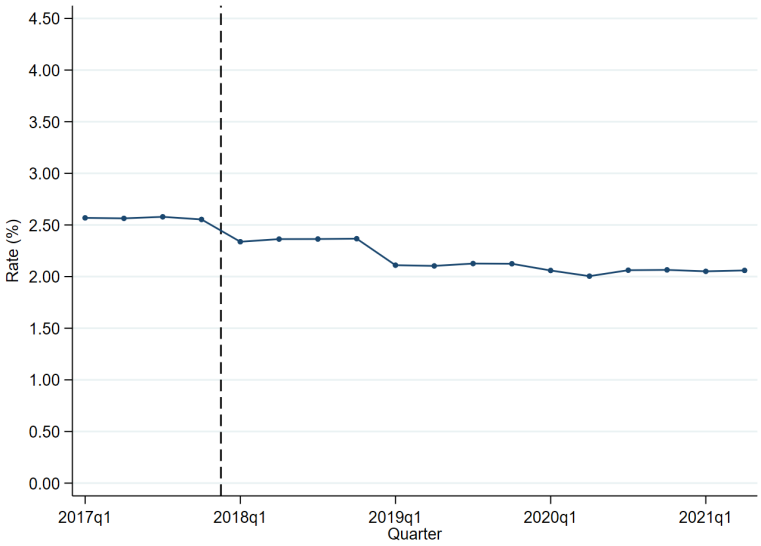

*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.
*Notes*: concentration of turnover by firm in Córdoba (only firms headquartered outside of Cordoba). Firms are sorted by tax base. Firms are grouped in 5 percent brackets up to the 95th percentile. The top 5 percent is ordered by percentile.

**Figure 10:** Empirical out-of-jurisdiction tax rate in La Pampa



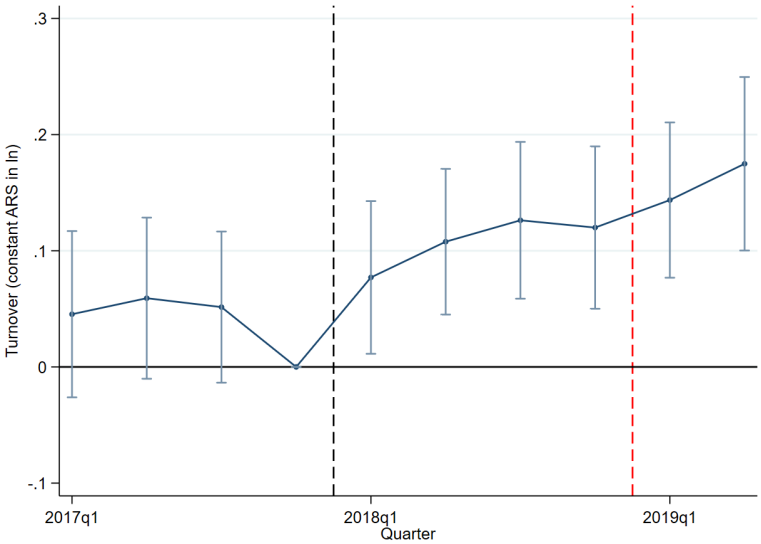

*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.
*Notes*: quarterly effective Ingresos Brutos tax rate for manufacturing activities in the province of La Pampa (firms headquartered outside of La Pampa).

