

**Boston University**

**OpenBU**

**<http://open.bu.edu>**

---

Global Economic Governance Initiative (GEGI)

China - Latin America Economic Bulletin

---

2015-09

# 2015 China-Latin America economic bulletin

---

<https://hdl.handle.net/2144/27510>

*"Downloaded from OpenBU. Boston University's institutional repository."*

## China-Latin America Economic Bulletin 2015 Edition

WORKING GROUP ON DEVELOPMENT AND ENVIRONMENT IN THE AMERICAS

*Rebecca Ray and Kevin Gallagher*

This China-Latin America Economic Bulletin is the second annual note summarizing and synthesizing trends in the burgeoning China-Latin America economic relationship. The goal of the bulletin is to provide analysts and observers handy reference to the ever-changing landscape of China-Latin America economic relations, a landscape where data is not always as readily accessible. Highlights from this year's edition include:

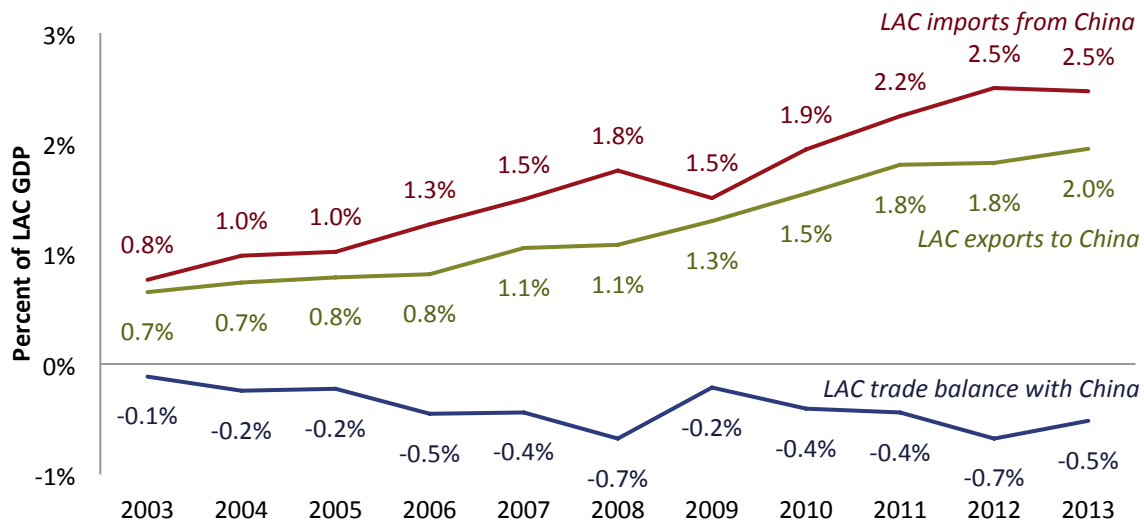
- **China surpassed the United States as most the important destination for South American exports.** LAC exports as a whole to China grew to US \$112 billion in 2013 (a record 2.0% of regional GDP), though the region still had a trade deficit of 0.5% of GDP with China that year.
- **China's policy banks have become the largest annual public creditors to LAC governments.** Chinese finance to the LAC region have risen sharply in the last few years, from US \$3.8 billion in 2012 to \$12.9 billion in 2013 and \$22.1 billion in 2014. In 2014, Chinese finance to the region was more than finance to the region provided by the World Bank and the Inter-American Development Bank combined. The largest loans have been directed toward infrastructure (including rail and hydropower) and extractive projects.
- **LAC exports to China continue to be heavily concentrated in primary goods.** In 2013, China purchased 15% of LAC's agricultural and extractive exports, but only 2% of the region's manufactured exports. As a result, LAC exports to China support fewer jobs and have a larger environmental footprint than other exports, but LAC has a large share of the world market in their top exports to China (iron, soy, and copper), so there is room to enact necessary social and environmental protections without fear that China will simply switch other suppliers.

