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

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Abstract

Has increased access to international markets contributed to political ideology shifts in developing economies? Does ones ex-ante opinion on international trade impact their political leaning after international market access has begun? Previous research has shown that regions impacted negatively by trade have shifted toward political extremes but due to nonexistent regional level information on support for trade, there has been little said about how people's perception of trade may impact outcomes. Using the unique circumstance of Costa Rica, which placed their decision to join the Free Trade Agreement CAFTA-DR on their populace via a democratic referendum in 2007. I use county-level vote share of support for CAFTA-DR as a proxy of direct opinion on trade. I use political party election manifesto data to rank political leans left-to-right interacted with their received vote share at the county-level to create a county-political-lean index. Assuming that an individuals' political decision is impacted by the most recent comparative difference, I measure a counties exposure to imports for each election cycle. Results align with previous research and show that increased import competition shifts political support toward right-leaning ideologies. Interestingly, this effect diminishes 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

International trade, or globalization, has become an increasingly divisive political issue in world politics. Interestingly, opinions against globalization have not increased, but rather that globalization has become politicized (Walter, 2021). Emerging economies have increasingly entered the global scene through bilateral trade agreements with developed economies, opening themselves up to both benefits and losses of trade. Due to the recent wave of greater political polarization where attitudes against globalization have taken the main stage and the increasing reliance of developing economies on world trade, understanding how developing nations' political contexts are affect by international trade has become important at an international scale.

Developing nations have welcomed international trade as an important tool to push forward their economic growth. Through international economic linkages and Free Trade Agreements (FTAs), the Global South has become more intertwined with the global economy at large. Alongside the economic benefits come the economic woes. Recent political events have shown an increase in support for right-wing/nationalist political parties (Colantone and Stanig, 2018b, 2019), political polarization in the US attributable to labor market outcomes (Autor et al., 2020), and extreme pushback against globalization that culminates in actions such as Brexit (Sampson, 2017; Colantone and Stanig, 2018a). Beyond documenting shifts in political preferences as a cause of exposure to international trade, interacting these dynamics with stated preferences for trade can shed light on consequences of trade; politically or otherwise. The former is largely straightforward to measure using political election outcomes, but the latter suffers from lack of observable direct preferences for trade.

Costa Rica, a developing nation with strong democratic institutions, provides an ideal context to gather evidence on this interaction. In 2007, they held a democratic referendum on whether to ratify the Central America Free Trade Agreement (CAFTA-DR). By using this electoral event, along with election, political party, and Costa Rica-US trade data from 1994 to 2018, I analyze to what extent exposure to trade impacts political ideological leans

at the county-level in Costa Rica.

A novel contribution of this analysis is the construction of a county-level political ideology lean measure by combining political party election coded manifesto data and vote shares by election to map the county's political lean at each election. Results show that counties in a developing nation that are increasingly exposed to increasing international imports lean toward the right ideologically, 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. Importantly, interacting an import penetration measure with observed support for CAFTA-DR, through county-level referendum vote shares, yields evidence that this effect is diminishing in counties that supported the trade agreement more strongly. Decomposing county-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 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 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.

There has also been literature on proposed theoretical models to bridge the gap between international trade policy and voter behavior. Grossman and Helpman (2021) propose a theoretical model of social identity in trade politics by including both material and psychosocial components for groups. This model can further the understanding of trade policy formulation as it responds to racial and ethnic divides. Adams et al. (2006) proposes a unified model of voter indifference-alienation to explain policy influences on voter participation. And Mansfield and Mutz (2009) find that individual attitudes toward trade are driven more by perceptions of how the nation-wide economy is affected than by self-interest.

All in all, there has been little research focusing on the Global South: Bustos and Morales-Arilla (2024) look at whether NAFTA affected the leftist candidate's 2006 presidential candidacy. 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.

Given the rising market participation of emerging 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. This is evident by the lack of evidence from developing nations put forth in the Handbook of International Economics (Colantone et al., 2022), which focuses on backlash to globalization but is only able to show evidence of effects in developed economies.

