

# Economic Watch

## Cross-Country Emerging Market Analysis

Hong Kong, 25th Feb 2013  
Economic Analysis

Emerging Economies

**Alicia García-Herrero**  
Chief Economist  
alicia.garcia-herrero@bbva.com.hk  
852 2582 3281

Cross-Country Emerging  
Markets Analysis

**Mario Nigrinis Ospina**  
Principal Economist  
mario.nigrinis@bbva.com  
852 2582 3193

**Weiwei Liu**  
Economist  
carrie.liu@bbva.com  
852 2582 3243

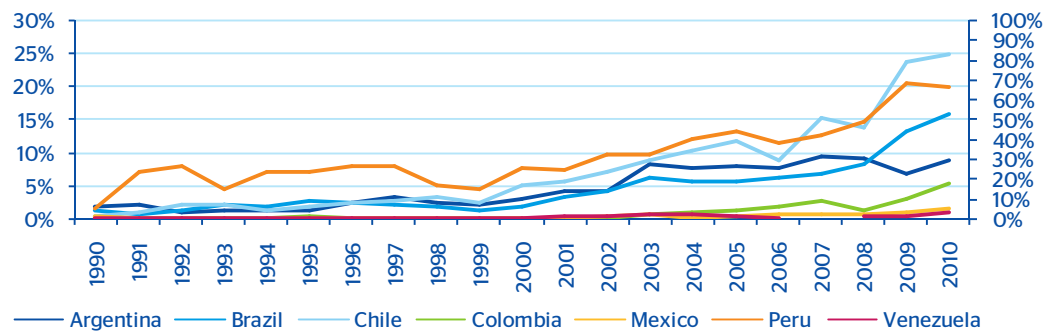
## How dependent is Latin America's Economy on China?

The global commodity boom which started at the beginning of this century has been favoring resource-abundant economies such as Latin American countries. The higher commodity prices and larger volume of commodity trade are commonly believed to be driven by rapidly growing emerging economies like China (See chart 1). Nevertheless, the increasing relevance of the 2 regions is now putting Latin American economies on tenterhooks given the fact that the world "powerhouse" is now slowing down. Will Latin America slow with it?<sup>1</sup>

In this Economic Watch, we are trying to dissect this issue by checking 1) how much of a commodity export concentration that is in Latin America; 2) to what extent Latin American exports depend on China's commodity demand; 3) how relevant this export dependency is for economic growth in the region. Our results show that:

- **Commodities have always taken a significant share of Latin American exports;** the level of commodity exports concentration had been declining until the start of this century, which coincides with the further involvement of China in global markets.
- **The shift of China's economic model** makes it the biggest contributor to the world commodity demand and the top importer of Latin America's natural resources.
- **There is a positive China effect on commodity exports concentration in our regression model;** the dependency on Chinese demand for our sample commodities has indeed increased during the last decade.
- **However, Latin American countries' economic growth** is far less dependent on China than the commodity exports figures might imply.

Chart 1  
Exports to China /Total Exports



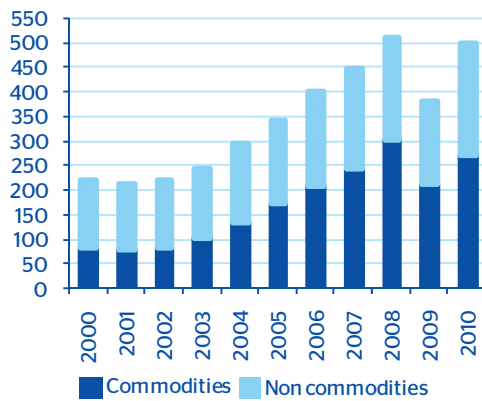
Source: COMTRADE and BBVA Research

<sup>1</sup> Financial Times, "When China slows, who slows with it?", <http://blogs.ft.com/beyond-brics/2012/05/17/when-china-slows-who-slows-with-it/#axzz1w8r0eBld>.

## Commodity export concentration in Latin America: it has always been there

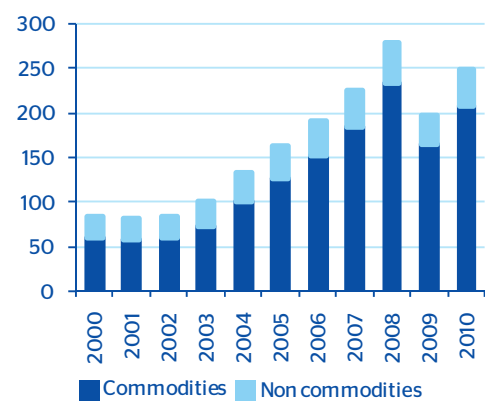
We first focus on 7 Latin American economies (LATAM): Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. For comparison, we also look at 6 South American countries, including all the above Latin American economies except Mexico. As we see from chart 2, Latin American commodities take about half of total exports to major economies (US, Europe and China); the situation is even worse when excluding Mexico as shown in chart 3.