- **LAC manufactured exports continue to face stiff competition from China in world markets**, though less so than in the early 2000s. From 2008 to 2013, 75% of the region's manufactured exports faced a threat from China, compared to 83% from 2003 to 2008. It is unlikely that the reduced threat comes from better labor productivity in the LAC manufacturing sector, because China's productivity continues to outpace labor productivity in LAC manufacturing.
- **Chinese investment in LAC spiked in 2013, with China comprising over half of new (greenfield) projects in LAC that year.** The largest Chinese greenfield project in the last few years, by far, is the new Nicaragua Canal, larger than all other Chinese greenfield FDI projects for the last 5 years combined. Even though 2014 didn't meet the same record, China accounted for 17% of new greenfield projects in LAC last, more than any other year on record other than 2013. Among mergers and acquisitions projects (M&As, foreign investment into ongoing projects), Chinese investment was overwhelmingly focused on extraction projects, with the oil and gas sector accounting for 69% of Chinese M&A investment between 2009 and 2013 (compared to just 16% of overall M&A investment).
- **Chinese trade, investment, and finance are increasingly associated with significant social and environmental conflict, with some of the most controversial projects about to come on line.** LAC exports to China are almost twice as carbon intensive and three times as water intensive than average economic activity in LAC. Many new Chinese investment projects are slated to go through the heart of many globally recognized indigenous and environmentally sensitive lands.
- **The predicted slowing of the Chinese economy is expected to result in a related LAC economic slowdown.** It is likely that both directions of trade between LAC and China will slow over the coming years. However, planned Chinese-financed infrastructure and power projects are not expected to suffer as a consequence.

## LAC TRADE WITH CHINA

In 2013, Latin America and the Caribbean sent China US \$112 billion in goods (equal to a record 2.0% of regional GDP). LAC imports from China stayed relatively constant at US \$142 billion (2.5% of LAC GDP), leaving a trade deficit in goods of 0.5% of regional GDP, as shown in Figure 1.

**FIGURE 1: Latin America and the Caribbean, Trade in Goods with China**



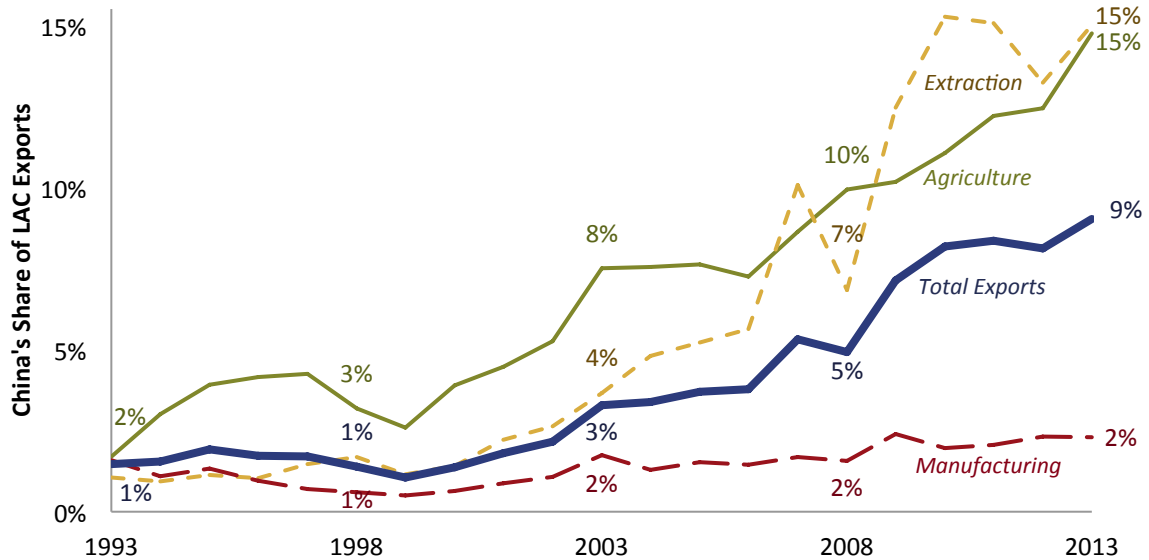
Source: Calculated from IMF Direction of Trade Statistics and World Economic Outlook (WEO) Databases.

Despite LAC's persistent trade deficit with China, China continues to grow in importance as an export market for LAC goods. In 2013, China purchased 9% of LAC goods exports, up from 8% in 2012. For South America, China's roll has grown even more dramatically: China overtook the United States as the top export destination in 2013, buying 14% of South American exports, compared to 12% for the United States. In contrast, China bought only 2% of exports from Mexico, Central America, and the Caribbean, where the US still has a dominant market share of 69%.

### ***China as a Unique Export Market***

China's importance as an export market remains limited to primary sectors. As Figure 2 shows, in 2013 China bought 15% of LAC's agricultural and extractive exports, but just 2% of LAC manufactured exports. China's share of exports has doubled in the last five years for agriculture, and risen by half for extraction, but it has barely moved for manufactured goods.

