An Econometric Perspective

# Mercosur

# Background of Mercosur

- Formed in 1991 by Argentina, Brazil, Paraguay, Uruguay
- Multilateral Trade Agreement to facilitate trade between the South America Region.
- Doubled in membership by 2004 adding Bolivia, Peru, Colombia and Ecuador.

# Key Questions

What is the impact that MercoSur had on International Trade?

Policy implications: Are totalitarian governments harming themselves in terms of potential trade partners?

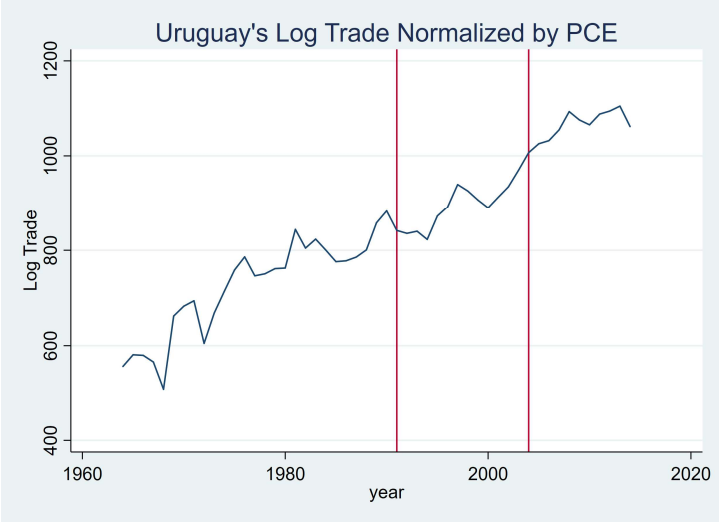
In essence, we will be attempting to estimate the treatment effect of Mercosur on International Trade.

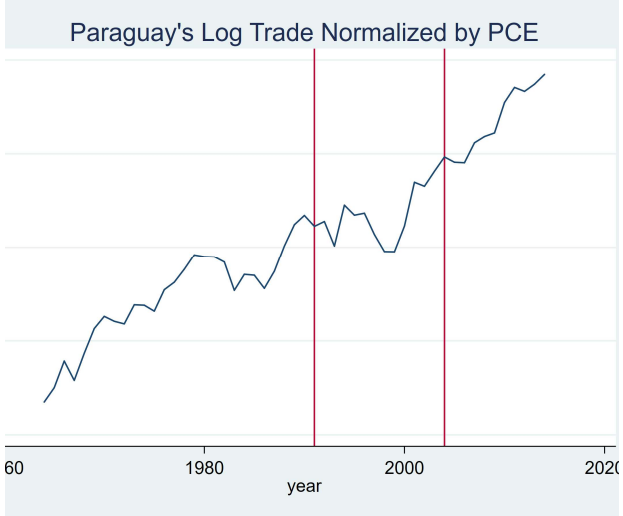
# Data

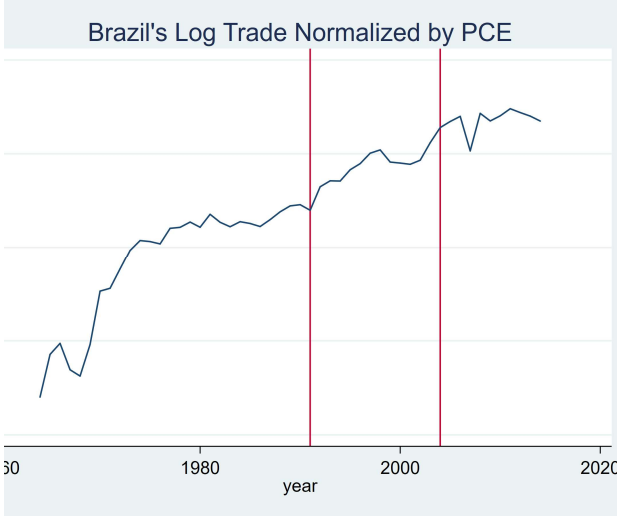
Our Data that we are working with consists of a 51 year(1964-2014) panel dataset containing 9506 unique country dyad pairs.