Chart 2  
US, EU and China:  
Total imports from LATAM 7 (in USD billion)



Source: COMTRADE and BBVA Research

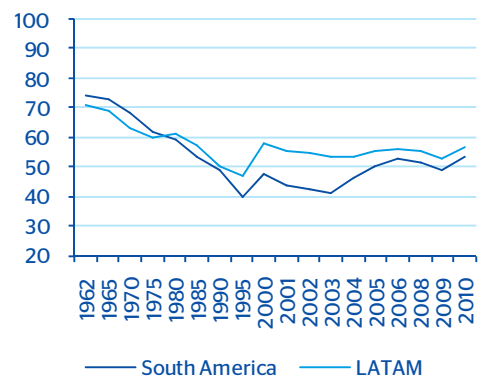
Chart 3  
US, EU and China: Total imports from South America\* (in USD billion)



Source: COMTRADE and BBVA Research

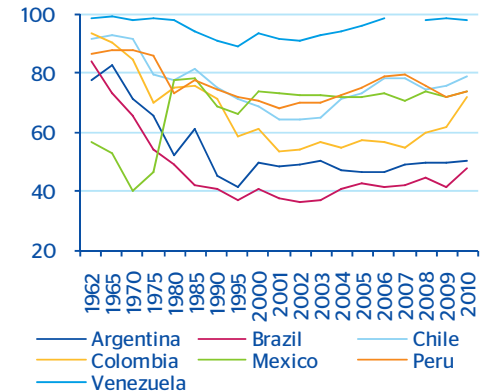
Chart 4 and 5 are the cumulative shares of the top 5 export goods. We notice that the declining trend before the end of the twentieth century stopped in the last decade. However when considering only South America, there has been a small reversal starting at the beginning of the twenty-first century, which coincides with the emergence of China as a powerhouse and its entry to the World Trade Organization (WTO).

Chart 4  
Exports: Top 5 goods cumulative share  
(% of total exports)



Source: COMTRADE and BBVA Research

Chart 5  
Exports: Top 5 goods cumulative share  
(% of total exports)



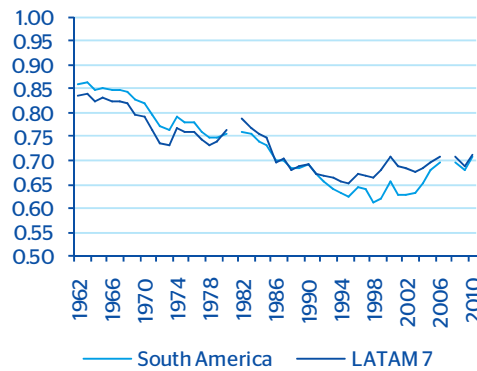
Source: COMTRADE and BBVA Research

Within the region there are several differences. Brazil and Argentina seem to have the most diversified exports while Venezuela has the strongest concentration. In the case of Colombia, the diversification process apparently had a significant reversal in the last few years; although this may be explained by the dramatic decline of exports to Venezuela, mainly manufactured goods. Such exports reached a peak in 2008 (to almost 6 USD billion) but in

2010 they were reduced to only one quarter of the 2008 value. The reasons behind the trade collapse are more related to the bad performance of Venezuelan economy (its imports contracted 32% between 2008 and 2010), rather than stronger competition from China or other economies.

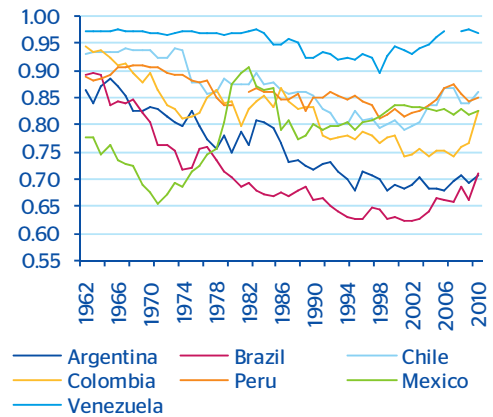
Using other metrics, like the Gini index (see chart 6 and 7), similar results emerge: a continuous decline of exports concentration until the end of the twentieth century, and a reversal of this trend since after, in particular in South America.

Chart 6  
Gini Index of commodity export concentration:  
LATAM vs South America



Source: COMTRADE and BBVA Research

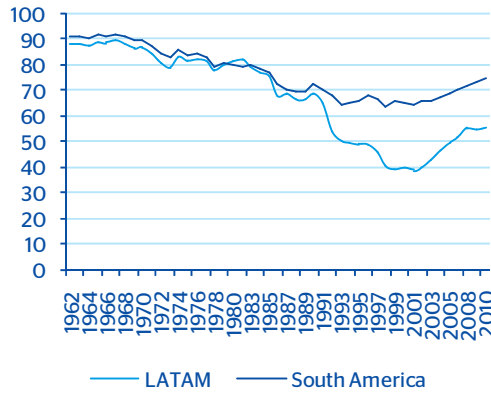
Chart 7  
Gini Index of commodity export concentration