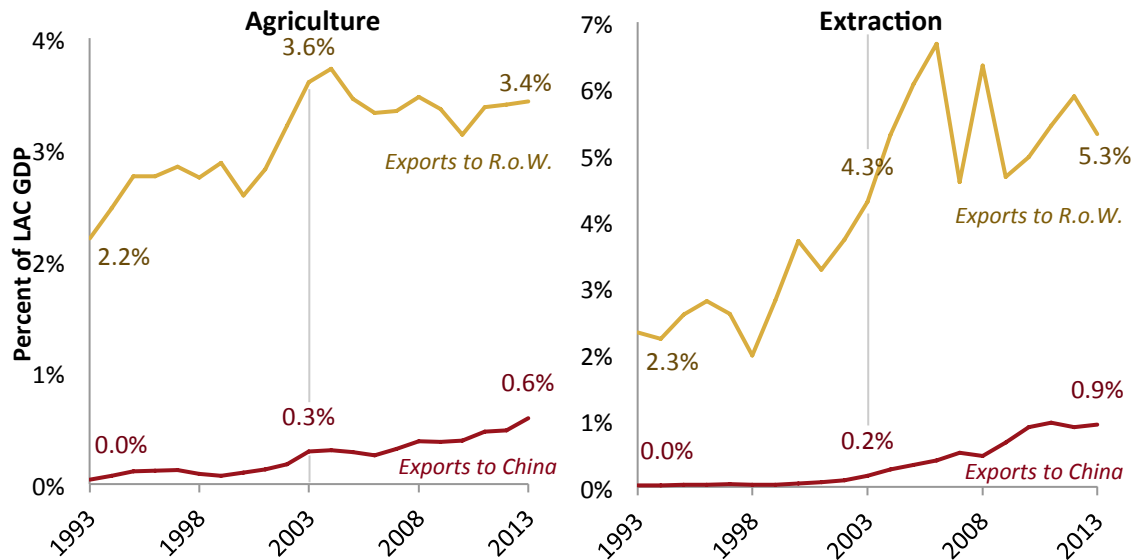
**FIGURE 2: China's share of LAC goods exports, by sector**



Note: Sectors are defined as ISIC categories A (agriculture, forestry, and fishing), B (mining and quarrying), and C (manufacturing). Source: Ray et al. (2015).

In fact, China has been an important driver of growth in LAC's agricultural and extractive sectors. As Figure 3 shows, Chinese demand for these exports has continued to grow over the last decade, while demand from the rest of the world has been volatile or stagnant.

**FIGURE 3: LAC Agricultural and Extractive Exports as a Share of GDP, by Market**



Note: Sectors are defined as ISIC categories A and B. Source: Ray et al. (2015).

In contrast, China mainly exports manufactured goods to LAC. Table 1 shows the top five exports between LAC and China for 2009 through 2013 (the last five years of available data). While all five of LAC's top exports to China are primary (agricultural and

extractive) goods, the top Chinese exports to LAC were manufactured goods and refined petroleum. Furthermore, LAC exports to China are heavily concentrated in a few products: just five products make up over two-thirds of total LAC-China exports, as Table 1 shows. The same is not true for China's exports to LAC, where the top five products make up less than one-fourth of the total. LAC's heavy export concentration makes them vulnerable to world price swings, or to changing Chinese demand for just a few products.

**TABLE 1: Top 5 exports between LAC and China, 2009-2013**

Top LAC Exports to China		Top Chinese Exports to LAC	
Item	Share of total	Item	Share of total
1. Iron ore and concentrates	20%	1. Telecom equipment, parts	10%
2. Soybeans and other oilseeds	18%	2. Data processing equipment	4%
3. Copper	14%	3. Ships, boats, floating structures	4%
4. Copper ores, concentrates	10%	4. Optical instruments	3%
5. Crude petroleum	9%	5. Refined petroleum products	3%
<b>Total of top 5</b>	<b>69%</b>	<b>Total of top 5</b>	<b>23%</b>

Source: Author's analysis of UN COMTRADE (SITC Rev. 3, 3 digit) data.

Even though LAC exports to China are quite concentrated in a few items, as Table 1 shows, LAC has a large market share in each of the top four commodities exported to China. Table 2 shows LAC share of the world market and of China's imports for iron ore and concentrates, oilseeds, refined copper, and copper ores and concentrates. For example, Latin America accounts for nearly half of China's imported oilseeds and over half of the market for copper ores and concentrates.

**TABLE 2: Market share of top LAC exports to the world and to China, 2009-2013**

	Iron (Ores, Concentrates)		Soybeans, Other Oilseeds		Copper (Refined)		Copper (Ores, Conc.)	
	World Market	China	World Market	China	World Market	China	World Market	China
Argentina	-	-	7%	10%	-	-	3%	-
Brazil	26%	16%	25%	34%	1%	1%	3%	1%
Chile	1%	1%	-	-	21%	27%	32%	28%
Mexico	-	-	-	-	1%	1%	2%	6%
Peru	1%	1%	-	-	2%	2%	15%	17%
Other	-	-	5%	1%	-	-	-	-
<b>LAC Total</b>	<b>28%</b>	<b>18%</b>	<b>37%</b>	<b>45%</b>	<b>25%</b>	<b>31%</b>	<b>57%</b>	<b>51%</b>

Source: Author's analysis of UN COMTRADE (SITC Rev. 3, 3 digit) data.

