Does the Global South Import Ideology Shifts? Evidence from Costa Rica and CAFTA-DR

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Abstract

Previous research has shown that regions impacted negatively by trade have shifted toward political extremes in developed nations. Not much, if anything, has been studied on effects in the developing world. Additionally, due to nonexistent disaggregated level data on support for trade, little has been said about how perceptions of trade may impact political outcomes. Using the unique circumstance of Costa Rica, a developing nation with a stable democracy, which placed their decision to join the Free Trade Agreement CAFTA-DR on their populace via a democratic referendum in 2007, I use canton-level vote share of support for CAFTA-DR as a proxy of direct opinion on trade. To measure political ideological shifts, I use political party election manifesto data to rank political leans left-to-right. These are weighted by their received vote share at the canton-level to create a canton-political-lean index. Assuming that an individuals' political decision is impacted by the most recent comparative difference, I measure a cantons exposure to imports for each election cycle. Results confirm that developing nations are exposed to ideological shifts stemming from increased trade, with results showing that increased exposure to imports shifts political support toward right-leaning ideologies. Interestingly, this effect is attenuated as support for trade increases. This finding gives further evidence of links between adverse economic shocks to ideological shifts while adding the role of economic agent perception of trade and their interpretation of outcomes from it.

JEL Codes: F13, F14, F55, D72

1 Introduction

Developing nations have welcomed stronger international relations as an important tool to push forward their economic growth. Through international linkages and Free Trade Agreements (FTAs), the Global South has become more intertwined with the global economy. Along with the economic benefits come the economic woes. Given the rising market participation of developing economies in the world (Bown and Crowley, 2014), it is necessary to gain insight on how international interactions may impact local contexts in developing nations.

At the same time, globalization, a direct consequence of trade, has recently become a politically divisive issue around the world. Negative opinions against globalization have not necessarily increased, but rather, it has become politicized by political agents (Walter, 2021). In the recent wave of global political polarization, attitudes against globalization have taken the main stage. Additionally, developing nations have shown an increase reliance on trade for national growth purposes. Knowing how political polarization and increased openness to trade in the developing worlds interact is important in expanding our knowledge on global politics.

Recent political outcomes have given evidence of a tangible shift toward right-wing/nationalist political movements attributable to international trade (Colantone and Stanig, 2018b, 2019). These may be because of economic consequences, such as labor market effects increased political polarization in the US (Autor et al., 2020), or as a cause of extreme push-back against globalization, as evidenced in actions such as Brexit (Sampson, 2017; Colantone and Stanig, 2018a). Understanding shifts in political preference as a cause of exposure to international trade can shed light on possible consequences of trade, political or economic. Additionally, documenting how stated preferences for trade interact with exposure to trade can further our understanding of the dynamic effects of trade on local agents. Documenting political ideological shifts is relatively straightforward to document by using political election outcomes. Confidently measuring preferences for trade and their interaction with exposure to trade is

more difficult, due to the lack of observable and direct preferences for trade. I provide an answer to both using Costa Rica, a developing nation with strong democratic institutions. I exploit an important FTA ratification with the US and other Central American nations (CAFTA-DR). Moreover, in 2007, Costa Rica held a democratic referendum on whether to ratify the Central America Free Trade Agreement (CAFTA-DR). By using this democratic event, along with data on general elections, political party, and international trade flows with the US for the period 1994 to 2018, I analyze to what extent exposure to trade impacts political ideological leans at the canton-level in Costa Rica.

A novel contribution of this analysis is the construction of a canton-level political ideology lean measure. It is constructed by combining political party manifesto data and canton-level vote shares for each election cycle which identifies each canton's political lean throughout each election cycle. Results show that cantons in a developing nation that are increasingly exposed to increasing international imports lean toward the right ideologically, by as much as 4.83 standard deviations, providing evidence of trade exposure effects on political contexts in the Global South; confirming what has been largely observed in similar research that has looked at developed nations, as reviewed in Colantone et al. (2022). Importantly, interacting the constructed import exposure measure with observed ex-ante support for CAFTA-DR, using canton-level referendum vote shares, yields evidence that this effect is diminishing in cantons that supported the trade agreement more strongly. Decomposing canton-level political ideologies into economic and social coded policy further details that these shifts are not due to economic policies, but rather social ones as shown in Danieli et al. (2024).

The paper proceeds as follows. Section 2 summarizes relevant literature to globalization, trade, and interactions with political outcomes. Section 3 provides background information on Costa Rica's political context and CAFTA-DR. Section 4 describes the data used in the analysis and Section 5 describes construction of variables and presents the empirical strategy. Section 6 presents the results analyzing the relationship between exposure to trade liberalization, support for trade, and political ideology shifts. Lastly, Section 7 concludes.

2 Literature Review

2.1 Trade Liberalization & Politics

Many studies have looked at how globalization has impacted internal labor markets and the politics of developed nations; Autor et al. (2013, 2020) in the United States finds import competition has significant effects on manufacturing labor markets and shifts voters toward the political extremes. Dauth et al. (2014) looks at German labor markets finding that the rise of Asian countries in the world economy negatively affected local labor markets but show that trade integration with regional neighbors caused an increase in employment in these same markets. Dippel et al. (2022) shows that support for nationalist parties in Germany was driven by exposure to imports from low-wage countries and that increasing exports has the opposite effect. Malgouyres (2017) find evidence that import competition exposure increased votes for the far-right in France, Caselli et al. (2020, 2021) show that increased import competition from China and immigration intensity contributed to electoral outcomes of far-right parties in Italy, and Iacoella et al. (2020) show that trade reforms explain the rise of populism in recent history in Brazil. Jensen et al. (2017) explores the effects of international trade on US presidential elections, showing that increases in imports are associated with a decrease in incumbent presidential vote shares. Che et al. (2022) looks at the effects of exposure to trade liberalization on voter behavior in the US. These papers highlight how there are winners and losers of trade, and how outcomes of trade can explain political outcomes such as the rise in populism the world is currently experiencing.

All in all, there has been little research focusing on the Global South. In their survey chapter, (Colantone et al., 2022) discuss the backlash to globalization observed worldwide, but they are only able to show evidence of effects in developed economies. Dix-Carneiro and Novak (2023), in summarizing globalization research in Latin America, address how the political channel may be a mechanism for globalization to impact inequality in the region. Goldberg and Pavcnik (2007) summarize recent literature and provide empirical evidence

on how globalization and inequality have evolved in developing nations through the 1980s and 1990s. Bustos and Morales-Arilla (2022) look at whether NAFTA affected the leftist candidate's 2006 presidential election in Mexico. The present analysis fills this gap. I provide evidence on political ideological dynamics in a developing nation directly attributable to international trade. Additionally, I use the unique circumstance of the CAFTA-DR Referendum in Costa Rica to shed light on how ex-ante support for trade interacts with actual exposure to trade to shape political outcomes.