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 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 census. Legislative elections are directly linked to the political party and not the individual

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

legislator. A voter at the ballot box is asked to vote for the party of their choosing, not the individual. This is significant to my 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 this is not enforced, as evidenced by an average 69.73% turnout rate through my 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 National Liberation Party (PLN) 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 and negotiations concluded successfully in 2004. However Costa Rica's government was unable to ratify it through legislature voting. To decide whether to ratify CAFTA-DR or not, 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.

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 rights, as determined by Article 1.2 of the treaty.

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

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 (Figure 2).

3.3 The CAFTA-DR Referendum

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 agreements. 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 possible competition to governmental institutions, 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 for Costa Rican workers into the US (Raventos Vorst, 2018). This opposition culminated in organized marches against the FTA in which a reported 50,000 individuals participated (Frajman, 2012).

This divide was reflected in 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 county-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 constitutionally mandated supreme 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 counties 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 Trade Data

Data on trade flows is from COMTRADE. 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 County Demographic Data

Data on county-level demographics comes from the Costa Rican 2000 census, through IPUMS International. 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 the county-level. Other demographic information such as education, age, and sex are available but not used in the primary analysis. 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. Although not used in the main analysis, relevant county demographic statistics can be found in table 7 in the Appendix.

5 Methodology

5.1 Political Lean Measure

In order to measure political lean for each county, I create a measure that uses the political party election manifesto data weighted by the vote share they received in the county. The Political Party Score is created by following 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 6.

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, negative or positive scores 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, nearly 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 county at each election cycle. This is weighted by political party's p vote-share w in county c at election t. I sum over all political parties which gives a weighted average at the county-level. Because not all participating political parties are coded 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 observe county-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);

$$\Delta IP_{ct} = \sum_{k} \frac{L_{ck,2000}}{L_{c,2000}} \cdot \Delta IP_{kt}. \tag{3}$$

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

$$\Delta IP_{kt} = \frac{\Delta M_{kt}}{L_{k,2000}}, \tag{4}$$

where the change in Import Penetration is measured for industry k in year t and is the change in imports per worker in industry k.

This Import Penetration measure captures how vulnerable to import competition county 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.

5.3 Model

The main model to be estimated is:

$$\begin{aligned} \text{Political Lean}_{ct} = {} & \beta_1 \cdot \Delta IP_{ct} \times \text{CAFTA-Yes Share}_c + \\ & \beta_2 \cdot \Delta IP_{ct} + \\ & \beta_3 \cdot \text{CAFTA-Yes Share}_c + \\ & \gamma_t + \gamma_c + e_{ct}. \end{aligned} \tag{5}$$

The dependent variable is the political lean of county c at election t. β_1 captures the effect of the interaction between the change in import penetration, relative to the previous

election cycle, at county c in election t interacted with the support for CAFTA-DR through the vote-share of "Yes" in county c. Lastly, γ_t and γ_c are time and county fixed effects.

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

The interaction variable should be interpreted as the differential effect of county-level support for CAFTA-DR in the referendum across Import Penetration levels. 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.

5.3.1 Priors

The primary coefficient of interest is β_1. This is the interaction between Import Penetration and Support for CAFTA-DR. I expect β_1 to have a negative coefficient. This would capture the negative relationship between Import Penetration exposure and support for Free Trade as captured by vote share in support of CAFTA-DR.

Following results from previous literature on globalization effects on political outcomes, I would expect for Import Penetration to have an effect on political lean toward the right as individuals likely experience outcomes similarly to other settings (Autor et al., 2020; Dauth et al., 2014).

This effect would be captured as a positive β_2 coefficient. Because the CAFTA-Yes Share (β_3) which is used as a stand-in for support for Free Trade in the model is a novel addition, I do not have strong priors on what sign this can take. A coefficient equal to zero could occur if the voting population's preference for trade is not factored in to their political opinion. A negative or positive coefficient can be explained through the political party alignment that occurred during the referendum. So a negative coefficient signals a shift toward the political left. This variable is dropped when county fixed-effects are factored in.