Source: COMTRADE and BBVA Research

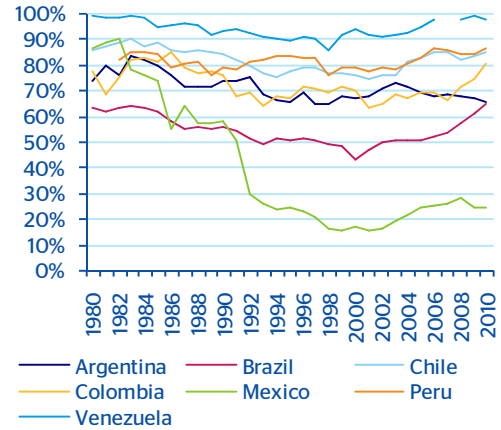
Commodities have always taken an important share of Latin American exports although until the 1980's there was a continued decline in their shares when compared to previous decades (66% in 1989 vs 88% in 1962, see Chart 8 and 9). In the 1990's, the implementation of NAFTA (North American Free Trade Agreement) introduced a structural change of the Mexican economy which became mainly an exporter of manufactured goods (in 2001 only 15% of total Mexican exports were commodities), whereas in South America the lowest share, reached in the late nineties, was fourfold (63%). During the last 10 years the commodity boom increased their share of total exports again.

Chart 8  
Commodity exports (% share of total exports)



Source: COMTRADE and BBVA Research

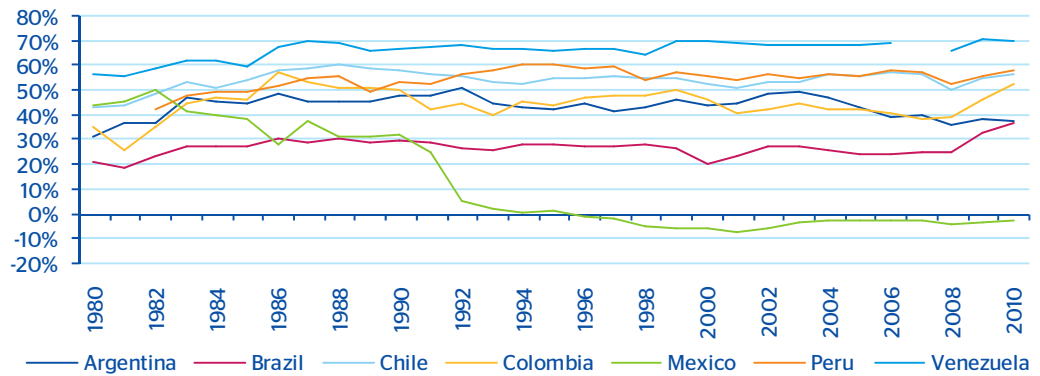
Chart 9  
Commodity exports (% share of total exports)



Source: COMTRADE and BBVA Research

Compared with the rest of the world, South American economies have always been intensive in commodity exports (see Chart 10) given that the share of commodity exports in total export is always way above world average. Once again it is clear that NAFTA helped change the structure of the Mexican economy

Chart 10  
LATAM's excessive commodity exports (LATAM commodity exports share vs World average)



Source: COMTRADE and BBVA Research

## To what extent Latin American exports depend on China's commodity demand?

We have observed a consistent pattern of commodity exports in Latin America with different scopes and techniques. From a producer's point of view, the rising concentration in the last decade explained by China's hunger for raw materials has been considered a blessing in a region very much dependent on the US, especially during the global crisis started in 2008. Nevertheless, if we see an economy as a whole, the excessive specialization in commodities and natural resources exports can be detrimental and may lead to dampened prospects of growth (see Box 1). Thus we start wondering if China should be blamed of the "de-industrialization" in Latin America and to what extent the latter is dependent on China's commodity demand.

### Box 1: Potential Problems of Commodity Export Concentration

First, there is the standard “diminishing returns” argument. As a country continues to invest in any particular activity, including the exporting activity in a narrow range of products, the rates of return will generally fall. Second, concentration of exports, whether it is in supposed high-technology items like computer chips or in standardized items such as petroleum, can be subjected to periodic and sometimes unexpected fall in demand and decreased prices and thus export earnings. Such volatility in incomes associated with exports can have negative consequences for the governments in developing economies if they are trying to plan for expenditures in education, infrastructure, health or any fiscal measures.

In addition, there is the well-known hypothesis that natural resources can be subjected to a secular decline in their terms-of-trade. The argument is that as countries become richer, they will spend proportionally more on manufactured products. The change in relative demand will lower the terms-of-trade of commodities.

Also, if concentration of exports has the tendency to lead to volatility of export revenues, such a feature is viewed as even more pronounced for concentration of exports of commodities and fuels. Natural resource goods tend to be homogenous products, with individual exporting economy facing a fairly inelastic demand. Adverse international market conditions often create negative terms-of-trade shocks and reduced export earnings, which can then lead to lower investment as well as consumption in the developing countries.

Besides, it is equally well-known that resource-rich economies may face the Dutch disease. A boom in the export sector is usually a beneficial development for a

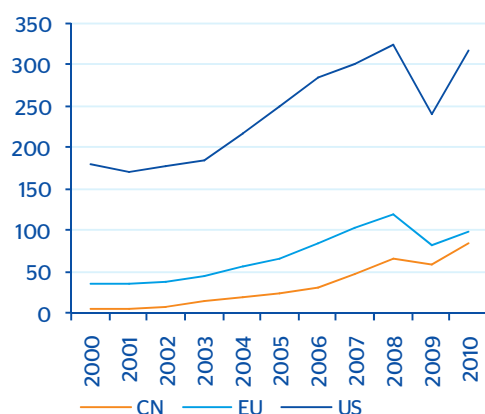
country. But for the case of a resource-exporting economy, it can lead to negative consequences. Booming exports of minerals and fuels are often accompanied by an increase in the real exchange rates of the countries as well as a rise of the economy-wide wage levels. This leads to a loss of competitiveness and tends to shrink the manufacturing sectors, leading to de-industrialization.