2.2 CAFTA-DR Research

There has been limited research surrounding the CAFTA-DR referendum. Mendez and Patten (2023) use the referendum to analyze how much economic fundamentals drive attitudes toward trade. Their results find that economic factors, such as firm of employment, explain 6% of the variation in voting patterns. Importantly, this is variation that cannot be attributed to political ideology.

To my best knowledge, there has been no previous work analyzing the interaction between trade liberalization and preferences for trade on political ideology using this singular event.

3 Policy Background

3.1 Costa Rica Political Structure

Costa Rica is a representative democratic republic, with a multi-party system. The political system is structured with an Executive Branch, an Independent Judiciary, and Legislative Branch. The focus of this study is on the Legislative Power organized through a unicameral Legislative Assembly. It is comprised of 57 seats, with all legislators being elected every 4 years. Seats are awarded to Political Parties using a modified Hare quota[1] using proportional representation determined by provincial population size as measured by the

[1]Calculated based on the total number of valid votes divided by the number of deputies to elect.

census. Legislative elections are directly linked to the political party and not the individual legislator. A voter at the ballot box is asked to vote for the party of their choosing, not the individual. This is significant to this analysis because voters are largely voting for the party platform and not the individual legislator.

Elections are held every 4 years and consist of presidential and legislative elections. Voting is compulsory but not enforced, as evidenced by a mean 69.73% turnout rate through the sample period. All citizens are automatically enrolled to vote once they turn 18 years of age, which eliminates some traditional barriers to voting.

The multi-party political structure means that coalition governments are the norm. The mean number of parties per legislature is 7 and no single party has held an outright majority in the sample period. The most consistent party is the National Liberation Party (PLN), a centrist party, with a mean of 22 seats per legislature.

3.2 The Economic Consequences of CAFTA-DR

The Central America Free Trade Agreement (CAFTA-DR) is observed by the United States, Costa Rica, Nicaragua, Guatemala, El Salvador, Honduras, and the Dominican Republic. It was negotiated through the early 2000s with negotiations concluding successfully in 2004. Costa Rica was unable to ratify it through their legislature and so to decide whether to enter into CAFTA-DR, the question was posed to the voting age populace via a democratic referendum in 2007. The vote was held on October 7, 2007. The question put on the ballot was "Do you approve of the Dominican Republic, Central America-United States Free Trade Agreement?" with a simple yes or no choice.[2] The referendum was approved with a 51.56% majority and a 59.2% turnout rate.

The primary objectives of CAFTA-DR were to encourage expansion and diversification of trade, eliminate trade barriers, promote conditions of fair competition, substantially increase investment opportunities, and provide protection and enforcement of intellectual property

[2] An image of the ballot can be found in the Appendix Figure 3

rights, as determined by Article 1.2 of the treaty.

For non-US signatory countries, this meant an immediate elimination of tariffs on about 80% of US imports and the rest to be phased out over time. This opens up local economies to an increased volume of goods originating from the US. Exports into the US did not see much change as they already entered the US duty-free due to the Caribbean Basin Initiative (1984). CAFTA-DR gave a wider access to markets for all signatory nations. In Costa Rica, the FTA saw an increase in FDI(Figure 1) and trade volume from the US (Figure 2).

3.3 The CAFTA-DR Referendum

Within Costa Rica, the agreement was politically and socially contentious. In support of the agreement were political parties like National Liberation Party (PLN), Libertarian Movement (ML), and National Restoration Party (RN). These political agents tend to lean relatively right and center-right. Additionally, nearly all sections of commerce chambers that make up the Union of Chambers and Private Enterprise Associations (UCCAEP) voiced their support. Those against the agreement were parties like Citizens' Action Party (PAC), Broad Front (FA), and Social Christian Unity Part (PUSC). Nearly all trade unions, environmental organizations, the LBGT Rights movement, and the students' federations for all four public universities also positioned themselves against the free trade agreement.

Some of the main arguments against CAFTA-DR were: negative impact on majority of agricultural sectors, rising prices of agrochemicals and medicinal products, endangers access to electricity and telecommunications services due to the possibility of competition against government monopolies in these industries, threats to the social security system, threats to progress on environmental and labor issues, and elimination to barriers of entry for US firms into Costa Rica and no reciprocal opportunities for Costa Rican workers into the US (Raventos Vorst, 2018). The opposition to the FTA culminated in organized marches against the FTA in which a reported 50,000 individuals participated (Frajman, 2012).

This divide is reflected in opinion polling leading up to the referendum. Polling conducted

by the University of Costa Rica (UCR) in March 2007 showed opinions of 39% in favor, 32.7% against and 28.3% undecided. They polled again in June 2007, with results showing 43.3% in favor and 56.7% against the FTA. Gallup polling in July 2007 showed 44% in favor, 38% against, and 18% undecided. Rodríguez et al. (2008) provides a detailed breakdown of polling statistics leading up to the referendum. At the beginning of polling the intent to vote in favor of the FTA was 7.6 p.p. greater than those responding no. As the referendum data got near, this difference steadily declined. So much so that just a week prior to the vote polling showed the nation to be essentially split 50/50 amongst likely referendum voters.

4 Data

4.1 Election Voting Data

Voting outcomes are observed at the canton-election level. Given the multi-party political structure of Costa Rica, this data observes votes obtained by party at each election. Data is sourced from the Tribunal Supremo de Elecciones (TSE), which is the constitutionally mandated election commission of Costa Rica. The sample period is from 1998 to 2018 and covers 6 election cycles, held every 4 years. The data is reported for 81 Costa Rica cantons across all 7 provinces.

4.2 Political Party Data

Political party data comes from the Comparative Manifesto Project (CMP) (Lehmann et al., 2023). This data consists of policy-coded political party election manifestos. The text is split into single statements, which are called quasi-sentences. These statements are then coded into a single policy position category. The variable observation is the share of quasi-sentences related to each code. For example, a value of 3.194 under the "Protectionism: Negative" means that 3.194% of all quasi-sentences were coded in this category. This data contains information on 8 different Costa Rican political parties across the sample period,

although not all parties appear across all elections.

4.3 Import/Export Data

Data on trade flows is from the UN Comtrade Database. I collect trade data between Costa Rica and the United States where Costa Rica is the primary reporter. This data reports imports and exports between both parties by HS industry. The sample period runs from 1994 to 2018. The same data is gathered for every other signatory nation except the Dominican Republic due to missing data. In order to properly harmonize HS codes across years, I use concordance maps to equate all years to HS0 categories.

4.4 Canton Demographic Data

Data on canton-level demographics comes from the Costa Rican 2000 census, accessed through Minnesota Population Center (2020). Data are collected for households with individuals identified within households. I primarily use the data on which industry of employment is held by the individual, which is then aggregated to counts at the canton-level. Because the occupation-industry data is coded using ISIC3, I use concordance maps to map them onto HS0 categories so they can be used with the trade data. Relevant canton demographic statistics can be found in table A2 in the Appendix.

5 Methodology

5.1 Political Lean Measure

In order to measure political lean for each canton, I create a measure that uses the political party election manifesto data, which I call Political Party Score. It is created according to the proposed methodology for use of Comparative Manifesto Project data in Lowe et al.