5.4 Endogeneity Concerns

A concern in using this approach is the endogeneity that demand for imports creates. Previous works have utilized imports in other countries from the trading partner, the US in this context. I do the same, by using the trade of goods for the sample period between the US and the other CAFTA-DR signatory nations, except the Dominican Republic due to lack of data. I use the cumulative trade volume between the US and El Salvador, Honduras, Nicaragua, and Guatemala.[3] 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.

6 Results

Results from regressions of equation 5 are reported below. I do this over different dependent variables and sample periods, but the specification remains the same. All estimations are for the period of 1998 to 2018, for all observed counties. Standard errors are clustered at the county-level.

6.1 Effects of Import Penetration on Political Lean

These are the results of the main specification with county-level political lean as the dependent variable. The regression results can be found on table 1. The main difference between column 1 and 2 is the Import Penetration measure. In column 1, it only uses Imports, column 2 uses Net Imports which is the difference between Imports and Exports. Both regress the main specification with Import Penetration and its interaction with the support for CAFTA-DR as measured through percentage of votes in favor in the referendum.

The effects of Import Penetration are as expected, with a positive coefficient. This signals that more Import Exposed counties will lean politically/ideologically to the right. This effect

[3] I need to do this one-by-one or by dropping one nation at a time for robustness

Table 1: Import Penetration Effect and CAFTA Support Effects on Political Lean

	County Political Lean	
	(1)	(2)
Δ IP	0.1575***	
	(0.0573)	
Δ IP × CAFTA Share	-0.2460**	
	(0.1034)	
Net Δ IP		0.1927***
		(0.0536)
Net Δ IP × CAFTA Share		-0.2736***
		(0.0933)
Observations	378	378
R^2	0.94737	0.95126
Within R^2	0.04110	0.11195
Election FE	✓	✓
County FE	✓	✓

Years: 1998-2018; Counties: 63
Standard Errors clustered at county-level
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

holds across measures using only imports or net imports. These coefficients indicate a shift toward the right politically.

The magnitude is slightly more difficult to interpret but I generalize it to the US political context to provide some insight: Using the same variables that determine Costa Rican political ideologies, as defined in table 6, and using equation 1, I create measures for the Democratic and Republican party from 2008 to 2022. These result in a scores for President Obama's Democratic party in 2008 of -1.0038 and President Trump's Republican Party of 2016 of 0.2987. The estimated coefficient of 0.1575 is equivalent to a 20% shift from President Obama in 2008 to President Trump in 2016.

The coefficient of interest is the interaction of Import Penetration and support for CAFTA-DR. A negative coefficient lends evidence that the political shift toward the right experienced by import penetrated counties exhibits diminishing effects as support for the FTA is stronger.

These results are consistent across Import Penetration measures. The Net Import Penetration measure is of particular interest in the Costa Rica 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 that rely on exports, have to account for the possibility that exports may react differently.

Because these results are averaged across all observed election cycles, it is of particular interest to see whether they are driven strictly by either the pre- or post-CAFTA-DR period.

6.2 Import Penetration Pre/Post CAFTA-DR

Table 2: Import Penetration Effect and CAFTA Support Effects by Pre/Post Sample

	County Political Lean			
	(Pre)	(Post)	(Pre)	(Post)
Δ IP	0.2074**	-0.0345		
	(0.0925)	(0.0659)		
Δ IP × CAFTA Share	-0.3767**	0.0665		
	(0.1682)	(0.1182)		
Δ Net IP			0.3414**	-0.0223
			(0.1410)	(0.0374)
Δ Net IP × CAFTA Share			-0.5547**	0.0694
			(0.2490)	(0.0625)
Observations	189	189	189	189
R^2	0.95016	0.97055	0.95162	0.97164
Within R^2	0.03802	0.00309	0.06623	0.04014
Election FE	✓	✓	✓	✓
County FE	✓	✓	✓	✓