Furthermore, unlike manufactures, commodities may have properties that make their excessive specialization particularly undesirable. For example, it is often argued that minerals, fuels and food have less scope for productivity improvements. Quality improvements are also more likely if the developing countries export manufactured goods or services. Significantly climbing up the value added ladder seems less possible with mineral or oil exports than exports of manufactured goods. Countries that export goods associated with higher productivity levels are seen to be growing faster than countries that export lower-productivity goods (Hausman, Hwang and Rodrik 2006). In addition, concentration in exporting oils and commodities will not give the domestic entrepreneurs the opportunities to realize the gains from exploring and finding out the right varieties of products to export, making economic growth via “self-discovery” less likely (Hausmann and Rodrik 2003).

Finally some argue that the economic rents generated by the exports and productions of commodities and fuels are often extracted in economies characterized by poor institutions. Consequently, these countries tend to misuse the rents and would not invest significantly to make sure that the economic development of the countries will continue even after the natural resources are depleted.

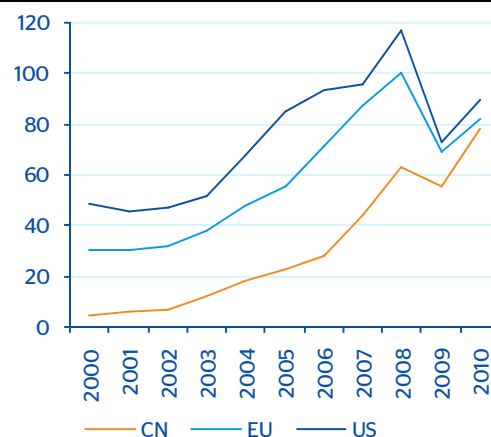
To answer the above questions, we first take a look at the major trading partners of Latin America. As demonstrated in Chart 11 and 12, the U.S. is still, by far, the largest export destination for both LATAM and South America. The rise of China is remarkable and in 2010 it almost caught up with Europe as the region's second export partner. The catching up process of China as one of the export destinations is not only due to its rapid economic growth but also by the sharp decline of exports to the U.S. and the EU with the current economic crisis. Hence Chinese commodity demand can be considered as a buffer which has compensated the negative effects of the world crisis.

Chart 11  
Total imports from LATAM 7 (in USD billion)



Source: INE and BBVA Research

Chart 12  
Total imports from South America\* (in USD billion)

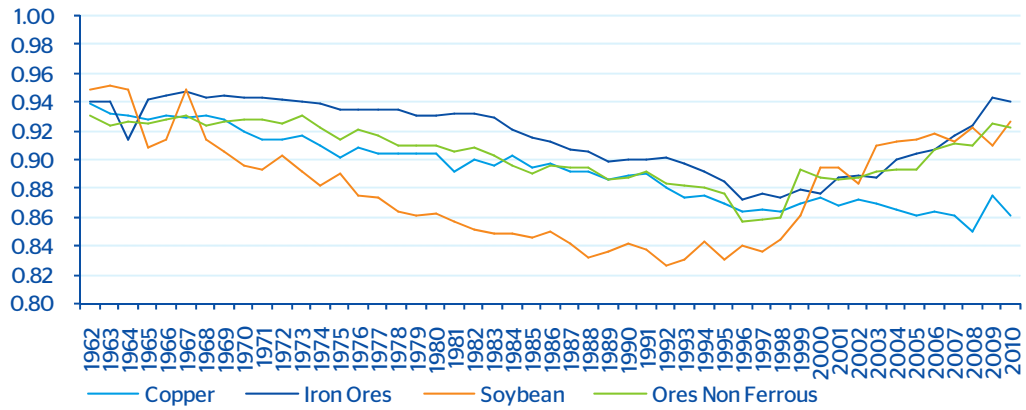


Source: BBVA Research

This surge of China's commodity demand is due to the fact that its economic model shifted towards heavy industrial production, the private property market exploded, and wealthier citizens demanded a richer diet. Taking 4 commodities: soybeans, iron ore, copper, and ores of non ferrous metals as examples, we'll notice the focus of global commodity markets shifted away from the US, Europe and Japan towards China, which rapidly became the world's largest importer of the commodities and thus the biggest contributor both to global commodity demand and to global commodity prices.

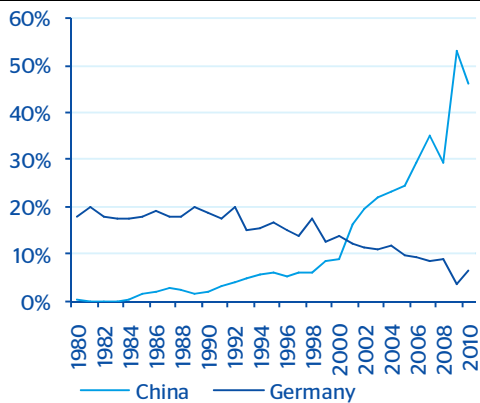
In Chart 13 we plot the Gini coefficients in order to measure import market concentration for major commodities over the period 1962-2010. We can see the continuing decline of imports concentration, but an obvious reverse (except copper) after China's accelerated development by the end of 1990s. The emergence of China is dramatically transforming the commodities market structure (see charts 14-17).