(2011):

$$\text{Political Party Score}_{pt} = log(0.5 + \sum_i z^+_{ipt}) - log(0.5 + \sum_i z^-_{ipt}), \tag{1}$$

where $\sum_i z^+_{ipt}$ and $\sum_i z^-_{ipt}$ are the sum of the frequency of "right" and "left", respectively, policy statements i by political party p in election t. These sums result in values greater than 0, with the difference being the political position of the party. The policy variables used can be found in Appendix Table A1.

This measure ranks each individual party, at every observed election, on a comparable political spectrum. Values are bound between -5 and 5 given that if a party were to only have "right" or "left" coded policy statements the maximum sum would be equal to 100. It indicates whether a party is left- or right-leaning, indicated by a negative or positive value respectively. A higher score (more positive) indicates a more right-leaning party, a lower score (more negative) indicates a more left-leaning party. Given the political context of Costa Rica as a left-leaning country, essentially all political parties are scored with a negative number. Results of this are shown in figure 4 of the Appendix.

The political party score measure is then used to create a political lean data point for every canton at each election cycle. This is weighted by political party's p vote-share w in canton c at election t. I sum over all political parties which gives a weighted average at the canton-level. Because not all participating political parties are included in the data, the measure is normalized using the sum of all observed political parties vote shares;

$$\text{Political Lean}_{ct} = \frac{\sum_{p=1}^{n} w_{cpt} \times \text{Political Party Score}_{pt}}{\sum_{p=1}^{n} w_{cpt}}. \tag{2}$$

Because this constructed variable is measured at every election, it allows me to dynamically observe canton-level political ideology through my sample period.

5.2 Import/Export Exposure Measure

To capture the exposure to trade component, I use a shift-share measure as done in Autor et al. (2013, 2020) and Dauth et al. (2014);

$$\text{Import Exposure}_{ct} = \sum_{k} \frac{L_{ck,2000}}{L_{c,2000}} \cdot \text{Import Exposure}_{kt}. \tag{3}$$

This measure has two main components, the share of individuals in canton c employed in industry k in 2000, and the shift in imports by industry k in year t. The latter is calculated as:

$$\text{Import Exposure}_{kt} = \frac{\Delta M_{kt}}{L_{k,2000}}, \tag{4}$$

where the change in Import Exposure (ΔM_{kt}) is measured for industry k in year t and is the change in imports per worker in industry k.

This Import Exposure measure captures how vulnerable to import competition canton c is in year t. The share of individuals is static due to endogeneity concerns of local employment industry composition responding to changes in local economies adjust to a new equilibrium with trade. The Export Exposure measure is created using the same methodology, using export values instead of imports.

5.3 Model

The main model to be estimated is:

$$\begin{aligned} \text{Political Lean}_{ct} = {} & \beta_1 \cdot \text{Import Exposure}_{ct} \times \text{CAFTA-Yes Share}_c + \\ & \beta_2 \cdot \text{Import Exposure}_{ct} + \\ & \beta_3 \cdot \text{CAFTA-Yes Share}_c + \\ & \mathbb{X}_c + \gamma_t + \gamma_p + e_{ct}. \end{aligned} \tag{5}$$

The dependent variable is the political lean of canton c at election t. β_1 captures the

average effect of the interaction between the change in import exposure, relative to the previous election cycle, at canton c in election t interacted with the support for CAFTA-DR through the vote-share of "Yes" in canton c. $\mathbb{X}_c$ are canton socioeconomic controls measured in the year 2000: average age, unemployment rate, proportion female, proportion college educated, and average years of schooling. γ_t and γ_p are time (election cycle) and province fixed effects.[3] The time (election cycle) fixed effects account for differences across each election cycle that the nation may experience. Province fixed effects are more correct than canton fixed effects given how legislative deputies are determined as a proportional representation of province vote shares.

The dependent variable measures the political lean of a canton at each election. Because the variable itself is created using a weighted index of political party scores and support for them within the canton, it should be interpreted as an ordinal variable rather than nominal.

The interaction variable should be interpreted as the mediator effect of import exposure on political ideological lean as support for trade at the canton-level increases, as measured by vote-share in support of CAFTA-DR in the referendum. This interaction is the novel component of this research: it lends evidence toward beliefs of free trade effects on political opinions. The coefficient could also lend evidence on whether the opinion on international trade can dampen/increase effects experienced from trade.

5.4 Endogeneity Concerns

A possible concern when considering model 5 is the possible endogeneity that demand for imports may create. Previous works have utilized imports of other countries from the trading partner, the US in this context. I use a similar approach, by using the trade of goods for the sample period between the US and the other signatory nations, except the Dominican Republic due to lack of data. I use the cumulative trade volume between the US and El

[3]Specification tests can be found in Appendix table A4 and A5. Results are similar throughout all specifications and the one above is the preferred specification given the political context.

Salvador, Honduras, Nicaragua, and Guatemala.[4] By using these countries as an instrument for trade between the US and Costa Rica, I directly address the possibility of Costa Rican demand for US goods being the primary driver of changes in imports.

Another potential cause of endogeneity may be the political and import exposure signals that may influence any individuals/regions decision to support or reject CAFTA-DR. To address this, I estimate the following model and use the residuals in the main specification;

$$\text{CAFTA-Yes Share}_c = \text{Political Lean}_{ct} + \text{Import Exposure}_{ct} + \mathbb{X}_c + \gamma_t + \gamma_p + e_{ct}. \quad (6)$$

By using the residuals from model 6, I am extracting all variation that goes into voting for CAFTA that is not influenced by political and exposure to import competition. There is a strong and positive correlation between residuals and vote shares as seen in figure 5 in the Appendix. I consider this to be true preferences of trade for each canton, and will interpret them as such in the following model results.

Due to the timing of the CAFTA referendum having happened in 2007, I use all observations of political and import exposure from the period 1998 to 2006. This sets up the residuals to be a pre-period preference of trade for the main specification. The main specification expands the period of 2010 to 2018; the post-CAFTA period. This ensures that any time-related endogeneity is not in the model.

6 Results

Results from regressions of equation 5 are reported below. All estimations are for the period of 2010 to 2018, for all observed cantons. Standard errors are clustered at the canton-level.

[4]To account for the possibility of one country being a the primary driver in the instrumental approach, I do this in a bootstrap manner, leaving one country out in different specifications, and results are largely the same.