Years: 1998-2018; Counties: 63

Pre-Period Years: 1998-2006; Post-Period Years: 2010-2018

Standard Errors clustered at county-level

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

I split the sample into pre- and post-CAFTA periods. The pre-period runs from 1998 to 2006, and the post-period is from 2010 to 2018. The split is determined by the official year

when CAFTA-DR went into effect, 2009. These breaks provide a balanced panel as each period has 3 election years, and thus each has 189 observations. Results for this are found in table 2 in the Appendix.

Columns 1 & 2 show results for the Import Penetration measure and columns 3 & 4 show results for Net Imports. Across both specifications, results show that the effects of import penetration appear to only be relevant in the political ideology context in the pre-period. Similarly, the trend evidenced in the whole-sample regression remains.

The fact that this effect is negligible in the post-period can be indicative of several things: (1) Individuals have adapted to the new economic reality post-CAFTA-DR and thus their exposure is not significant in their political lean. (2) The ratification of the FTA created a different political context in the post-period in which political parties identified along different margins. (3) Voters factor in social policy over economic policy when voting, which is reflected in who they support at the ballot box.

I test point (3) 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 equation 1 and 2, with a different subset of policy statement variables determine each score. Policy variables used for the economic lean and social lean can be found in appendix table 6.

6.3 Import Penetration on Different Political Considerations

Results by different margins of ideological lean can be found in table 3. For ease of comparison, the political lean measure is reported in columns 1 & 2. Columns 3 & 4 are for Economic Lean, and columns 5 & 6 report the results on Social Lean. All odd numbered columns report results using only Imports and even numbered columns use Net Imports. Results show that import competition exposed counties do not shift their economic ideology in either direction. This is makes sense given the context of Costa Rica, where political parties hold similar opinions on economic policy. The lack of significant variation on behalf

of political parties should mean that counties do not shift widely on this margin.

The interesting results show up when we consider the Social Lean measure. Results show that import competition exposed counties do shift toward the right on social policies. Importantly, coefficients are nearly the same magnitude as the political lean results. This could be interpreted as evidence that political parties target more social policy in their election manifestos rather than economic, making social policy signaling the margin on which political parties differentiate themselves and the relevant margin for voters.

I also run these regressions on Social Policy Lean splitting up the sample into the same pre- and post-periods as above. These results can be found in table 4 in the Appendix. Columns 1 & 2 show results for using only imports in the Import Penetration measure and columns 3 & 4 use net imports. These seem to be relevant across time periods when considering net imports, which considers the reality that some counties may be net exporters as well. Interestingly, the sign of the coefficients flip across periods. Rather than considering this as a re-alignment on social policy in the country, I believe it to be a return to the Costa Rican political middle by the average county.

6.4 Instrumental Variable Analysis

Finally, in order to address the possibility of endogeneity through demand for US goods driving imports, I use an instrumental variable approach using the other CAFTA-DR signatory countries (minus Dominican Republic). Results can be found in table 5. Columns 1 & 2 use only imports, and columns 3 & 4 use net imports. The even numbered columns show results from a Two-Stage Least Squares regression and odd numbered columns show the results from an OLS regression. F-statistics are reported and show that the instrument is valid, in both circumstances.