Because of LAC's market power in these top exports to China, the region has room to enforce environmental and social protections on copper mining and production, or the deforestation impacts of soybean production, even if it results in somewhat higher end

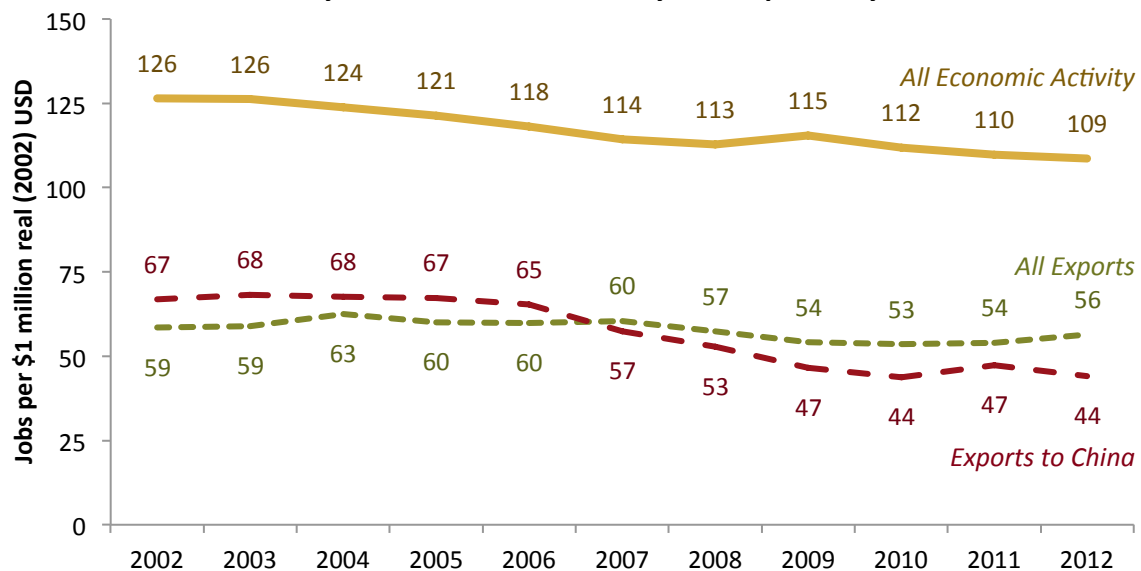
prices, without being simply replaced as a supplier for China. Similarly, LAC is responsible for over half of the world's (and China's) imports of unrefined copper but less than one-third of refined copper. If the region prioritized the development of downstream industries with higher value added components, there is no other source that could produce the same amount of unrefined copper to take the place of LAC's exports.

### ***Differing environmental and social impacts of exports***

The concentration of LAC-China exports in primary sectors give them a unique social and environmental impact: they support fewer jobs, generate more net greenhouse gas emissions, and use more water than other LAC exports.

As Figure 4 shows, exports in general support fewer jobs per million dollars than overall economic activity. This is largely due to the extremely labor-intensive nature of peasant agriculture, which is pervasive in the region but absent from production for export. Total exports support fewer jobs, but the labor intensity has remained fairly stable: falling from 59 to 56 jobs per real US\$1 million. Exports to China, however, have fallen by over a third in the number of jobs they support for every US\$1 million: from nearly 70 in 2002 to fewer than 45 in 2012. This trend comes from the increasing importance among LAC-China exports of extractive industries, which support far fewer jobs per million USD than other sectors.<sup>1</sup>