6.1 Effects of Import Exposure on Political Lean

Table 1: Import Exposure Effect Interacted with Support for CAFTA Effects on Political Lean

	Dep. Var: Canton Political Lean			
	(Cycle)	(Yearly)	(Cycle)	(Yearly)
Import Exposure	0.1640***	0.6521***		
	(0.0543)	(0.2197)		
Import Exposure × CAFTA Yes (%)	-0.2589***	-1.029**		
	(0.0972)	(0.3938)		
Net Import Exposure			0.1702***	0.7069***
			(0.0484)	(0.1969)
Net Import Exposure × CAFTA Yes (%)			-0.2394***	-0.9991***
			(0.0846)	(0.3441)
CAFTA Yes (%)	0.1583**	0.1567**	0.0796	0.0780
	(0.0602)	(0.0602)	(0.0511)	(0.0513)
Observations	378	378	378	378
R^2	0.94340	0.94335	0.94699	0.94732
Within R^2	0.12304	0.12223	0.17869	0.18381
Election FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
Canton Controls	✓	✓	✓	✓

There are 63 cantons and 7 provinces. The Standard Errors are clustered at the canton-level. All regressions are weighed by the canton electorate in 1994. The canton control variables used are unemployment rate, proportion female, average age, proportion with college education, and average years of schooling. All canton measures are obtained from the 2000 Costa Rica Census. Standard errors are presented in the parenthesis below coefficients. Statistical significance is displayed as * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Given how the Import Exposure measure is created, results are interpreted as a 1,000 USD increase in imports across industries is associated with an increase/decrease in the canton political lean. Regression estimates can be found on table 1. These are the results of the main specification with canton-level political lean as the dependent variable. Column 1 and column 2 uses only imports in the creation of the import exposure measure. Columns 3 and 4 use net imports. Additionally, columns 1 and 3 use trade data at an election cycle frequency: the difference in imports/net imports every 4 years. Columns 2 and 4 use yearly trade data to calculate import exposure. All specifications include the interaction with

support for CAFTA-DR as measured by the percentage of votes in favor of the referendum.

The estimated positive effects of Import Exposure are as expected from previous literature on the topic. More Import Exposed cantons shift toward the relative ideological right. This effect holds for both imports and net imports. The preferred specification uses the yearly frequency trade data as it should minimize measurement errors in the data.

Putting this in the US political context helps to provide some insight as to the magnitudes of these effects. By using the same policy variables and using equation 1, I create measures for the Democratic and Republican party from 2008 to 2022. President Obama's 2008 Democratic party receives a score of -1.0038 and President Trump's Republican party of 2016 has a score of 0.2987. The estimated coefficient of 0.6521, which uses yearly data, is equivalent to an estimated 50% shift from President Obama to President Trump.

The coefficient of interest is the interaction of Import Exposure and support for CAFTA-DR. A negative coefficient lends evidence that the political shift toward the ideological right experienced by import exposed cantons has diminishing effects as support for the FTA is stronger.

These results are consistent across Import Exposure measures. The Net Import Exposure measure is of particular interest in the Costa Rican context given the significance of exports to its economy. Previous literature has focused on Imports as these are directly relevant to local labor markets and economies in developed nations. Developing nations, particularly those whose economies rely on exports, have to consider the possibility that net exporting regions may react and experience trade differently.

The above results likely suffer from endogeneity. It covers the complete sample period of 1998 to 2018, which includes the CAFTA referendum. Table 2 shows the IV approach described above. Regressions are shown using the yearly trade data. I also estimate these regressions using election cycle frequency trade data and results are reported in table A3. Results are largely the same although somewhat attenuated, likely due to measurement error in the data across this larger time period. Coefficients under the OLS columns are different

than those reported above in table 1 due to a change in sample period being used.

In Table 2, results only stay statistically significant when considering net imports. This is likely due to all economies considered in the instrument have some dependence on exports with the US which makes net imports salient. Coefficients suggest that political shifts are understated in the OLS model, increasing to 0.1845. The interaction coefficient remains negative, suggesting that rightward ideological shifts are rapidly diminishing as cantons hold stronger preferences for trade, as measured through the residualized CAFTA Yes Share variable. These results more closely resemble those reported in table 1 which cover the entire possible sample period between 1998 to 2018.

The results of the IV approach suggest that exposure to trade has an effect on political ideologies which are tempered as support for trade is more prevalent. Political ideologies encompass many possible policies, which can range from economic ones like support/rejection of internationalism or the expansion/contraction of educational spending in the nation. Because voters consider these as a bundle, an important next question is whether import exposure is deterministic through economic or social policies.

I test this point next, by creating an economic lean and social lean from the political party manifesto coded data. These are created in the same manner that the Political Lean measure was created in equations 1 and 2, with a different subset of policy statement variables determining each score. Policy variables used for the economic lean and social lean can be found in appendix table A1.

6.2 Import Exposure on Different Political Considerations

Results across different ideological margins can be found in table 3. Coefficients are reported for both the OLS model and Instrumented approach. Although results are not statistically significant across models, they are economically significant. The economic policy specification (columns 1 and 2) suggest that an increase in net import exposure leads to an ideological rightward shift in economic policies they support. This is consistent with

Table 2: Instrumented Import Exposure Interacted with Instrumented Support for CAFTA Effects on Political Lean (Yearly Data)

	Dep. Var: Canton Political Lean			
	(OLS)	(IV)	(OLS)	(IV)
Import Exposure	0.0154	-0.0902		
	(0.2384)	(2.631)		
Import Exposure × CAFTA (Inst)	0.0030	-0.6828		
	(0.4314)	(4.416)		
Net Import Exposure			-0.0843	0.6811**
			(0.1272)	(0.3090)
Net Import Exposure × CAFTA (Inst)			0.2315	-0.9692**
			(0.2159)	(0.4805)
CAFTA (Inst)	0.1291**	-0.2266	0.1590***	0.2180**
	(0.0574)	(0.4249)	(0.0554)	(0.0853)
Observations	189	189	189	189
R^2	0.96404	0.89336	0.96498	0.95980
Within R^2	0.18265	-1.4236	0.20411	0.08637
First Stage F-test Statistics				
Import Exposure	-	6.1233	-	-
Import Exposure × CAFTA	-	5.2618	-	-
Net Import Exposure	-	-	-	13.261
Net Import Exposure × CAFTA	-	-	-	16.384
CAFTA	-	173.20	-	263.68
Election FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
Canton Controls	✓	✓	✓	✓

There are 63 cantons and 7 provinces. The Standard Errors are clustered at the canton-level. All regressions are weighed by the canton electorate in 1994. The canton control variables used are unemployment rate, proportion female, average age, proportion with college education, and average years of schooling. All canton measures are obtained from the 2000 Costa Rica Census. Standard errors are presented in the parenthesis below coefficients. Statistical significance is displayed as * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

recent right-leaning economic policies of isolationism and protectionism. These shifts are, once more, attenuated across cantons with higher observed preference for trade as measured through the residualized CAFTA Yes Share variable.

The social policy specification (columns 3 and 4) sugges tthat the opposite is true. Cantons with higher net import exposure seemingly shift towards leftward social policies. This, once again, may be explained as a support for an increase in demand or need for social safety nets which are usually associated with left-leaning social policies. Like the other analysis in this project, these effects are attenuated in cantons that exhibit an increased preference for trade.

