SOUTH AMERICA FOR
THE CHINESE?
A TRADE-BASED ANALYSIS

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Introductory Remarks
China has Developed an Avid Appetite for Natural Resources During the last 10 years. What are the Implications for Latin America?

- Is South America cursed by its natural resources?
- Does China rapid penetration of the region renew the region’s comparative advantage in natural resources?
- Does South America’s trade specialization stand in the way of regional integration?
Answering the Questions in 4 steps

1. Analysis of trade flows demonstrates China’s growing importance in South America.

2. China’s emergence as an important partner to the region reinforces the long-established calling of its countries as natural resources and commodities exporters.

3. This vocation matters, because there is a link between the behavior of the price of commodities and the region’s economic performance. How best deal with this?

4. Finally, could Brazil serve as a counter weight to China’s influence in the region?
1. Analysis of trade flows demonstrates China’s growing importance in South America.
What happened in Brazil illustrates the shifting importance of trade partners in South America, as the United States and Europe lost importance in relative terms to both China and intra-regional trade. Even if, in 2008, China remained a less important partner than the other groups, its trade share in Brazilian trade had increased almost eightfold. By early 2009, China surpassed the United States as Brazil’s most important single trade partner.

Brazil’s Trade Partners, 1990-2008, (Percent of total Brazilian exports)

Source: IMF. Directions of Trade Statistics on line. Authors’ calculations.
Output co-movement between Brazil and the United States has been declining. Output co-movement between Brazil and China has been increasing because of demand spillovers due to the rising correlation of business cycles in China with world commodity prices, in which Latin America tends to have a natural comparative advantage.

(10-year-rolling correlations)

Source: World Bank. World Development Indicators on line. Authors’ calculations.
Use of the Vector Autoregression Approach between 1980 and 2008, across 10 South American Countries and their most Important Trade Partners, shows that:

1. The growth rate of China’s total imports from the world is more important for the growth rate of exports in each country of the region than the growth rate of the United States’ and the Euro Zone’s total imports from the world.

2. Changes in the growth rate of Chinese imports accounts for a proportion between 30 and 74 percent of the change in the growth rate of exports in the majority of South-American countries.

3. Changes in the growth rate of U.S. imports account for less than 10 percent of the change in the growth rate of exports of each South American country on average.

4. The importance of the growth rate of Brazilian imports for the dynamics of exports in the rest of the region is comparable to the importance of the United States in most cases and is more than twice that of the Euro Zone. Its importance is much smaller than that of China, except in the case of Uruguay.
2. The United States and Europe are still very important trade partners to Latin America, but they have lost importance to the acceleration of trade in relation to China. The increased trade with China reinforces South America’s position as a commodities exporting region.
Trade Specialization with China Brazil, 2007 (Percent)

- Primary Products: 74.29%
- Natural Resource Based Manufactures: 11.01%
- Low Technology Manufactures: 5.49%
- Medium Technology Manufactures: 7.76%
- High Technology Manufactures: 1.40%

Source: UN COMTRADE. United Nations Commodity Trade Statistics Database, DESA/UNSD
3. There is a link between the behavior of the price of commodities and Latin America’s economic performance.
## Coefficient of Correlation Between GDP Growth Rates and Commodity Price Indices
### South American Countries, 1980-2008

<table>
<thead>
<tr>
<th>Country</th>
<th>Coefficient of Correlation with the Non-Fuel Commodity Price Index</th>
<th>Coefficient of Correlation with a Selected Commodity Price Index ‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>0.33*</td>
<td>0.27* [Soya beans]</td>
</tr>
<tr>
<td>Bolivia</td>
<td>0.47**</td>
<td>0.20* [Petroleum]</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.11</td>
<td>0.07 [Agricultural Raw Materials]</td>
</tr>
<tr>
<td>Chile</td>
<td>0.20</td>
<td>0.16 [Copper]</td>
</tr>
<tr>
<td>Colombia</td>
<td>0.60**</td>
<td>0.39** [Petroleum]</td>
</tr>
<tr>
<td>Ecuador</td>
<td>0.18</td>
<td>0.16 [Petroleum]</td>
</tr>
<tr>
<td>Paraguay</td>
<td>0.49**</td>
<td>0.44** [Soya beans]</td>
</tr>
<tr>
<td>Peru</td>
<td>0.17</td>
<td>0.21* [Copper]</td>
</tr>
<tr>
<td>Uruguay</td>
<td>0.40**</td>
<td>0.27* [Food]</td>
</tr>
<tr>
<td>Venezuela</td>
<td>0.43**</td>
<td>0.35** [Petroleum]</td>
</tr>
</tbody>
</table>

