Good Policy or Good Luck in Latin America?
A View from the Stock Market

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Motivation

• The last quarter of the 20th century was a turbulent time for most countries in LA.
• Quite often, bad policies were at the root of the problem.
• In contrast, the last 5-10 have been more tranquil and prosperous.
• Was this good policy or good luck?
  – This is hard to identify given that external conditions have been favorable for most LA countries in recent years (except for a short time during the global crisis).
• We propose to look at stock market data to tell them apart.
Motivation

• Why the stock market?
  – Stock prices are forward-looking variables, much more so than other macro variables like real GDP.
  – Looking at GDP to evaluate policy might be misleading:
    • A policy that increases GDP today may be detrimental for GDP in the future.
    • If a president goes into power after a recession, GDP will likely increase but not necessarily because of good policy.
    • A policy implemented by one president may have an impact on GDP during the mandate of the next president.
  – Policies should be evaluated for their perceived (maybe potential) impact at the time of the announcement, and not necessarily for their performance ex-post.
Motivation

Argentina's Performance: 2003-2010
Motivation

Brazil's Performance: 2003-2010

Real Price in Local Consumption Units

Base: January-2003=100

P_Brazil P_World
Motivation

Argentina's Performance: 2003-2010
Motivation

Brazil's Performance: 2003-2010

Base: January-2003=100
Motivation

Argentina's Performance: 2003-2010

Base: May 2003=100
Motivation

Brazil's Performance: 2003-2010

Base: January-2003=100

Real Price in Local Consumption Units

2003 2004 2005 2006 2007 2008 2009 2010

P_Brazil  P_World  P_World_Brazil  P_World_Latin_no_Bra  P_Latin_no_Bra
What do we do?

• Decompose the average return during the mandate of a given official (either presidents or finance ministers) into three components: Global, Regional, and National.
  – 7 Countries: Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela.

• Compare countries, presidents and ministers performance.

• Explore if the Global, Regional, and National components are correlated with public opinion survey measures of presidential approval.
Preview of the Results

• The good performance of LA economies in the last 5-10 years was in many cases more related with good luck than with good policy.

Averages across time and countries

<table>
<thead>
<tr>
<th>Decade</th>
<th>Global</th>
<th>Regional</th>
<th>National</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>80s</td>
<td>18.2%</td>
<td>-0.2%</td>
<td>2.9%</td>
<td>20.9%</td>
</tr>
<tr>
<td>90s</td>
<td>6.8%</td>
<td>8.2%</td>
<td>-3.1%</td>
<td>11.9%</td>
</tr>
<tr>
<td>00s</td>
<td>6.7%</td>
<td>8.6%</td>
<td>0.1%</td>
<td>15.4%</td>
</tr>
</tbody>
</table>

• In terms of approval rates, for some measures the National component is an important predictor, but in some cases good luck appears to be relevant as well.
Rest of the talk

• Data and Methodology.
• Comparing Countries.
• Comparing Presidents.
• Comparing Ministers.
• Good Luck, Good Policy and Approval Rates.
• Conclusions
Data and Methodology

- Key variable: value-weighted national stock market return of each country.
- Source: S&P/IFC Global and Investable indices.
- Unit of measure: Domestic CPI.
- Inflation adjustment: average consumer price index variation during the following three months.
- Variable to be used: log of the adjusted return $R_i$
- Sample: Chile and Mexico 12/75, Brazil 11/81, Colombia and Venezuela 12/84, Argentina 1/85, Peru 12/92. Last observation: 12/10 (except Venezuela 3/03).
Data and Methodology

- Global Component I: return on a global portfolio that has the same industrial structure as that country at the end of the previous month.
- Source: Datastream Global Equity Indices.
- Unit of measure: US CPI.
- Variable to be used: log of the adjusted return $R_t^{w'}$.
Data and Methodology

• Global Component II: Terms of Trade (TOT).
• Data limitation: for some countries, only quarterly available.
• Two sets of result:
  – Monthly regressions without TOT.
  – Quarterly regressions including TOT.
• Regional Component: Year fixed effect common to all countries, $I^r(t)$
• National Component: Dummy variable for each administration in each country. $I^j(t)$
Data and Methodology

• Estimated regression:

\[ Z_t^i = R_t^i - R_t^{w^i} = \alpha + \sum_{\tau=1976}^{2010} \alpha_\tau I^\tau(t) + \sum_{i=1}^{J^i} \sum_{j^i=1}^7 \alpha_{j^i}^i I^{j^i}(t) + \gamma \Delta TOT_t^i + \varepsilon_t^i \]

• Global Component:  \[ \alpha + \sum_{\tau=t_0^i}^{T^i} \frac{R_t^{w^i}(t)}{T^i - t_0^i} + \gamma \sum_{\tau=t_0^i}^{T^i} \frac{\Delta TOT_t^i}{T^i - t_0^i} \]

• Regional Component:  \[ \sum_{\tau=t_0^i}^{T^i} \frac{\alpha_\tau}{T^i - t_0^i} \]