Results using the instruments show that these effects are not statistically significant at any level. Although this result calls into question previous work, it is encouraging that the signs of the coefficients behave as expected. These results merit more work to fully

Table 3: Import Penetration Effect and CAFTA Support Effects on Different Spectrums

	Political Lean		**Econ Lean**		**Social Lean**	
	(1)	(2)	(3)	(4)	(5)	(6)
Δ IP	0.1575***		0.0001		0.1160**	
	(0.0573)		(0.0220)		(0.0516)	
Δ IP × CAFTA Share	-0.2460**		0.0117		-0.1724*	
	(0.1034)		(0.0400)		(0.0917)	
Δ Net IP		0.1927***		-0.0248		0.1466**
		(0.0536)		(0.0338)		(0.0554)
Δ Net IP × CAFTA Share		-0.2736***		0.0531		-0.2006**
		(0.0933)		(0.0611)		(0.0963)
Observations	378	378	378	378	378	378
R^2	0.94737	0.95126	0.93167	0.93162	0.91179	0.91695
Within R^2	0.04110	0.11195	0.00577	0.00514	0.03578	0.09223
Election FE	✓	✓	✓	✓	✓	✓
County FE	✓	✓	✓	✓	✓	✓

Years: 1998-2018; Counties: 63

Standard Errors clustered at county-level

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 4: Import Penetration Effect and CAFTA Support Social Effects by Pre/Post Sample

	Social County Lean			
	(Pre)	(Post)	(Pre)	(Post)
Δ IP	0.1885**	-0.0885		
	(0.0867)	(0.0581)		
Δ IP × CAFTA Share	-0.3320**	0.1639		
	(0.1596)	(0.1006)		
Δ Net IP			0.2774**	-0.1262***
			(0.1376)	(0.0471)
Net IP × CAFTA Share			-0.4446*	0.2368***
			(0.2446)	(0.0816)
Observations	189	189	189	189
R^2	0.84296	0.97969	0.84683	0.98072
Within R^2	0.03527	0.01614	0.05902	0.06644
Election FE	✓	✓	✓	✓
County FE	✓	✓	✓	✓

Years: 1998-2018; Counties: 63

Pre-Period Years: 1998-2006; Post-Period Years: 2010-2018

Standard Errors clustered at county-level

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Import Penetration and CAFTA Support Effects on Political Lean

	Dep. Var: County Political Lean			
	(1)	(2)	(3)	(4)
Δ IP	0.1575***	0.4331		
	(0.0573)	(0.4861)		
Δ IP × CAFTA Share	-0.2460**	-0.5994		
	(0.1034)	(0.9962)		
Δ Net IP			0.1927***	0.0307
			(0.0536)	(0.1483)
Δ Net IP × CAFTA Share			-0.2736***	-0.0190
			(0.0933)	(0.2348)
Estimation method	OLS	2SLS	OLS	2SLS
Observations	378	378	378	378
R^2	0.94737	0.45675	0.95126	0.94991
Within R^2	0.04110	-8.8983	0.11195	0.08730
F-Statistics (1st Stage):				
Δ IP	-	18.630	-	-
Δ IP × CAFTA Share	-	18.555	-	-
Δ Net IP	-	-	-	31.255
Δ Net IP × CAFTA Share	-	-	-	38.723
Election FE	✓	✓	✓	✓
County FE	✓	✓	✓	✓

Years: 1998-2018; Counties: 63

All models are weighted by the county electorate in 1994

Standard Errors clustered at county-level

Instrument is constructed using all other CAFTA nations' trade with the US:

El Salvador, Honduras, Nicaragua, Guatemala

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

understand whether this is a proper instrument and how we can interpret these results. Future analysis will use only a subset of the nations as instruments and separate analysis in which one country is removed to see if it is a driven by only one nation.

7 Conclusion

In conclusion, exposure to import competition is a natural consequence of international trade. Local economies are vulnerable to international competition which impacts local labor markets and local economies differently. There has been significant 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 on developing nations. This analysis lends evidence that developing economies are vulnerable to the effects of trade. Not all are winners.

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 or not 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 county-level, I use this information as a proxy for direct opinions of trade.

Using trade data between Costa Rica and the US for the periods of 1994 to 2018, and vote data by each legislature election in Costa Rica, I begin to answer whether exposure to import competition affects political ideological shifts.

Results show that import exposed counties will react by leaning more toward the right. These effects are decreasing in counties that showed larger support for CAFTA-DR. Additionally, after decomposing political ideologies into economic and social policies, as coded through political party election manifesto language, I show that counties acquire their signals from the social realm, rather than the economic.