**FIGURE 4: Labor intensity of LAC economic activity and exports, by market**

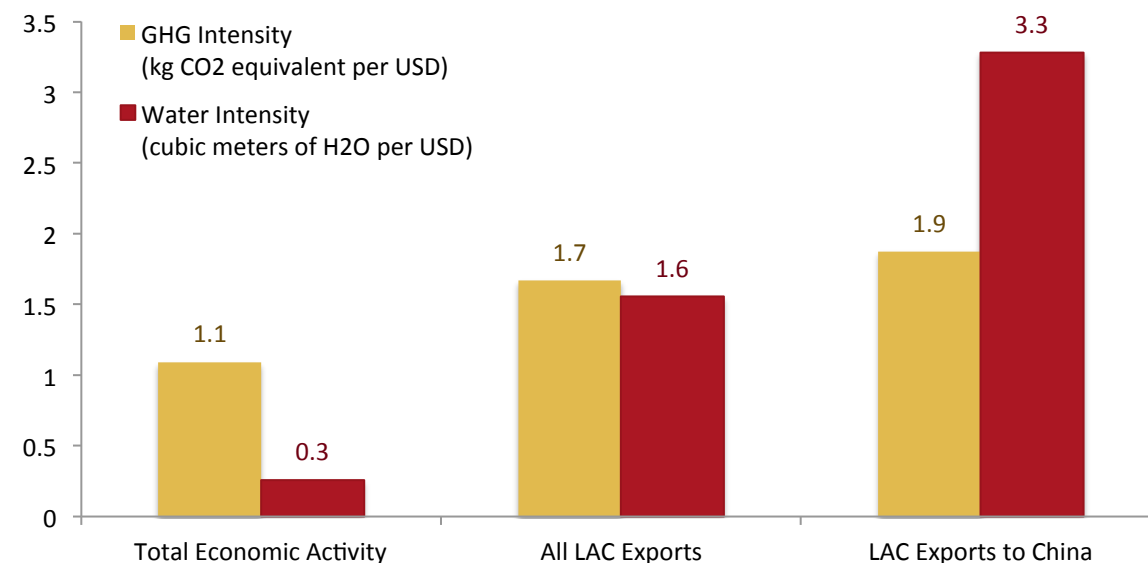


Source: Ray (2015).

<sup>1</sup> According to the GGCD 10-Sector Database, extraction supports about one-eighth as many jobs as manufacturing for every \$1 million USD. These figures include only direct, not indirect jobs. Data from the World Input-Output Tables indicate that it is highly unlikely that indirect jobs from extractive industries are enough to overcome the difference in direct jobs per million USD.

The heavy concentration in agriculture and extraction also creates a larger environmental footprint for LAC-China exports: they are responsible for about 12% more net greenhouse gas emissions and about twice as much water use. Figure 5 shows the figures for net greenhouse gas emissions, including the effects of deforestation and electricity generation for export production, and water footprints, including both water use and contamination.

**FIGURE 5: Environmental Impact of Overall LAC Economic Activity and Exports**



Source: Ray (2015).

### ***Threat analysis: Chinese manufacturing and LAC competitiveness***

Many scholars have wondered whether China’s demand for LAC’s primary goods – while exporting manufactured goods – is accentuating deindustrialization in LAC. For example, Mauricio Mesquita Moreira of the Inter-American Development bank has called this a “disquieting trend” (2007). Lall and Weiss (2005) developed a methodology to measure this potential threat, and Kevin Gallagher and Roberto Porzecanski (2010) later updated these measures through 2006. Simply put, these authors compared changes in world market share for Latin American and Chinese exports. If Latin America lost global market share for a particular export while China gained market share, then that Latin American export was considered to be under a “direct threat” from Chinese exports. If both exporters gained market share but China’s exports gained market share more quickly than Latin America’s, then Latin America faced a “partial threat” there. Finally, they calculated the percent of Latin America’s manufactured exports that was under threat from China. Gallagher and Porzecanski found that from 2000 to 2006, 94% of Latin American manufactured exports were under threat from China (with 62% under direct threat and 31% under partial threat). Mexico faced the most danger, with 99% of manufactured exports under threat (70% direct and 29% partial).

Table 2 updates these results to include the latest years of export data. It finds that for the region as a whole, the threat level peaked in the early 2000s before falling again. Table 2 shows that the threat percentage for the middle of the decade (2003-2008) is lower than what Gallagher and Porzecanski found for the first half of the decade, and the threat level from 2009 to 2013 fell further. This is especially the case for Mexico and Central America, where the threat peaked at 87% of manufactured exports from 2003 to 2013 before falling back to 76% in the last five years. However, the threat faced by the Caribbean has continued to rise, with 96% of manufactured exports under threat in 2013. South America has seen its threat remain stable at 78% of manufactured exports, split between countries with rising threats (such as Brazil or Peru) and those with falling threats (most notably Argentina, whose threat level fell from 80% to 57% of manufactured exports).