Notes: *, **, and *** significant at 1%, 5%, and 10%, respectively.
‡ Commodities selected according to their predominance in country’s exports of goods.
Source: ECLAC (Cepalstat) and IMF (IFS on line).
Swings in commodity prices are not reflected one for one in movements in terms of trade in South America. Commodities are not only an important part of South America’s exports, but primary commodities and natural resources-based manufactures also account for an important share of these countries’ imports. Thus, one needs to check the impact of Terms of Trade (ToT) on growth. ToT is a more relevant variable than the price of commodities in several empirical studies on growth.
Terms of trade do explain a significant proportion of the forecast error variance in GDP growth in:
   - Brazil (25 percent)
   - Paraguay (32 percent)
   - Venezuela (26 percent).

Yet, the commodity price index remains important and explains an important part of the changes in GDP growth in six out of ten countries in the region:
   - Bolivia (27 percent)
   - Chile (17 percent)
   - Colombia (47 percent)
   - Ecuador (15 percent)
   - Paraguay (49 percent)
   - Venezuela (18 percent).

These six countries are the same countries with the highest concentration indices by products as measured by the Herfindahl-Hirschman Index (HHI).
Commodity prices are very volatile and this implies very volatile income sources. Volatile income sources generate uncertainty which reduces investment. Furthermore, governments under-invest in public goods when beset with revenue instability, and pro-cyclical international capital flows amplify the fluctuations in income. The results are boom-bust cycles.
Panel Data Analysis (1980-2007)  
Dependent Variable: GDP Growth

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Model 2b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.885**</td>
</tr>
<tr>
<td></td>
<td>(0.311)</td>
</tr>
<tr>
<td>GDP Growth_1</td>
<td>0.341**</td>
</tr>
<tr>
<td></td>
<td>(0.057)</td>
</tr>
<tr>
<td>ΔTOT_1</td>
<td>0.051**</td>
</tr>
<tr>
<td></td>
<td>(0.021)</td>
</tr>
<tr>
<td>R Squared</td>
<td>0.15</td>
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<tr>
<td>Adjusted R Squared</td>
<td>0.14</td>
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<tr>
<td>Cross-Sections</td>
<td>10</td>
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<tr>
<td>Period Included</td>
<td>26</td>
</tr>
<tr>
<td>Total Panel Observations</td>
<td>260</td>
</tr>
</tbody>
</table>

Note: * and ** mean statistically significant at 1 and 5 percent, respectively. Standard errors in parentheses.

Different models confirm the evidence shown here.
4. To Respond to Terms of Trade Volatility, the Best Policy for Latin America would be the use of a Counter Cyclical Fiscal Policy

In Brazil, as much as in the rest of the region, government debt has shown a downward trend since 2003. This trend has been partly due to rapidly increasing commodity prices. Yet, more sustainable fiscal policies have also contributed to this result. However, Latin governments have continued to under-save in good times and therefore fiscal policy has remained pro-cyclical, thus weakening the ability to protect the poor and maintain infrastructure investments during bad times. Financing and institutional constraints to more counter-cyclical fiscal policies continue to exist in most countries of Latin America. These constraints are lowest in Chile and highest in Ecuador and Venezuela.
5. Finally,

- Brazil probably cannot serve as a counter weight to China’s influence in Latin America to judge from the experience of Mercosur.

- This is so in part because all countries of the region share the same comparative advantages in producing commodities and agricultural goods.