Chart 13  
Imports concentration (Gini Coefficient)



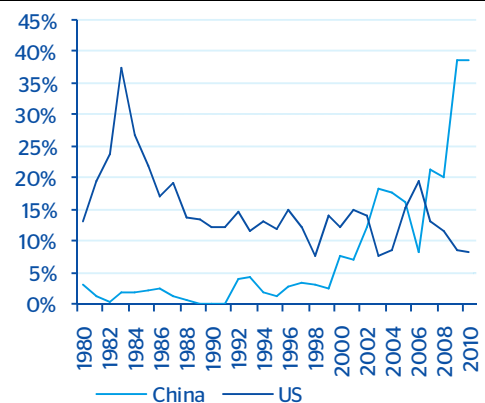
Source: COMTRADE and BBVA Research

Chart 14  
Brazil:  
exports of iron ores to main partners (Share, %)



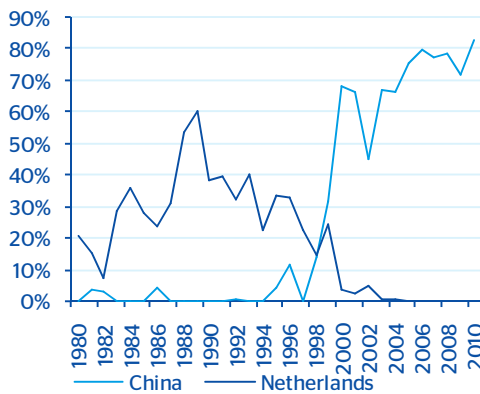
Source: COMTRADE and BBVA Research

Chart 15  
Chile:  
exports of copper to main partners (Share, %)



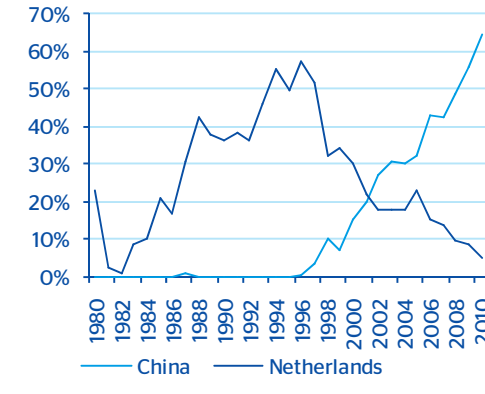
Source: COMTRADE and BBVA Research

Chart 16  
Argentina:  
exports of soybean to main partners (Share, %)



Source: COMTRADE and BBVA Research

Chart 17  
Brazil:  
exports of soybean to main partners (Share, %)



Source: COMTRADE and BBVA Research

## How relevant is South America export dependency to the GDP growth in the region?

We use two different methodologies on how vulnerable are Latin American commodity exporters to the shifts in Chinese demand: firstly, we run a panel regression model to test if commodities export concentration is related to the growing importance of China<sup>2</sup>. Secondly, we create a “China export dependency index” to measure the level of export dependency on China<sup>3</sup>.

### 1. Econometric Approach

We use panel data for the period of 1980-2010 on 74 economies<sup>4</sup> and 28 commodities<sup>5</sup>. The explanatory variable of interest is the effect of China on export concentration (from now called “China effect”). We use two proxies in our regressions. The first proxy is the growth rate of commodities exports to China by country *i* in year *t* (denote as *g*). The second proxy is the ratio of imports of commodities by China out of Chinese total imports relative to the same ratio for the world as a whole (represented by CN). Most of the explanatory variables are significant and have the expected signs. The China effect, as captured by CN, is consistently positive and significant, indicating that China is indeed responsible for the higher concentration of commodity exports. The other proxy, *g*, is also positive and significant, at least for 1980-2010 and for 1990-2010. Overall the results (see table 1) from this set of regressions indicate that there is indeed a China effect, after controlling for the standard explanatory variables.

Table 1  
Regression Results using GLS

Label	GLS					
	1980-2010		1990-2010		2000-2010	
Com Price Index/CPI	0.092*** (0.008)	0.269*** (0.020)	0.100*** (0.008)	0.299*** (0.020)	0.124*** (0.007)	0.363*** (0.016)
va	0.857*** (0.047)	0.802*** (0.043)	0.988*** (0.048)	0.992*** (0.045)	1.367*** (0.030)	1.357*** (0.031)
ln(GDPpct/wGDPpct)	-0.004 (0.005)	-0.005 (0.004)	0.005 (0.005)	0.003 (0.005)	0.043*** (0.005)	0.042*** (0.005)
infrastructure dummy	-0.076*** (0.022)	-0.078*** (0.021)	-0.063*** (0.022)	-0.051** (0.021)	-0.079*** (0.025)	-0.061** (0.026)
g	8.69 e-07** (4.45 e-07)		1.09 e-06** (4.41 e-07)		1.18 e-06 (1.01 e-06)	
CN		3.712*** (0.262)		4.070*** (0.250)		4.906*** (0.209)
_cons	0.021 (0.023)	-0.261*** (0.037)	0.003 (0.022)	-0.337*** (0.035)	-0.022 (0.026)	-0.435*** (0.034)

Source: COMTRADE and BBVA Research

<sup>2</sup> This is based on the working paper conducted by Fung, K.C., Alicia Garcia-Herrero and Mario Nigrinis Ospina, *Latin American Commodity Export Concentration: Is There a China Effect?* Working Paper Number 13/06, BBVA Research.