Table 3: Instrumented Net Import Exposure Interacted with Instrumented Support for CAFTA Effects on Policy Realm Decomposition (Yearly Data)

	Economic Policy		**Social Policy**	
	(OLS)	(IV)	(OLS)	(IV)
Net Import Exposure	-0.3334	0.3361	-0.4069**	-0.4937*
	(0.2637)	(0.6250)	(0.1652)	(0.2799)
Net Import Exposure × CAFTA (Inst)	0.5767	-0.3757	0.7534***	0.8467*
	(0.4521)	(1.017)	(0.2825)	(0.4620)
CAFTA (Inst)	0.0918	0.3641***	0.0845*	0.1037
	(0.0654)	(0.0976)	(0.0452)	(0.0691)
Observations	189	189	189	189
R^2	0.90823	0.89252	0.97777	0.97740
Within R^2	0.11804	-0.03296	0.12320	0.10840
First Stage F-test Statistics				
Net Import Exposure	-	13.261	-	13.261
CAFTA	-	263.68	-	263.68
Net Import Exposure × CAFTA	-	16.384	-	16.384
Election FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
Canton Controls	✓	✓	✓	✓

There are 63 cantons and 7 provinces. The Standard Errors are clustered at the canton-level. All regressions are weighed by the canton electorate in 1994. The canton control variables used are unemployment rate, proportion female, average age, proportion with college education, and average years of schooling. All canton measures are obtained from the 2000 Costa Rica Census. Standard errors are presented in the parenthesis below coefficients. Statistical significance is displayed as * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

7 Conclusion

Exposure to import competition is a natural consequence of international trade. Local economies are vulnerable to international competition which may impact local labor markets and local economies differently. There has been strong previous work on the effects of trade on employment, wages and economic outcomes, but little has been said about political responses. Much less has been said about these effects in developing nations. This analysis lends evidence that developing economies may be politically vulnerable to the effects of trade. Results are consistent with the observed shifts in developed economies with a rightward shift in political ideology as a consequence of import exposure. Not all are winners and those who lose out from trade tend to react by supporting right-leaning ideologies which place the large share of the blame on globalization or foreign origins.

Additionally, little is known on how opinions of trade interact with outcomes. In the context of Costa Rica, which underwent a democratic referendum on the decision to ratify the CAFTA-DR, we begin to answer how opinions interact with experiences with respect to FTAs. By being able to view support for the CAFTA-DR through vote shares at the canton-level, I instrument this information and residualize the vote shares by removing any possible variation that is explained by politics and exposure to trade. This serves as a proxy for direct preference of trade.

Results show that import exposed cantons will react by leaning more toward the ideological right. Due to the possibility of endogeneity in demand for US imports, an instrumental variable approach using the other FTA signatory nations is employed. These IV estimates suggest that the rightward shift in political ideology is independent of demand for imports of the sending nation. In either specification, these effects are diminishing in cantons that show larger support for the FTA, as measured by the canton vote-share in support of ratifying CAFTA-DR. This can be understood as winners of trade, or at least in expectation, are unlikely to shift political ideologies at the same rate as losers of trade. Additionally, after decomposing political ideologies into economic and social policies, as coded through political

party election manifesto language, I show that cantons that are import exposed support right-leaning economic policies, suggesting an increased demand in protectionist/anti-globalization policies. At the same time, import exposed cantons show an increased support for left-leaning social policies, possibly signaling an increased support of policies that promote social safety nets and socialized benefits.

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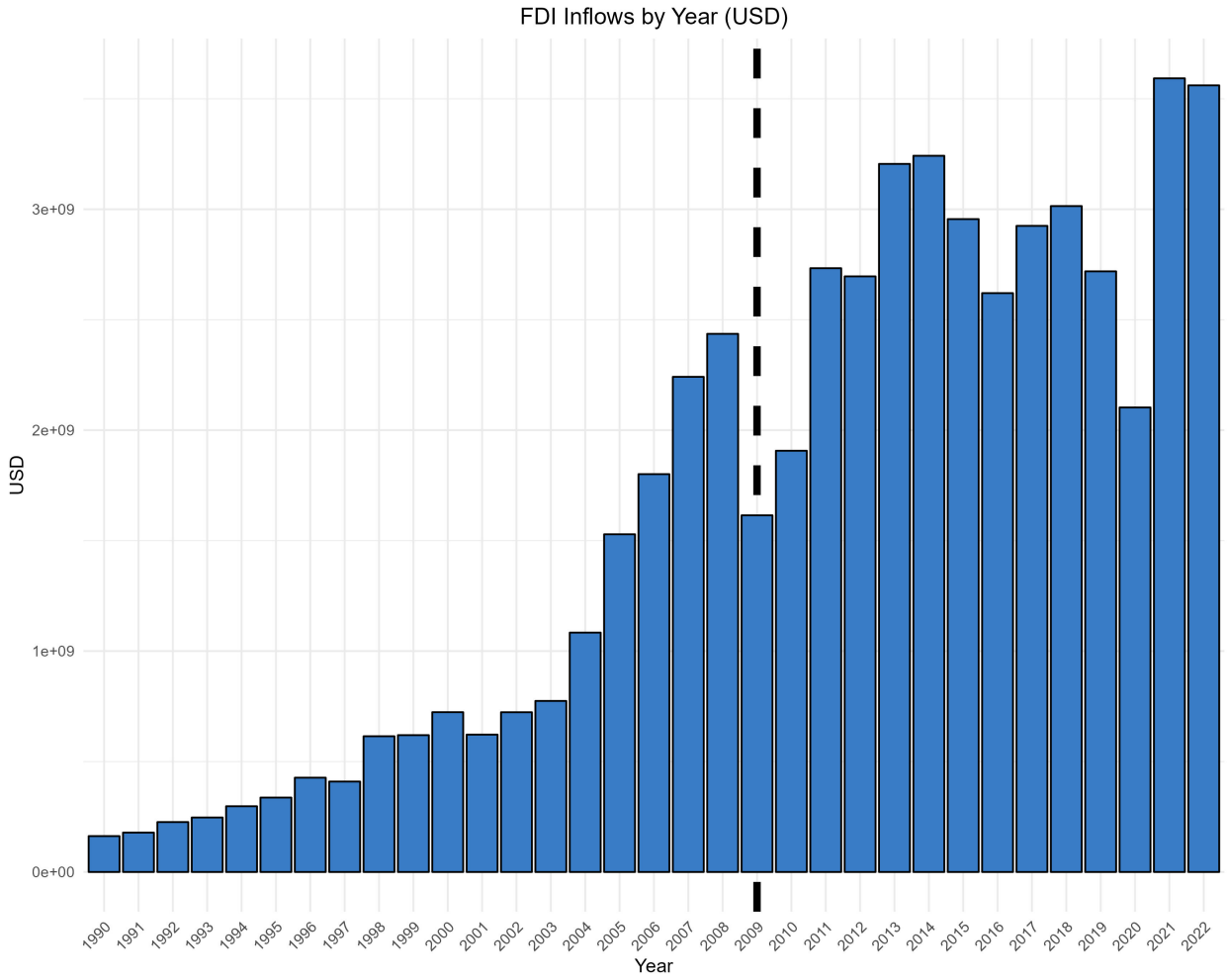
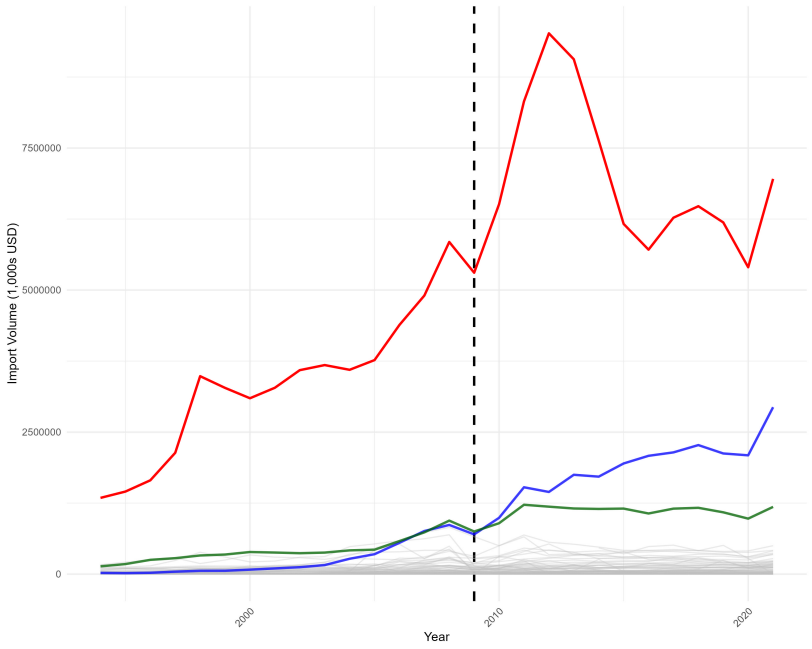
Appendix