(Estimated in the regression that includes countries only)

• National Component:  \[ \alpha_{j^i}^i \]
Data and Methodology

• Some caveats with our methodology:
  – Financial markets are not as deep in LA as in more developed economies.
    • Listed firms generally represent a small part of the total stock of capital in the economy.
    • Many times, some of these markets have been relatively illiquid.
    • Restrictions on capital controls may have an impact on the performance of the stock market.
  – Despite these caveats, it is worth to explore the information contained in the stock market to disentangle good luck from good policy.
Results

1. Comparing Countries.
2. Comparing Presidents.
3. Comparing Ministers.
4. Good Luck, Good Policy and Approval Rates.
Comparing Countries
Regional + Average Global Effects

Debt Crisis
Asia + Russia
Lehman
Comparing Countries

Global, Regional and National Components of Stock Returns: 1976-2010 (in percentage points per year).
Comparing Presidents

Global, Regional and National Components of Stock Returns.
All Presidents together over decades (in % points per year)
Comparing Presidents
Global, Regional and National Components of Stock Returns.
Argentina: by Presidential Administration. 1985-2010 (in percentage points per year)
Comparing Presidents
Global, Regional and National Components of Stock Returns.
Brazil: by Presidential Administration. 1981-2010 (in percentage points per year)
Comparing Presidents
Global, Regional and National Components of Stock Returns.
Chile: by Presidential Administration. 1976-2010 (in percentage points per year)
Comparing Presidents
Global, Regional and National Components of Stock Returns.
Colombia: by Presidential Administration: 1985-2010 (in percentage points per year)
Comparing Presidents
Global, Regional and National Components of Stock Returns.
Mexico: by Presidential Administration. 1976-2010 (in percentage points per year)
Comparing Presidents
Global, Regional and National Components of Stock Returns.
Peru: by Presidential Administration. 1993-2010 (in percentage points per year)
Comparing Presidents
Global, Regional and National Components of Stock Returns.
Venezuela: by Presidential Administration. 1985-2003 (in percentage points per year)
Comparing Ministers

Global, Regional and National Components of Stock Returns.
Argentina: by Minister Administration. 1986-2010 (in percentage points per year)
Some Robustness Checks

• Dummy for hyperinflations.

• TOT forwarded one period.

• Coefficients for TOT different for each country.

• Estimating the Regional component in either the presidents or the ministers regressions.
Good Policy, Good Luck and Approval Rates

• Why should we care about this decomposition?
  – We want to see whether the 3 components are correlated with presidential approval rates.
  – There is some evidence in the literature relating economic conditions have an impact on the results of a given election (e.g. Frai, 1978, 1996). However, there is no distinction between good policy and good luck.
  – A priori, it is not clear what kind of results we should expect:
    • One would like to have good policy as a determinant of approval rates.
    • However, given that the identification is difficult, politicians have incentives to convince people that a good performance was due to good policy.
Good Policy, Good Luck and Approval Rates

Dependent Variable: Percentage answering that the current economic situation of the country is very good or good.

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Without TOT</th>
<th>With TOT</th>
<th>VARIABLES</th>
<th>Without TOT</th>
<th>With TOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>0.119</td>
<td>0.107</td>
<td>Global (t-1)</td>
<td>0.171**</td>
<td>0.163**</td>
</tr>
<tr>
<td></td>
<td>(0.0829)</td>
<td>(0.0915)</td>
<td></td>
<td>(0.0490)</td>
<td>(0.0498)</td>
</tr>
<tr>
<td>Regional</td>
<td>0.0112</td>
<td>0.00959</td>
<td>Regional (t-1)</td>
<td>0.0505</td>
<td>0.0497</td>
</tr>
<tr>
<td></td>
<td>(0.0274)</td>
<td>(0.0278)</td>
<td></td>
<td>(0.0428)</td>
<td>(0.0428)</td>
</tr>
<tr>
<td>National</td>
<td>0.125</td>
<td>0.121</td>
<td>National (t-1)</td>
<td>0.125</td>
<td>0.116</td>
</tr>
<tr>
<td></td>
<td>(0.161)</td>
<td>(0.136)</td>
<td></td>
<td>(0.0940)</td>
<td>(0.0724)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.105***</td>
<td>0.108***</td>
<td>Constant</td>
<td>0.0977***</td>
<td>0.100***</td>
</tr>
<tr>
<td></td>
<td>(0.00896)</td>
<td>(0.0117)</td>
<td></td>
<td>(0.00647)</td>
<td>(0.00764)</td>
</tr>
<tr>
<td>Observations</td>
<td>79</td>
<td>79</td>
<td>Observations</td>
<td>79</td>
<td>79</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.210</td>
<td>0.216</td>
<td>R-squared</td>
<td>0.276</td>
<td>0.283</td>
</tr>
</tbody>
</table>
## Good Policy, Good Luck and Approval Rates

Dependent Variable: President’s classification (Scale 1 to 5)