<sup>3</sup> This is based on the working paper conducted by Matt, Ferchen, Alicia Garcia-Herrero and Mario Nigrinis Ospina, *Evaluating Latin America's Commodity Dependence on China*, Working Paper Number 13/05, BBVA Research.

<sup>4</sup> There are in total 74 economies which are included in the regressions: 45 emerging economies (Argentina, Bahrain, Bangladesh, Brazil, Bulgaria, Chile, China, Colombia, Czech Rep., Egypt, Estonia, Hungary, India, Indonesia, Iran, Jordan, Rep. of Korea, Kuwait, Latvia, Lithuania, Malaysia, Mauritius, Mexico, Morocco, Nigeria, Oman, Pakistan, Peru, Philippines, Poland, Qatar, Romania, Russia, Slovak Rep., South Africa, Sri Lanka, Sudan, Taiwan, Thailand, Tunisia, Turkey, Ukraine, UAE, Venezuela, Vietnam) and 29 industrialized ones (Canada, France, Germany, Italy, Japan, United Kingdom, United States, Australia, Austria, Belgium, Cyprus, Denmark, Finland, Greece, Hong Kong SAR, Iceland, Ireland, Israel, Luxembourg, Malta, Netherlands, New Zealand, Norway, Portugal, Singapore, Slovenia, Spain, Sweden, Switzerland).

<sup>5</sup> Using UN Comtrade SITC Rev.1 classification, we have added categories 0 to 4 (except commodities 25 and 26), plus 67 and 68 as pure commodities.



## 2. China Export Dependence Index

The second methodology is based on the calculation of an index to see how vulnerable Latin American commodity exporters are to the shifts in Chinese demand. To measure this, we have created a “China export dependency index” as indicated below<sup>6</sup>.

$$Index_{i,j} = \sqrt[3]{\frac{EXP_{i,j}}{EXP_j} \times \frac{EXP\ to\ China_{i,j}}{EXP_{i,j}} \times avg \left[ \frac{IMP_{i,China}}{IMP_i}, \left( 1 - \frac{EXP_{i,j}}{EXP_i} \right) \right]}$$

The index is a geometric mean of three components:

$$\frac{EXP_{i,j}}{EXP_j} = \text{Country } j\text{'s exports of commodity } i \text{ as a share of its total exports. This shows how concentrated are a country exports into one commodity (i).}$$

$$\frac{EXP\ to\ China_{i,j}}{EXP_{i,j}} = \text{Country } j\text{'s exports of commodity } i \text{ to China divided by its total export of that commodity. This shows how dependent the world is on China to sell a particular commodity relative to other export markets.}$$

$$avg \left[ \frac{IMP_{i,China}}{IMP_i}, \left( 1 - \frac{EXP_{i,j}}{EXP_i} \right) \right] = \text{The average of 2 components:}$$

$\frac{IMP_{i,China}}{IMP_i}$  is the share of China’s imports of commodity i in the global market.

$\left( 1 - \frac{EXP_{i,j}}{EXP_i} \right)$  is 1 minus country j’s export market share of commodity i.

This provides a measure of China’s strength as a buyer or pricing power compared to the exporting country’s strength as a seller.

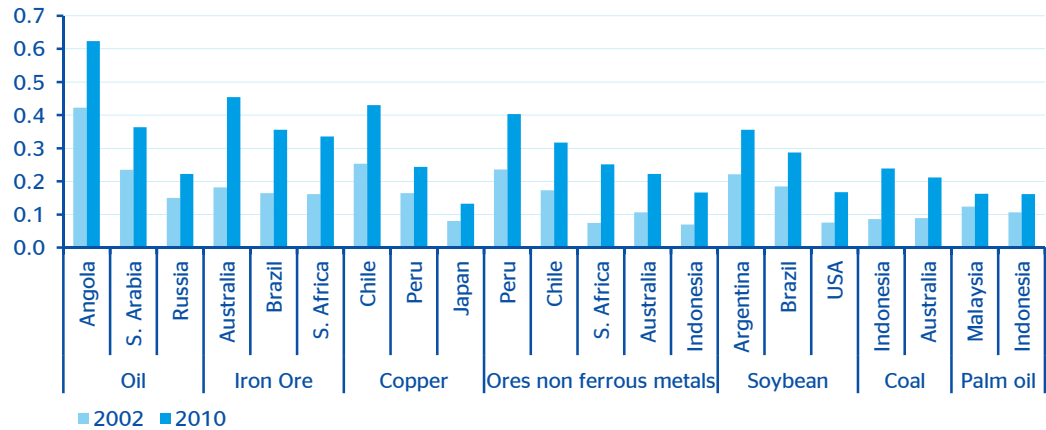
The index is scaled from 0 (no dependence) to 1 (complete dependence). The index is a relative measure of export dependence on China for each country and its particular commodity. The higher the score, the more vulnerable any exporter will be to any disruption of trade with China.