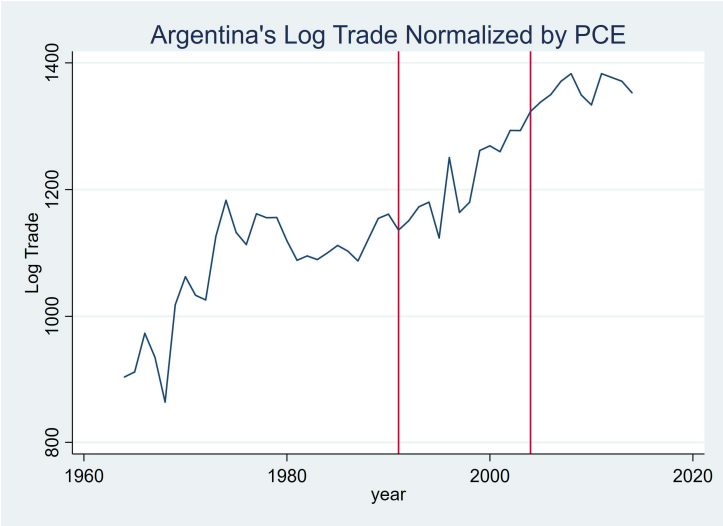
We are focusing on country pairs that joined in MercoSur, as a treatment effect.

Lets take an initial look into our data!