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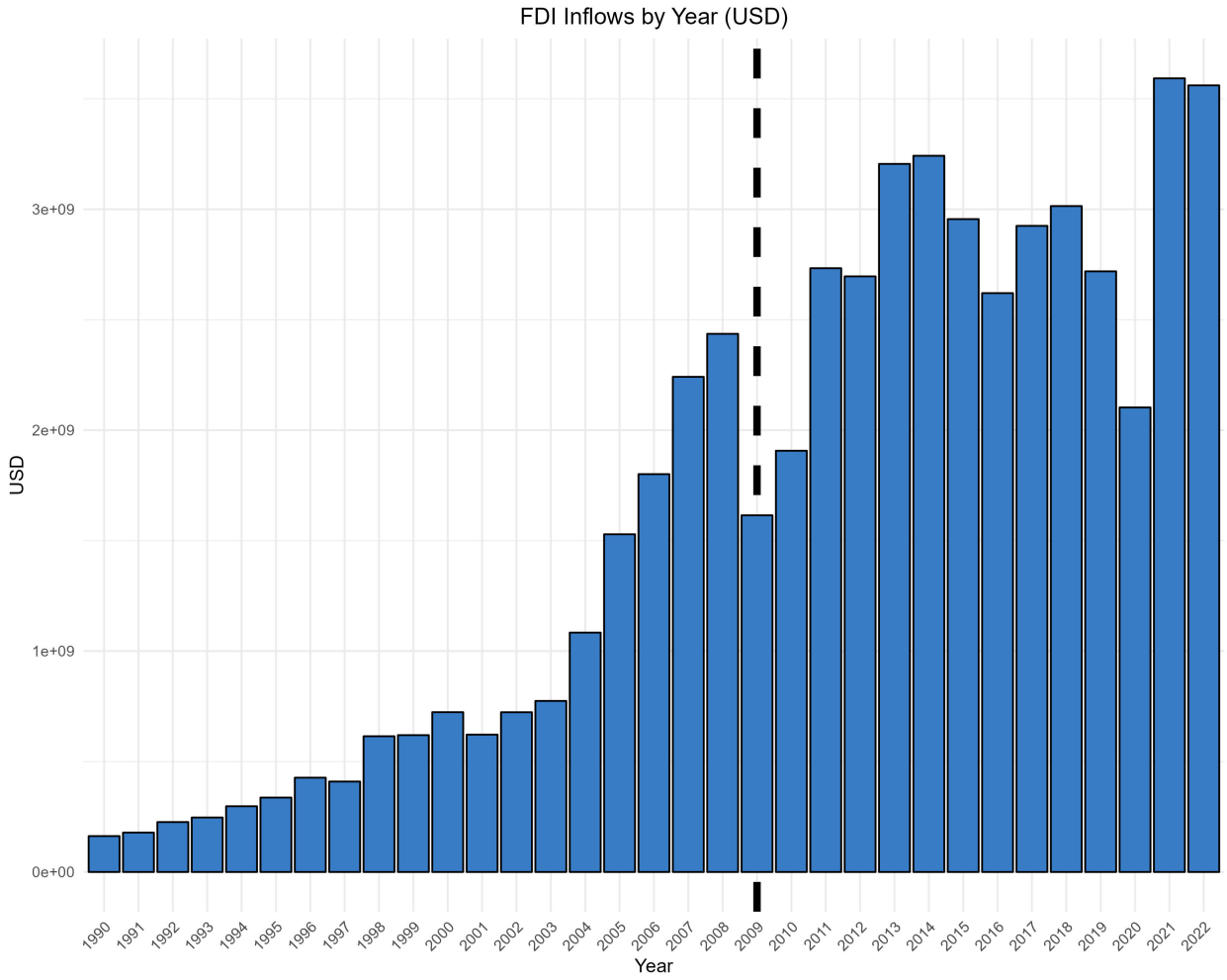
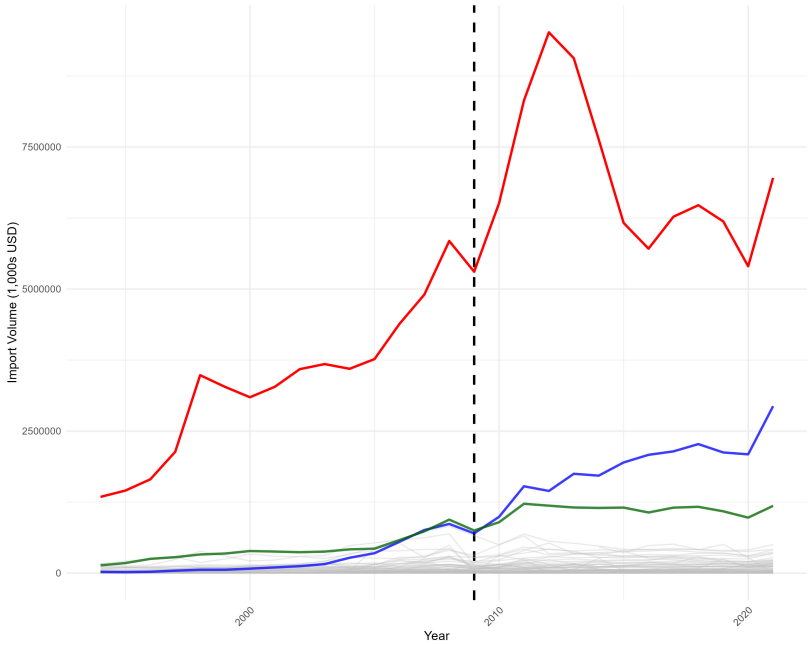
Appendix