Figure 1: FDI Inflows into Costa Rica

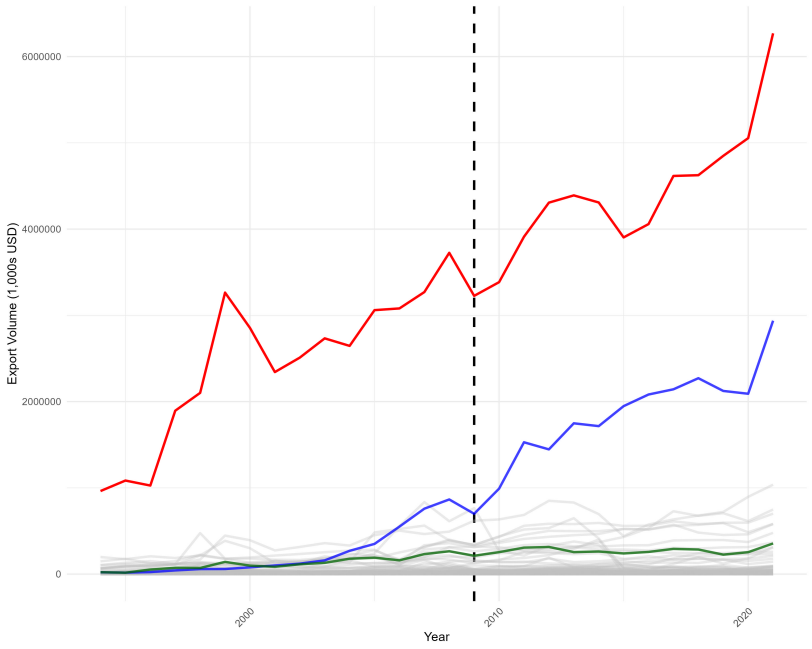


Notes: Total Foreign Direct Investment (FDI) inflows for Costa Rica in USD for the period 1990-2022. We can clearly observe the increase in FDI into the country around the time CAFTA-DR was being settled on internally; negotiations on the agreement ended in 2004. The black dashed-vertical line shows when CAFTA-DR went into effect.