**TABLE 3: Percent of LAC manufacturing exports threatened by Chinese competition**

	2003-2013			2003-2008			2008-2013		
	Direct Threat	Partial Threat	Total	Direct Threat	Partial Threat	Total	Direct Threat	Partial Threat	Total
<b>LAC Region</b>	<b>36%</b>	<b>41%</b>	<b>78%</b>	<b>47%</b>	<b>36%</b>	<b>83%</b>	<b>31%</b>	<b>43%</b>	<b>75%</b>
<b>Sub-Regions:</b>									
Caribbean	68%	28%	<b>96%</b>	54%	23%	<b>76%</b>	32%	64%	<b>96%</b>
Cent. Amer. & Mex.	31%	56%	<b>86%</b>	55%	32%	<b>87%</b>	26%	50%	<b>76%</b>
South America	24%	55%	<b>79%</b>	29%	49%	<b>78%</b>	45%	33%	<b>78%</b>
<b>Major LAC Economies:</b>									
Argentina	16%	62%	<b>77%</b>	15%	64%	<b>80%</b>	38%	19%	<b>57%</b>
Brazil	25%	64%	<b>89%</b>	28%	50%	<b>78%</b>	48%	39%	<b>87%</b>
Chile	18%	74%	<b>92%</b>	32%	62%	<b>94%</b>	38%	55%	<b>93%</b>
Colombia	28%	62%	<b>90%</b>	24%	71%	<b>95%</b>	42%	49%	<b>91%</b>
Mexico	31%	54%	<b>85%</b>	54%	33%	<b>87%</b>	27%	48%	<b>75%</b>
Peru	22%	75%	<b>98%</b>	4%	90%	<b>94%</b>	43%	54%	<b>97%</b>

Note: measured as a percent of manufactured exports in the final year of each time period. For detailed methodology, see Gallagher and Porzecanski (2010), Lall and Weiss (2005), and Lall (2000).

Source: Authors' analysis of UN COMTRADE (SITC Rev. 2, 3 digit) data.

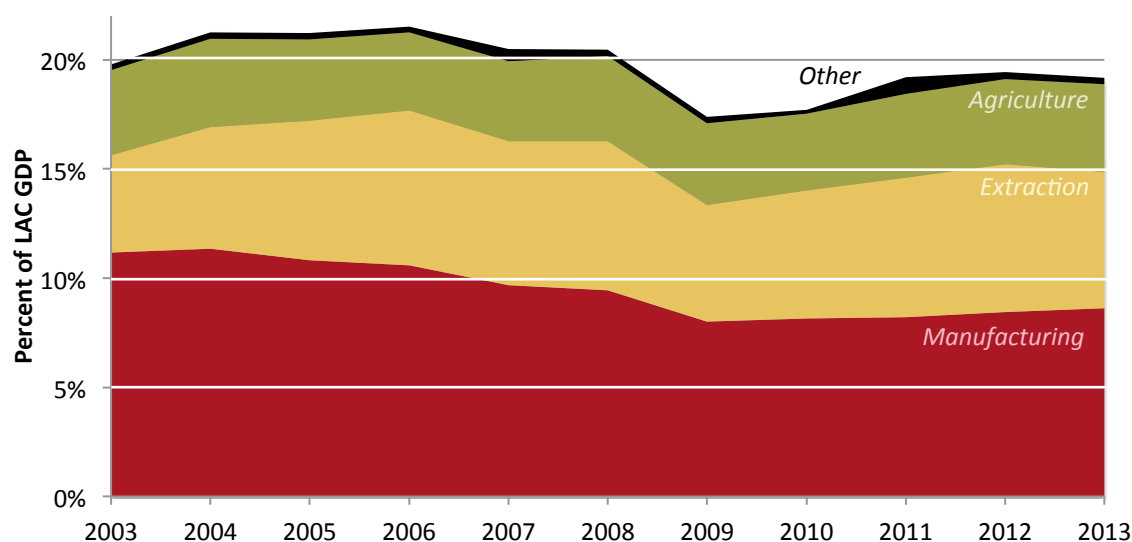
It is important to point out that falling threat levels do not mean that LAC manufacturing exports no longer face trouble. Exports under particularly acute threat are likely to lose their importance in LAC's overall export basket, resulting in a *lower* percent of exports that are facing threat. For example, several countries saw important sectors shrink while they faced increasing levels of threat:

- Argentina's vehicles sector (including cars, trucks, motorcycles, and aircraft, and ships) accounted for 23% of exports between 2003 and 2008, but just eight percent from 2008 to 2013 – a decline of nearly two-thirds. At the same time, the sector shifted from facing a partial threat to a direct threat.

- Mexico’s household and office electronics sector (computers, televisions, radios, and telecomm equipment) lost about one-third of its share in national exports, falling from 22% of exports (from 2003 to 2008) to 14% of its exports (from 2008 to 2013) while the threat this sector faced intensified from partial to direct.
- Peru’s apparel sector shrank from 47% of its exports (from 2003 to 2008) to 33% (from 2003 to 2013), while the threat faced by that sector increased from partial to direct.

Regionally speaking, the damage may already be done. LAC’s manufactured exports fell as a share of regional GDP from 2003 to 2009, but have stayed relatively stable thereafter (even as overall exports have rebounded some).