Figure 1: FDI Inflows into Costa Rica

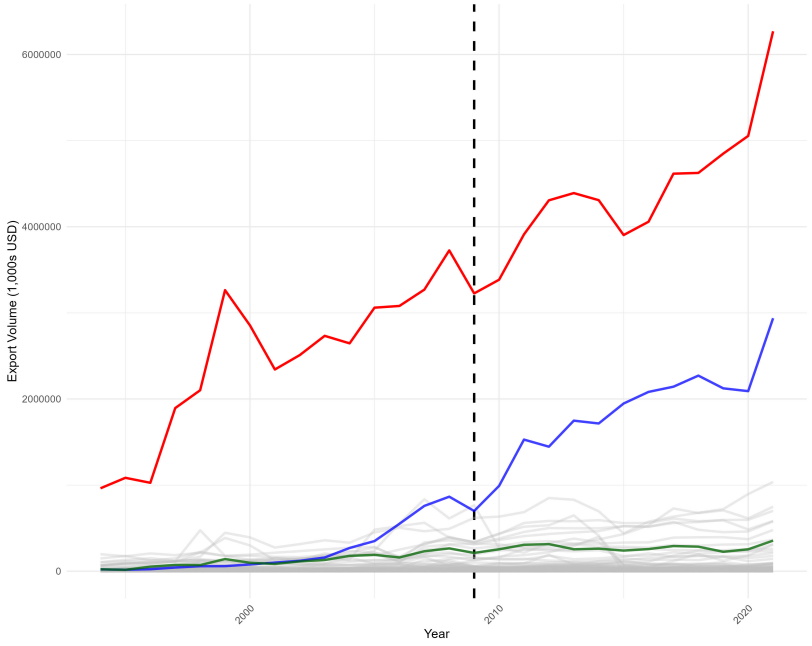


Notes: Total Foreign Direct Investment (FDI) inflows for Costa Rica in USD for the period 1990-2022. We can clearly observe the increase in FDI into the country around the time CAFTA-DR was being settled on internally; negotiations on the agreement ended in 2004. The black dashed-vertical line shows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