**Figure 11:** Empirical out-of-jurisdiction tax rate in San Luis



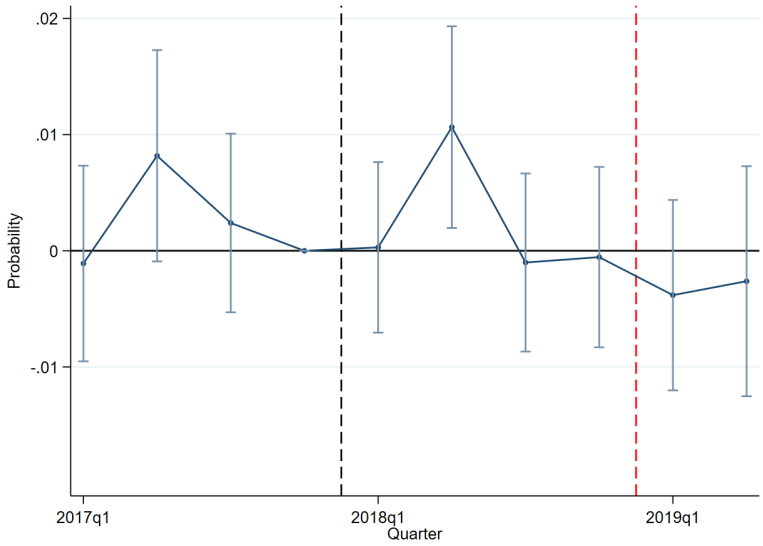

*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.
*Notes*: quarterly effective Ingresos Brutos tax rate for manufacturing activities in the province of San Luis (firms headquartered outside of San Luis).

**Figure 12:** Intensive margin




*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.
*Notes*: coefficients of the intensive margin estimate are presented by quarter. 95% confident intervals are also depicted. The model in differences estimates the effect on firms headquartered outside of Córdoba compared to those headquartered within the province. The dashed black line marks the legislation change. The dashed red line marks the first year after the reform. The model is restricted to firms with annual sales above $60,000.

**Figure 13:** Extensive margin




*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.
*Notes*: coefficients of the extensive margin estimate are presented by quarter. 95% confident intervals are also depicted. The model in differences estimates the probability of having some activity in Córdoba of firms headquartered outside of Córdoba compared to those having some activity in La Pampa or San Luis and are not headquartered within them. The dashed black line marks the legislation change. The dashed red line marks the first year after the reform.

**Table 2:** Intensive and extensive margin

| | Intensive margin | Extensive margin |
|---|---|---|
| VARIABLES | (turnover, logs constant ARS) | (participation) |
| | | |
| 2017_q1 | 0.0454 | -0.00110 |
| | (0.0365) | (0.00430) |
| 2017_q2 | 0.0592* | 0.00818* |
| | (0.0354) | (0.00464) |
| 2017_q3 | 0.0515 | 0.00239 |
| | (0.0332) | (0.00392) |
| 2018_q1 | 0.0770** | 0.000293 |
| | (0.0335) | (0.00375) |
| 2018_q2 | 0.108*** | 0.0106** |
| | (0.0320) | (0.00443) |
| 2018_q3 | 0.126*** | -0.00101 |
| | (0.0344) | (0.00391) |
| 2018_q4 | 0.120*** | -0.000548 |
| | (0.0357) | (0.00396) |
| 2019_q1 | 0.144*** | -0.00382 |
| | (0.0341) | (0.00418) |
| 2019_q2 | 0.175*** | -0.00262 |
| | (0.0381) | (0.00505) |
| Constant | 0.462*** | 0.539*** |
| | (0.0186) | (0.00145) |
| | | |
| Observations | 28,665 | 187,439 |
| R-squared | 0.910 | 0.815 |
| Robust standard errors in parentheses | | |
| *** p<0.01, ** p<0.05, * p<0.1 | | |

*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.

**Table 3:** Number of months with activity

| | | | Monthly revenue > $5,000 | |
|---|---|---|---|---|
| VARIABLES | All | 2019vs2017 | All | 2019vs2017 |
| | | | | |
| treat | -0.0545 | -0.0545 | 0.138*** | 0.138*** |
| | (0.0623) | (0.0660) | (0.0377) | (0.0403) |
| after | -0.0726 | -0.261*** | -0.00722 | -0.0505 |
| | (0.0685) | (0.0838) | (0.0375) | (0.0462) |
| treat*after | 0.131* | 0.172* | 0.0800* | 0.115** |
| | (0.0763) | (0.0934) | (0.0462) | (0.0569) |
| Constant | 10.98*** | 10.98*** | 11.57*** | 11.57*** |
| | (0.0559) | (0.0593) | (0.0306) | (0.0327) |
| | | | | |
| Observations | 27,057 | 18,038 | 10,998 | 7,332 |
| R-squared | 0.000 | 0.001 | 0.008 | 0.007 |
| Standard errors in parentheses | | | | |
| *** p<0.01, ** p<0.05, * p<0.1 | | | | |

*Source*: Author´s elaboration based on Ministerio de Hacienda de Córdoba.