**FIGURE 6: LAC Exports by Sector, as a Share of Regional GDP**

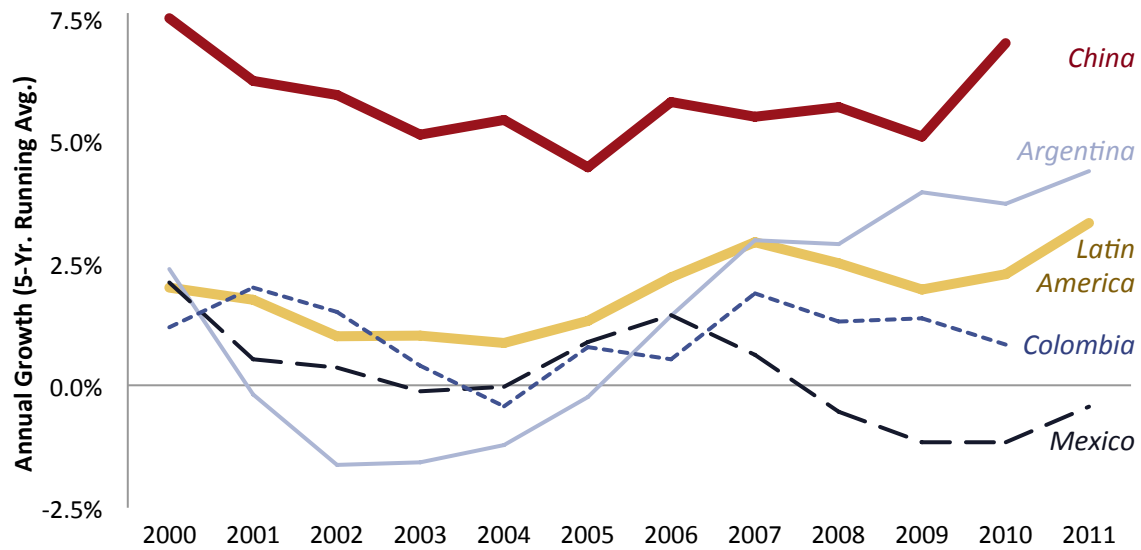


Note: Sectors are defined as ISIC categories A, B, and C.

Source: Authors’ analysis of IMF WEO and UN COMTRADE (SITC Rev. 3, 3 digit) data.

Nor does it appear that Latin America is gaining on China in terms of labor productivity in the manufacturing sector. As Figure 7 shows, Latin America’s productivity growth has picked up over the last decade, but China’s productivity has grown at an even faster pace, averaging over three times LAC’s growth rate from 2005 to 2010. The countries whose risk factor has fallen the most – Argentina, Colombia, and Mexico – have not fared much better, with the possible exception of Argentina (which may be subject to revision, as the official national accounts methodology is currently undergoing reform).

**FIGURE 7: Manufacturing-Sector Labor Productivity Growth, 5-Year Running Average**



Note: China includes Hong Kong but not Macao. Latin America does not include the Caribbean. Labor productivity is measured as real manufacturing value added per manufacturing employee.  
 Source: Author's analysis of the GGDC 10-Sector Database (Timmer et al, 2014).

In sum, Chinese demand continues to boost Latin American agricultural and extractive sectors, while Chinese manufacturing exports continue to threaten Latin American industry.

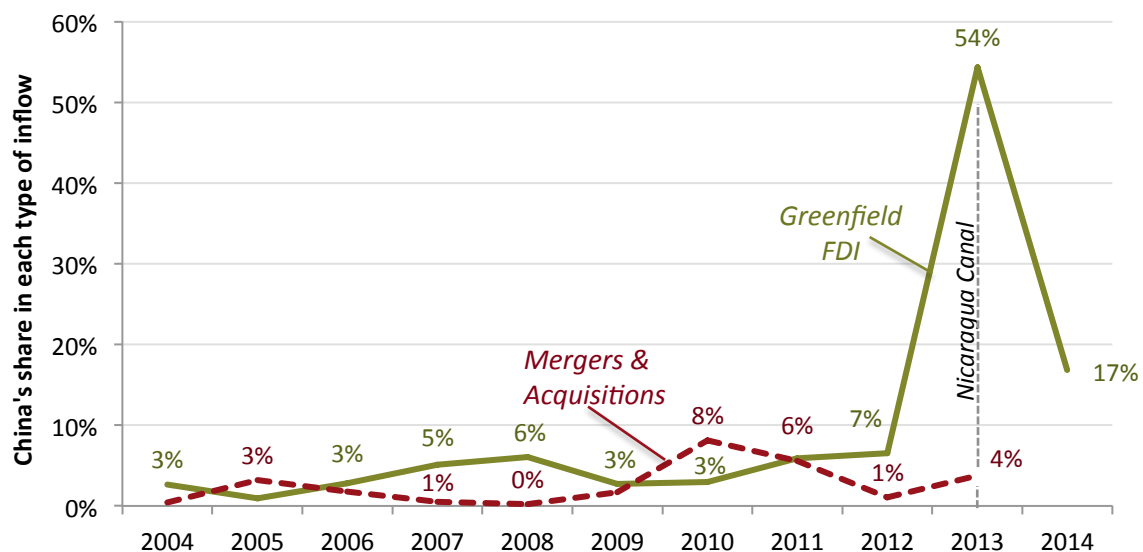
## Chinese Finance and Investment in LAC

Chinese finance and investment in LAC have been rising sharply in the last few years. Chinese loans to LAC countries rose from US \$3.8 billion in 2012 to \$12.9 billion in 2013 and \$22.1 billion in 2014. Chinese investment in LAC spiked in 2013, aided by the announcement of the new Nicaragua Canal project.