The index (see chart 18) shows that dependency on Chinese demand for all the commodities considered in the sample has increased compared with year 2002. Within the South American economies in the sample, Argentinean soybean exports are the most dependent on Chinese demand both because China takes an extremely high share of its total soy exports (above 85%) and because Argentina’s soybean market power is extremely weak, as Argentina accounts for less than 13% of world supply, compared to US (48%) and Brazil (28%). Brazil’s soybean producers remain highly dependent on China, but slightly less so than their Argentinean competitors, thanks to their stronger market position. Among exports of ores of non ferrous metals, Peruvians are the most sensitive to Chinese demand. This is a very interesting market where Chile has the largest share of total exports, whereas Peru, Australia

<sup>6</sup> We have conducted robustness tests with similar formulae. The index is to measure the vulnerability of a particular sector rather than the whole economy.

and Indonesia have a similar market power. At the same time, Peruvian sales of these ores to China are almost a third of its total sales.

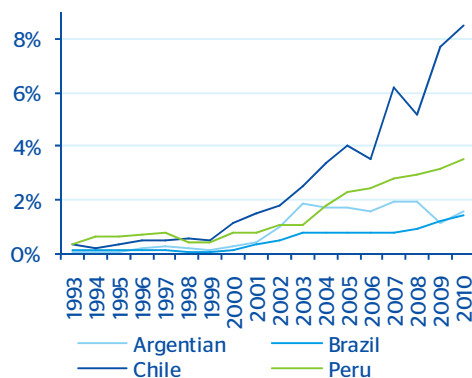
Chart 18  
Exports dependency to China index (0 no dependency - 1 absolute dependency)



Source: UN Comtrade

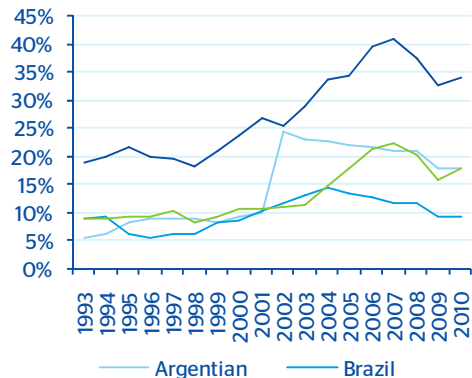
South American commodity exporters are highly dependent on China for trade, but their countries' overall GDP growth rates are far less dependent on China than these high export figures might imply. Exports to China are worth less than 2% of GDP in both Brazil and Argentina (see chart 19). This reflects the fact that trade plays a relatively small role in the Brazilian and Argentinean economies, which have relatively low export-to-GDP ratios at around 9% and 18%, respectively (see Charts 20). This is true for most Latin American countries apart from Chile, where exports comprise one-third of GDP. Moreover, as Chart 21 shows, the majority of the country's copper export is to China (more than 9% of GDP). However, the general point is still valid: even among Latin America's commodity-rich exporters to China, overall GDP growth is less directly dependent on China than many might believe (see chart 22).

Chart 19  
Exports to China (% of GDP)



Source: COMTRADE and BBVA Research

Chart 20  
Total exports (% of GDP)

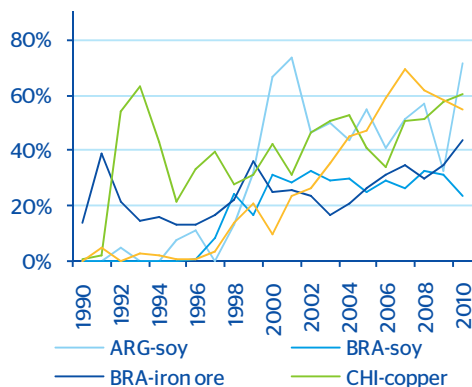


Source: COMTRADE and BBVA Research

In fact, export-to-GDP ratios appear to be falling across Latin America in recent years (see chart 21), indicating that countries are becoming less economically dependent on commodity exports, even as soy, iron ore, copper and ores of non ferrous metals exports to

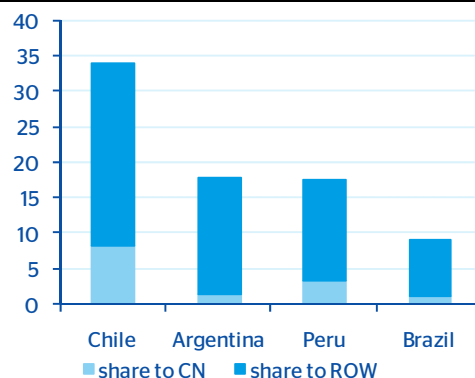
China continue to grow. This trend is partially a consequence of the global financial crisis, but also signals the significant role domestic demand has played in the South America's recent economic expansion. This simply underscores that much of the region's economic dynamism of recent years has mostly been a function of domestic factors.