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Without TOT</th>
<th>With TOT</th>
<th>VARIABLES</th>
<th>Without TOT</th>
<th>With TOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>0.113</td>
<td>0.0968</td>
<td>Global (t-1)</td>
<td>0.275</td>
<td>0.239</td>
</tr>
<tr>
<td></td>
<td>(0.245)</td>
<td>(0.233)</td>
<td></td>
<td>(0.278)</td>
<td>(0.260)</td>
</tr>
<tr>
<td>Regional</td>
<td>-0.157</td>
<td>-0.165</td>
<td>Regional (t-1)</td>
<td>-0.153</td>
<td>-0.164</td>
</tr>
<tr>
<td></td>
<td>(0.247)</td>
<td>(0.244)</td>
<td></td>
<td>(0.192)</td>
<td>(0.194)</td>
</tr>
<tr>
<td>National</td>
<td>0.691*</td>
<td>0.671*</td>
<td>National (t-1)</td>
<td>0.543**</td>
<td>0.438*</td>
</tr>
<tr>
<td></td>
<td>(0.316)</td>
<td>(0.334)</td>
<td></td>
<td>(0.173)</td>
<td>(0.196)</td>
</tr>
<tr>
<td>Constant</td>
<td>2.889***</td>
<td>2.899***</td>
<td>Constant</td>
<td>2.877***</td>
<td>2.883***</td>
</tr>
<tr>
<td></td>
<td>(0.0195)</td>
<td>(0.0207)</td>
<td></td>
<td>(0.0188)</td>
<td>(0.0194)</td>
</tr>
</tbody>
</table>

Observations  | 119         | 119       | Observations| 118         | 118      |
R-squared     | 0.222       | 0.224     | R-squared   | 0.224       | 0.220    |
## Good Policy, Good Luck and Approval Rates

**Dependent Variable:** Percentage answering that the presidential economic management is Very Good and Good  
**Source:** Barómetro Iberoamericano. Sample: 1999-2009  

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Without TOT</th>
<th>With TOT</th>
<th>VARIABLES</th>
<th>Without TOT</th>
<th>With TOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>0.119*</td>
<td>0.109*</td>
<td>Global (t-1)</td>
<td>-0.0111</td>
<td>-0.00894</td>
</tr>
<tr>
<td></td>
<td>(0.0501)</td>
<td>(0.0520)</td>
<td></td>
<td>(0.0669)</td>
<td>(0.0618)</td>
</tr>
<tr>
<td>Regional</td>
<td>0.105</td>
<td>0.113</td>
<td>Regional (t-1)</td>
<td>0.137</td>
<td>0.140</td>
</tr>
<tr>
<td></td>
<td>(0.234)</td>
<td>(0.257)</td>
<td></td>
<td>(0.154)</td>
<td>(0.159)</td>
</tr>
<tr>
<td>National</td>
<td>0.297</td>
<td>0.341</td>
<td>National (t-1)</td>
<td>-0.0462</td>
<td>0.0166</td>
</tr>
<tr>
<td></td>
<td>(0.414)</td>
<td>(0.331)</td>
<td></td>
<td>(0.323)</td>
<td>(0.247)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.304***</td>
<td>0.311***</td>
<td>Constant</td>
<td>0.317***</td>
<td>0.318***</td>
</tr>
<tr>
<td></td>
<td>(0.0234)</td>
<td>(0.0301)</td>
<td></td>
<td>(0.00676)</td>
<td>(0.00865)</td>
</tr>
<tr>
<td>Observations</td>
<td>70</td>
<td>70</td>
<td>Observations</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.347</td>
<td>0.366</td>
<td>R-squared</td>
<td>0.315</td>
<td>0.316</td>
</tr>
</tbody>
</table>
### Good Policy, Good Luck and Approval Rates

**ARGENTINA.** Dependent Variable: Percentage answering that they approve the presidential economic management

Source: Gallup. Sample: 2/1990 - 12/2010

Quarterly regression, regressors in t-2

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>Approve Coefficient</th>
<th>1 SD</th>
<th>Disapprove Coefficient</th>
<th>1 SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>0.100*</td>
<td>3.6%</td>
<td>-0.120*</td>
<td>-3.5%</td>
</tr>
<tr>
<td>Regional</td>
<td>0.149**</td>
<td>2.0%</td>
<td>-0.164**</td>
<td>-2.2%</td>
</tr>
<tr>
<td>National</td>
<td>3.542</td>
<td>2.0%</td>
<td>-4.278*</td>
<td>-2.6%</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Observations | 93 | 93 |
| R-squared    | 0.140 | 0.171 |
Conclusions

• We propose a method to decompose stock market returns into Global, Regional and National components.

• The good performance of LA economies in the last 5-10 years was in many cases more related with good luck than with good policy.

• Of an average return (across years and countries) of 15.4% during the last decade: 6.7% Global, 8.6% Regional, and 0.1% National.

• In terms of approval rates, for some measures the National component is an important predictor, but in some cases good luck appears to be relevant as well.