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



(a) Imports



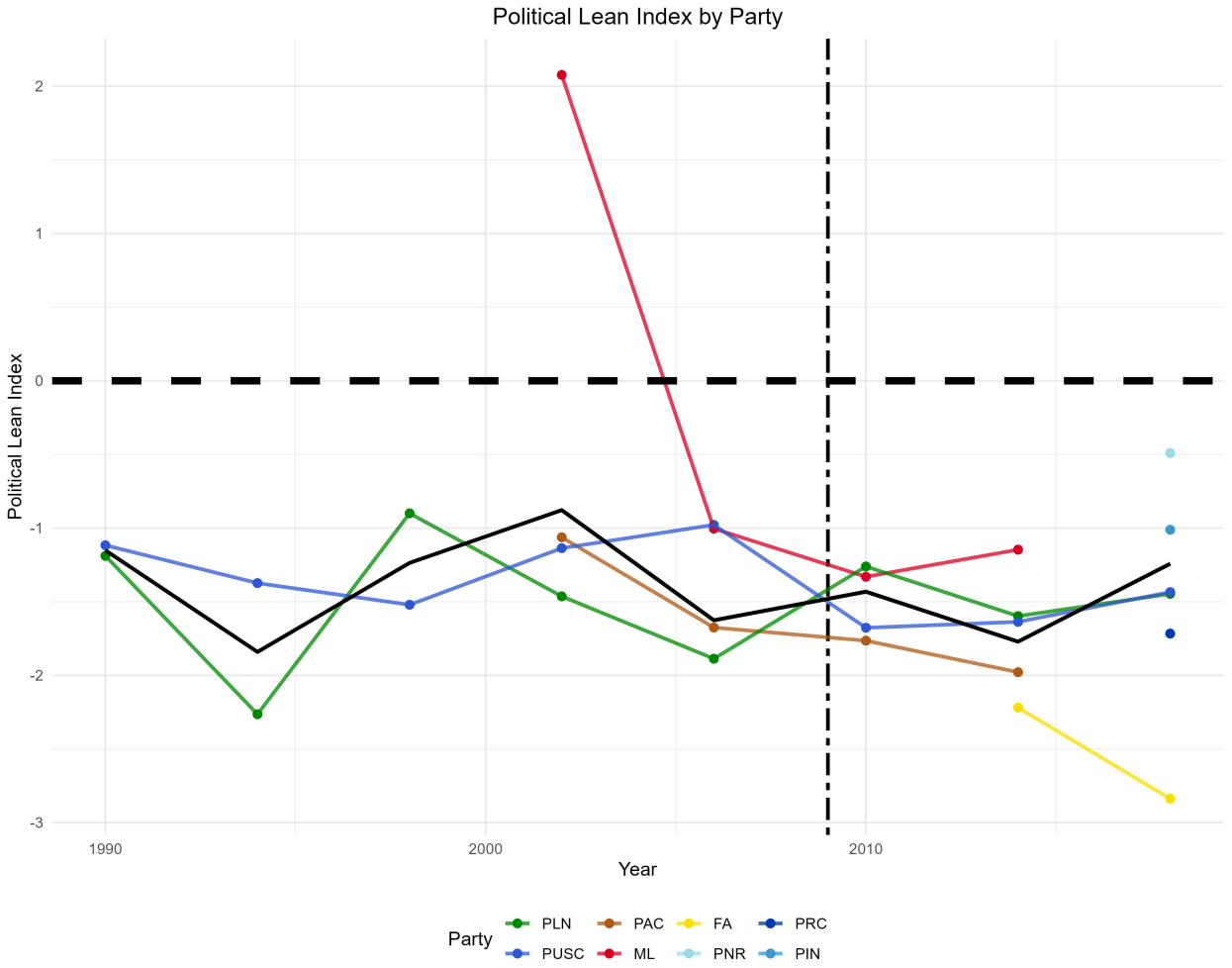
(b) Exports

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.

Table 6: 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 7: 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.