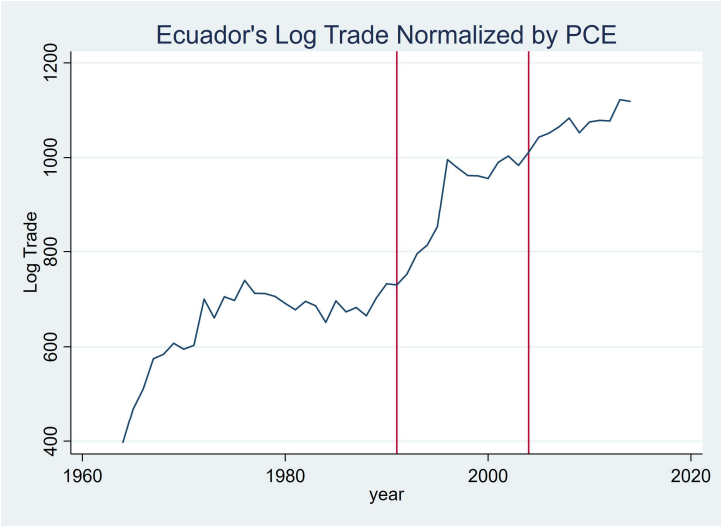


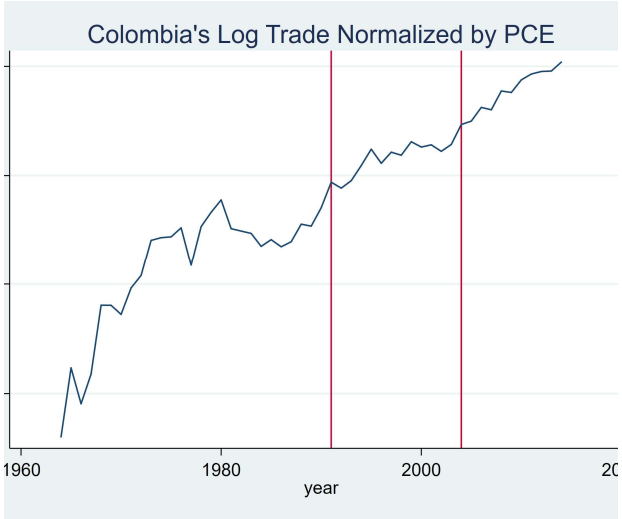



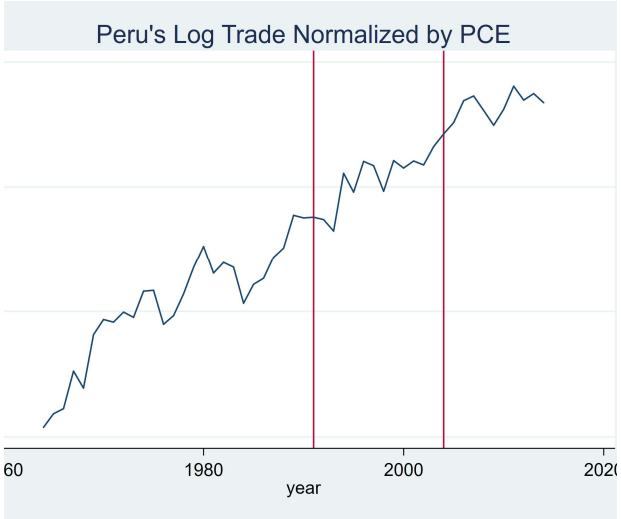



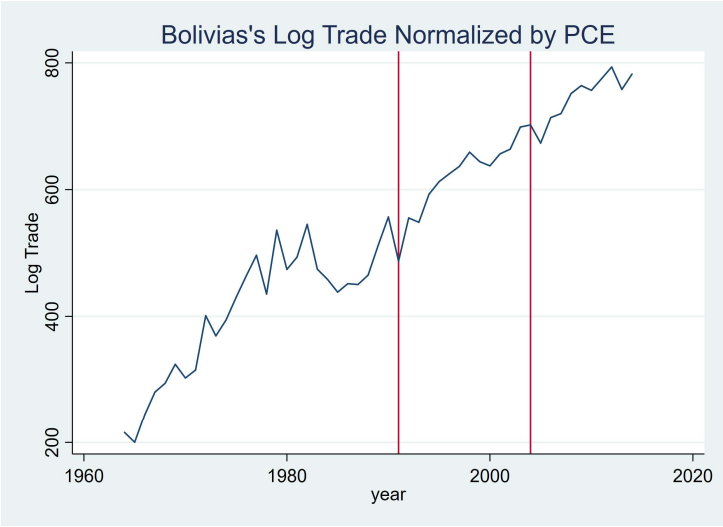




# Founding Members




# Associate Members

# Theoretic Model

1. Overall Trade has increased overtime but how much of that is attributed to Mercosur.
2. To answer this we will be using a the robust gravity model of trade.
3. Trade depends on the size and distance of countries.

$$T_{ij} = A\frac{Y_i \times Y_j}{D_{ij}}$$

# Econometric Model and Controls

$$\boldsymbol{MSUR}: \ln Y_{it} = \beta_0 + B_1 IEC_{it} + \beta_2 lnX_{it} + \beta_3 lnD_i + \delta_1 MES + \epsilon_{it}$$

$$\boldsymbol{poMSUR}: \ln Y_{it} = \beta_0 + B_1 IEC_{it} + \beta_2 lnX_{it} + \beta_3 lnD_i + \delta_2 poMES + \epsilon_{it}$$

**Where:**

$$\mathrm{t} = year$$
$$\ln Y_{it} = \log value\ of\ trade$$
$$IEC_{it} = Importer\ and\ Exporter\ capabilities$$
$$lnX_{it} = Trade\ Controls$$
$$lnD_i = Distance$$
$$\mathrm{MES} = Mercosur\ 1991$$
$$\mathrm{poMES} = Mercosur\ 2004$$

Trade Controls(X):

1. Common Language
2. Contiguous
3. Colony
4. Tariffs (GATT/WTO)

# Things to Consider

A large factor of endogenity comes from non-random assingment into the treatment group.

Solutions I have researched but not fully implemented consist of heckman twostep correction and propensity score matching.

There is also staggered entry into Mercosur after 1991 so the additional effect in 2004 may be biased. As well as heteroskedasticity.

# Results

| | *Pooled OLS* | *FE-All* | *FE-LA* |
|---|---|---|---|
| | Log of Trade | Log of Trade | Log of Trade |
| *Log of GDP* | 1.069*** | 0.793*** | 0.922*** |
| | (0.002) | (0.015) | (0.058) |
| *Log of Distance* | -1.072*** | 0 | 0 |
| | (0.004) | (.) | (.) |
| *Contiguous* | 0.602*** | 0 | 0 |
| | (0.021) | (.) | (.) |
| *Common Language* | 0.691*** | 0 | 0 |
| | (0.010) | (.) | (.) |
| *Colony* | 0.743*** | 0 | 0 |
| | (0.017) | (.) | (.) |
| *Trade Agreement* | 0.275*** | 0.246*** | 0.470*** |
| | (0.021) | (0.057) | (0.129) |
| *Mercosur 1991* | 0.913*** | 0.0961 | 0.171 |
| | (0.074) | (0.121) | (0.146) |
| *Mercosur 2004* | 0.141 | 0.262* | 0.329* |
| | (0.086) | (0.123) | (0.151) |
| *Mercosur Lag* | | 0.284* | 0.447** |
| | | (0.117) | (0.137) |
| *N* | 340344 | 324858 | 39226 |
| *adj. R-sq* | 0.655 | 0.849 | 0.778 |
| *Standard errors in parentheses* | | | |
| *="* p<0.05* | ** p<0.01 | *** p<0.001" | |

# Results

# Policy Implications

1

From what is previously stated members of Mercosur do not have a guaranteed spot in the trade agreement. They may be suspended for various reasons such as Paraguay in 2012.

2

Recently Venezuela was suspended in 2016 because of their authoritarian government.

3

Leaving Mercosur means a decrease in trade and therefore countries should think about their political actor's motives and their consequences