Chart 21  
Commodity exports to China  
(% of total national exports)



Source: COMTRADE and BBVA Research

Chart 22  
Export dependency (% of GDP in 2010)



Source: COMTRADE and BBVA Research

The prominent role of China as a driver of the commodity exports in Latin America is beyond question. The concentration in commodity export in Latin America has been accompanied by China's rapid growth and development. However, Chinese demand for commodities may only be responsible for a very minor contribution to GDP growth in these countries. Therefore, it is too early to conclude that China's economic landing will drag down its trading partners as well. The combination of hopes and anxieties tied to Latin America's decade-long boom in economic relations with China is likely to persist. The honeymoon period of Sino-LATAM economic relations may or may not be over, but what is clear is that commodities will continue to underpin the relationship for better or for worse.

## References

Fung, K.C., Alicia Garcia-Herrero and Mario Nigrinis Ospina, *Latin American Commodity Export Concentration: Is There a China Effect?* Working Paper Number 13/06, BBVA Research.

Matt, Ferchen, Alicia Garcia-Herrero and Mario Nigrinis Ospina, *Evaluating Latin America's Commodity Dependence on China*, Working Paper Number 13/05, BBVA Research.

**DISCLAIMER**

This document and the information, opinions, estimates and recommendations expressed herein, have been prepared by Banco Bilbao Vizcaya Argentaria, S.A. (hereinafter called "BBVA") to provide its customers with general information regarding the date of issue of the report and are subject to changes without prior notice. BBVA is not liable for giving notice of such changes or for updating the contents hereof.

This document and its contents do not constitute an offer, invitation or solicitation to purchase or subscribe to any securities or other instruments, or to undertake or divest investments. Neither shall this document nor its contents form the basis of any contract, commitment or decision of any kind.

**Investors who have access to this document should be aware that the securities, instruments or investments to which it refers may not be appropriate for them due to their specific investment goals, financial positions or risk profiles, as these have not been taken into account to prepare this report.** Therefore, investors should make their own investment decisions considering the said circumstances and obtaining such specialized advice as may be necessary. The contents of this document are based upon information available to the public that has been obtained from sources considered to be reliable. However, such information has not been independently verified by BBVA and therefore no warranty, either express or implicit, is given regarding its accuracy, integrity or correctness. BBVA accepts no liability of any type for any direct or indirect losses arising from the use of the document or its contents. Investors should note that the past performance of securities or instruments or the historical results of investments do not guarantee future performance.

**The market prices of securities or instruments or the results of investments could fluctuate against the interests of investors. Investors should be aware that they could even face a loss of their investment. Transactions in futures, options and securities or high-yield securities can involve high risks and are not appropriate for every investor. Indeed, in the case of some investments, the potential losses may exceed the amount of initial investment and, in such circumstances; investors may be required to pay more money to support those losses. Thus, before undertaking any transaction with these instruments, investors should be aware of their operation, as well as the rights, liabilities and risks implied by the same and the underlying stocks. Investors should also be aware that secondary markets for the said instruments may be limited or even not exist.**

BBVA or any of its affiliates, as well as their respective executives and employees, may have a position in any of the securities or instruments referred to, directly or indirectly, in this document, or in any other related thereto; they may trade for their own account or for third-party account in those securities, provide consulting or other services to the issuer of the aforementioned securities or instruments or to companies related thereto or to their shareholders, executives or employees, or may have interests or perform transactions in those securities or instruments or related investments before or after the publication of this report, to the extent permitted by the applicable law.

BBVA or any of its affiliates' salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to its clients that reflect opinions that are contrary to the opinions expressed herein. Furthermore, BBVA or any of its affiliates' proprietary trading and investing businesses may make investment decisions that are inconsistent with the recommendations expressed herein. No part of this document may be (i) copied, photocopied or duplicated by any other form or means (ii) redistributed or (iii) quoted, without the prior written consent of BBVA. No part of this report may be copied, conveyed, distributed or furnished to any person or entity in any country (or persons or entities in the same) in which its distribution is prohibited by law. Failure to comply with these restrictions may breach the laws of the relevant jurisdiction.

In the United Kingdom, this document is directed only at persons who (i) have professional experience in matters relating to investments falling within article 19(5) of the financial services and markets act 2000 (financial promotion) order 2005 (as amended, the "financial promotion order"), (ii) are persons falling within article 49(2) (a) to (d) ("high net worth companies, unincorporated associations, etc.") Of the financial promotion order, or (iii) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the financial services and markets act 2000) may otherwise lawfully be communicated (all such persons together being referred to as "relevant persons"). This document is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is available only to relevant persons and will be engaged in only with relevant persons. The remuneration system concerning the analyst/s author/s of this report is based on multiple criteria, including the revenues obtained by BBVA and, indirectly, the results of BBVA Group in the fiscal year, which, in turn, include the results generated by the investment banking business; nevertheless, they do not receive any remuneration based on revenues from any specific transaction in investment banking.

BBVA is not a member of the FINRA and is not subject to the rules of disclosure affecting such members.

**"BBVA is subject to the BBVA Group Code of Conduct for Security Market Operations which, among other regulations, includes rules to prevent and avoid conflicts of interests with the ratings given, including information barriers. The BBVA Group Code of Conduct for Security Market Operations is available for reference at the following web site: [www.bbva.com / Corporate Governance](http://www.bbva.com / Corporate Governance)".**

BBVA is a bank supervised by the Bank of Spain and by Spain's Stock Exchange Commission (CNMV), registered with the Bank of Spain with number 0182.