Figure 2: Trade Volume between Costa Rica and Rest of World



(a) Imports



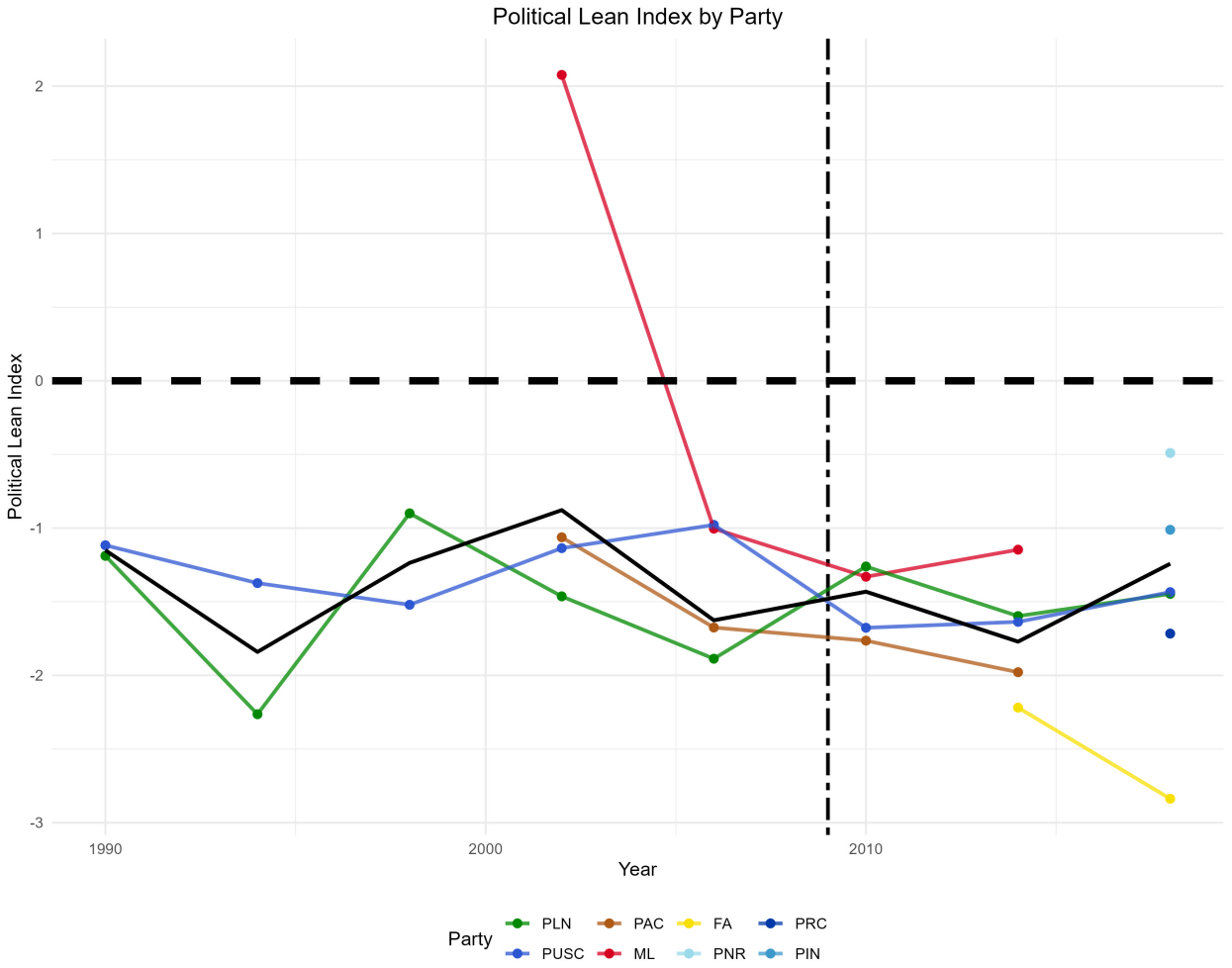
(b) Exports

Notes: Panel 2a shows imports into Costa Rica from 1994 to 2021. Panel 2b shows exports from Costa Rica. Values are in thousands of USD. Highlighted in Red is the US, Blue is China, and Green is Mexico which are the largest import trade partners of Costa Rica. The dashed vertical line represents the official starting year of CAFTA-DR.

Figure 3: CAFTA-DR Referendum Ballot

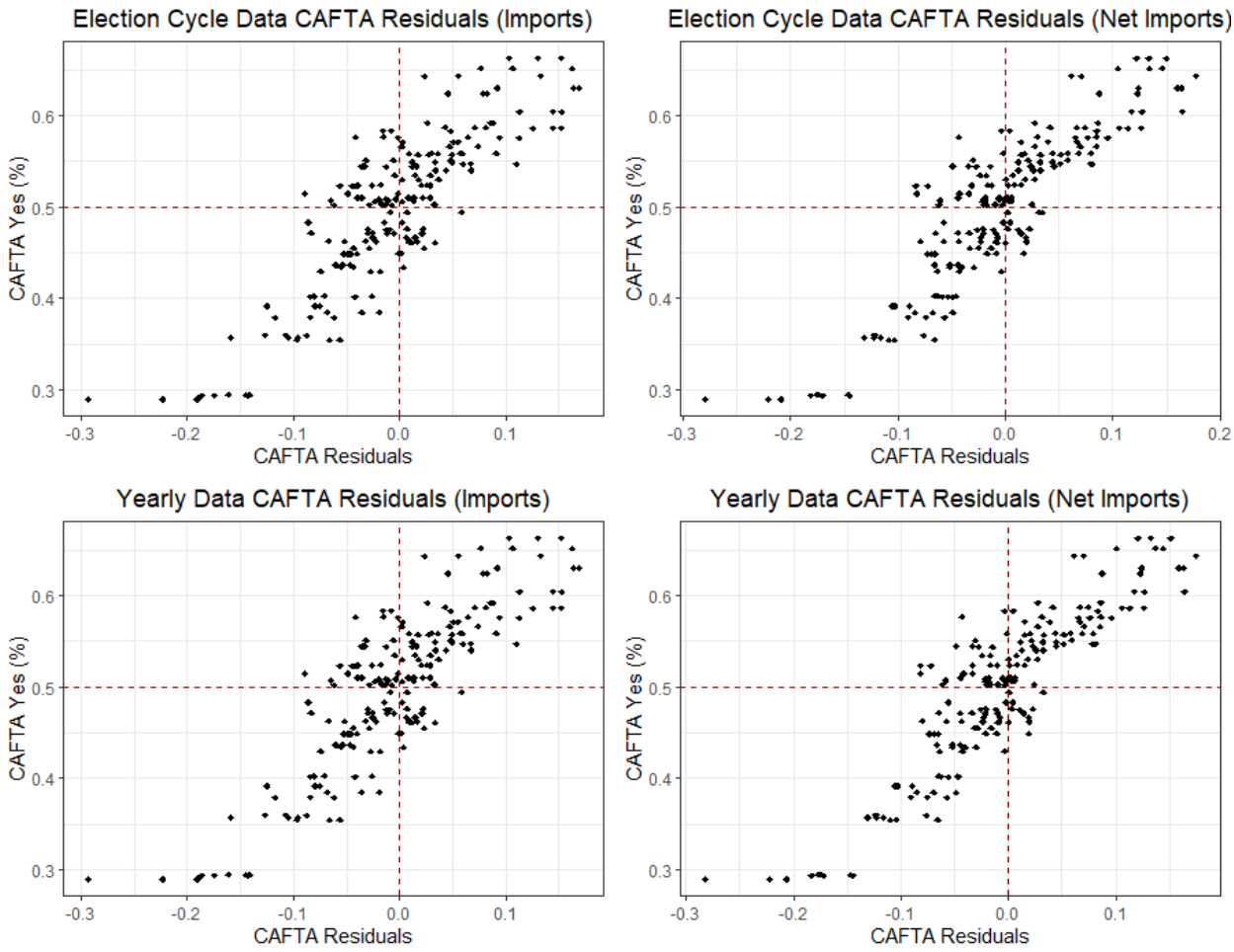
Notes: Ballot that eligible voters saw at the ballot box. The question reads: "Do you approve of the Central America, Dominican Republic Free Trade Agreement (CAFTA-DR), legislative file $N°$ 16.047, according to the text agreed upon by the Special Commission on International Affairs and Foreign Trade of the Legislative Assembly, published in scope $N°$ 2 in The Gazette $N°$19 of January 26, 2007

Figure 4: Political Lean Index by Party (Costa Rica)



Notes: Graph shows each Costa Rican political party in the data mapped by their Political Lean Index for every election they appear in. Each color represents an individual party. Noticeably, there are two parties that appear in every election (PLN and PUSC). The black line represents the weighted average score per election, where the weights are the national vote-share received by each party in that election. The black dot-dashed-vertical line is set at 2009, which is the year that CAFTA-DR went into effect. Given the political context it is normal for parties to come in and out of political power. All but one observation receives a negative score, indicating that the legislature is relatively left-leaning. A score of zero cannot be interpreted as the true-center of the political ideological spectrum. The absence of a party in the data simply means that they did not gain any legislative seats, but they may have participated in the election.

Figure 5: Correlation Between CAFTA-Yes Shares and Residuals



Notes: Each panel in the figure represents a different estimation specification for residuals of CAFTA based on model 6. Each panel varies by frequency of import data uses (Election Cycle vs Yearly) and measure of imports used (Imports vs Net Imports). The dashed horizontal line represents the 50.1 percent margin necessary for a canton to be understood to had approved the referendum. The dashed vertical line represents the zero line in the residuals. Given this relationship, the correlation is as expected with a positive relationship between both variables. There is a strong correlation between the residuals and the vote margin conditional on experienced import exposure, political influences, canton controls, election cycle, and province fixed effects.

Table A1: Components of Dependent Variables

Policy Dimension	"Left" Position	"Right" Position
	Political Lean	
Foreign Alliances	101: Foreign Special Relationships (Positive)	102: Foreign Special Relationships (Negative)
Militarism	105: Military (Negative)	104: Military (Positive)
Internationalism	107: Internationalism (Positive)	109: Internationalism (Negative)
Constitutionalism	203: Constitutionalism (Positive)	204: Constitutionalism (Negative)
Decentralisation	301: Decentralisation (Positive)	302: Centralisation (Positive)
Protectionism	406: Protectionism (Positive)	407: Protectionism (Negative)
Keynesian Policy	409: Keynesian Demand Management	414: Economic Orthodoxy
Welfare State	504: Welfare State Expansion	505: Welfare State Limitation
Education Spending	506: Education Expansion	507: Education Limitation
	Economic Lean	
Foreign Alliances	101: Foreign Special Relationships (Positive)	102: Foreign Special Relationships (Negative)
Internationalism	107: Internationalism (Positive)	109: Internationalism (Negative)
Decentralisation	301: Decentralisation (Positive)	302: Centralisation (Positive)
Market Economy	403: Market Regulation	401: Free Market Economy
Government Econ.	404: Economic Planning (Positive)	402: Supply-side Incentives (Positive)
Protectionism	406: Protectionism (Positive)	407: Protectionism (Negative)
Government Policy	415: Marxist Analysis (Positive)	414: Economic Orthodoxy (Positive)
Economic Growth	416: Anti-Growth Economy (Positive)	410: Economic Growth (Positive)
	Social Lean	
Constitutionalism	203: Constitutionalism (Positive)	204: Constitutionalism (Negative)
Welfare State	504: Welfare State Expansion	505: Welfare State Limitation
Education Spending	506: Education Expansion	507: Education Limitation
Way of Life	602: National Way of Life (Negative)	601: National Way of Life (Positive)
Morality	604: Traditional Morality (Negative)	603: Traditional Morality (Positive)
Civics	606: Civic Mindedness (Positive)	605: Law & Order (Positive)
Multiculturalism	607: Multiculturalism (Positive)	608: Multiculturalism (Negative)
Labor Groups	701: Labor Groups (Positive)	702: Labor Groups (Negative)

Table A2: County Demographics

	Female	Age	Highschool	College	Schooling (Years)	Unemployment Rate	Population
Mean	50%	34.64	15%	6%	7.05	5%	45,193
SD	2%	1.44	6%	5%	1.27	2%	39,656
Min	46%	31.62	4%	1%	4.88	2%	11,650
Max	53%	37.61	29%	24%	10.43	12%	244,570

Note: Table with summary statistics at county level of Costa Rica in 2000. Columns are: Proportion female, county age (years), proportion with highschool education attainment, proportion with college education attainment, years of schooling, unemployment rate, and population. These values are computed using IPUMS International data of the Costa Rica 2000 census.

Table A3: Instrumented Import Exposure Interacted with Instrumented Support for CAFTA Effects on Political Lean (Election Cycle Data)

	Dep. Var: Canton Political Lean			
	(OLS)	(IV)	(OLS)	(IV)
Import Exposure	0.0114	-0.1671		
	(0.0078)	(0.1917)		
Import Exposure × CAFTA (Inst)	-0.1096	0.1266		
	(0.1037)	(0.9003)		
Net Import Exposure			0.0161***	0.0465**
			(0.0049)	(0.0226)
Net Import Exposure × CAFTA (Inst)			-0.0716	-0.2133*
			(0.0690)	(0.1131)
CAFTA (Inst)	0.1429**	-0.3592	0.1476**	0.1720**
	(0.0664)	(0.5893)	(0.0633)	(0.0800)
Observations	189	189	189	189
R^2	0.96417	0.84711	0.96546	0.96078
Within R^2	0.18579	-2.4747	0.21492	0.10855
First Stage F-test Statistics				
Import Exposure	-	6.1815	-	-
Import Exposure × CAFTA	-	5.2498	-	-
Net Import Exposure	-	-	-	13.350
Net Import Exposure × CAFTA	-	-	-	57.186
CAFTA	-	9.03×10^{31}	-	2.84×10^{31}
Election FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
Canton Controls	✓	✓	✓	✓

There are 63 cantons and 7 provinces. The Standard Errors are clustered at the canton-level. All regressions are weighed by the canton electorate in 1994. The canton control variables used are unemployment rate, proportion female, average age, proportion with college education, and average years of schooling. All canton measures are obtained from the 2000 Costa Rica Census. Standard errors are presented in the parenthesis below coefficients. Statistical significance is displayed as * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A4: Import Penetration Effect and CAFTA Support Effects on Political Lean

	County Political Lean			
	(1)	(2)	(3)	(4)
Δ IP	0.7013***	0.6245***	0.7118***	0.6521***
	(0.2219)	(0.2329)	(0.2235)	(0.2197)
Δ IP $\times$ CAFTA Share	-1.120***	-0.9746**	-1.125**	-1.029**
	(0.3944)	(0.4210)	(0.4005)	(0.3938)
CAFTA Share	0.1619**		0.2877***	0.1567**
	(0.0656)		(0.0535)	(0.0602)
Mean of Dep. Var.	-1.37	-1.37	-1.37	-1.37
Observations	378	378	378	378
R^2	0.94114	0.94732	0.94159	0.94335
Within R^2	0.13004	0.04015	0.09503	0.12223
Election FE	✓	✓	✓	✓
Province FE	-	-	✓	✓
County Controls	✓	-	-	✓
County FE	-	✓	-	-

The number of counties is 63 and there are 7 provinces. The Standard Errors are clustered at the county-level. All regressions are weighed by the county electorate in 1994. County Control variables are unemployment rate, proportion female, average age, proportion with college education, and average years of schooling. All county measures are obtained from the 2000 Costa Rica Census. Standard errors are presented in the parenthesis below coefficients. Statistical significance is displayed as * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A5: Import Penetration Effect and CAFTA Support Effects on Political Lean

	County Political Lean			
	(1)	(2)	(3)	(4)
Δ Net IP	0.6494***	0.8000***	0.7102***	0.7069***
	(0.1937)	(0.2170)	(0.1976)	(0.1969)
Δ Net IP $\times$ CAFTA Share	-0.8806**	-1.141***	-0.9987**	-0.9991***
	(0.3375)	(0.3776)	(0.3469)	(0.3441)
CAFTA Share	0.1091*		0.1775***	0.0780
	(0.0571)		(0.0370)	(0.0513)
Mean of Dep. Var.	-1.37	-1.37	-1.37	-1.37
Observations	378	378	378	378
R^2	0.94563	0.95162	0.94580	0.94732
Within R^2	0.19646	0.11859	0.16016	0.18381
Election FE	✓	✓	✓	✓
Province FE	-	-	✓	✓
County Controls	✓	-	-	✓
County FE	-	✓	-	-

The number of counties is 63 and there are 7 provinces. The Standard Errors are clustered at the county-level. All regressions are weighed by the county electorate in 1994. County Control variables are unemployment rate, proportion female, average age, proportion with college education, and average years of schooling. All county measures are obtained from the 2000 Costa Rica Census. Standard errors are presented in the parenthesis below coefficients. Statistical significance is displayed as * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.