### Foreign Direct Investment

China's investment relationship with LAC changed dramatically in 2013 and 2014 because of one major project: the Nicaragua Canal. Including this project, China accounted for over half of all new FDI (known as greenfield FDI, or GFDI) in LAC in 2013. Prior to 2013, China had never accounted for more than 10% of new FDI projects, either through GFDI or through mergers and acquisitions (M&As).

**FIGURE 8: China's share of FDI projects in LAC, by type of project**



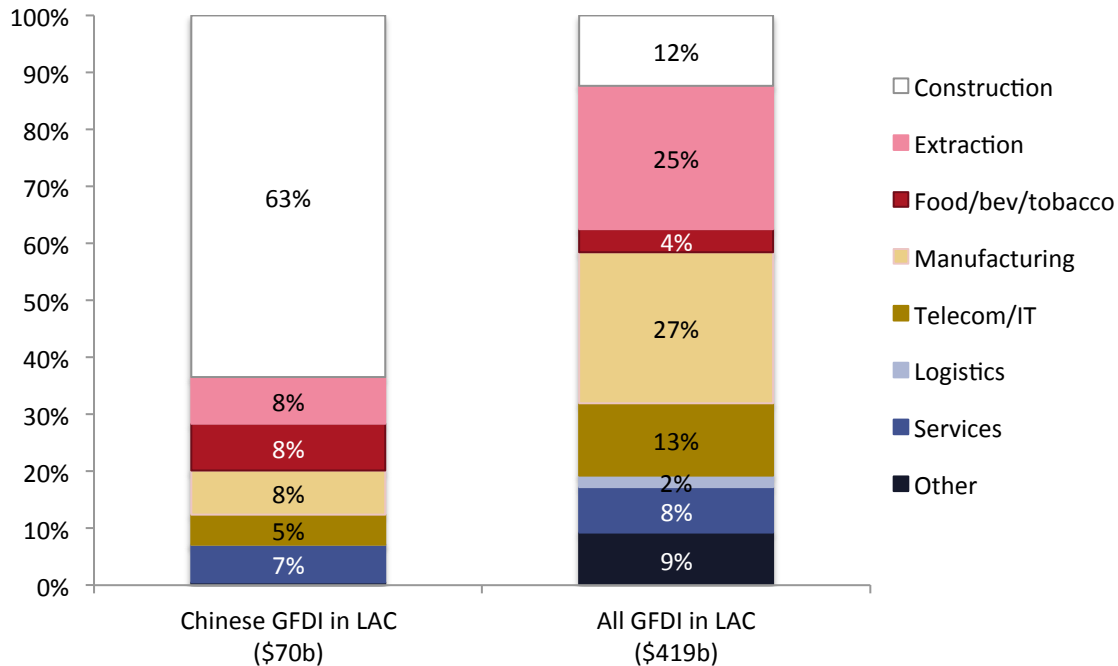
Source: Calculated from Financial Times and DeaLogic. Note: M&A data for 2013 include Q1-Q3.

### Greenfield FDI

In 2014, China invested US \$10 billion in greenfield FDI (GFDI) projects in LAC, 17% of total inbound GFDI and 0.2% of regional GDP. This comes after a record high in 2013 of US \$46 billion (including the US \$40 billion Nicaragua Canal project). Even though 2014's Chinese GFDI did not come close to 2013's level, it was still quite high by historical standards: about as high as the combined values for 2011 (\$7.2 billion) and 2012 (\$3.0 billion) together.

Figure 9 shows the distribution of GFDI by sector and source for the last five years. Nearly two-thirds of Chinese GFDI in LAC was in construction, which is overwhelmingly dominated by the Nicaragua Canal project, discussed in more detail below. In contrast, all GFDI in LAC was much more evenly distributed across sectors, as was overall GFDI from China.

**FIGURE 9: Sector Distribution of Greenfield FDI, by Market, 2010-2014**



Note: “China” includes mainland China, Hong Kong, and Macao. Total outbound Chinese GFDI does not include projects within these borders (for example, mainland-funded projects in Hong Kong).

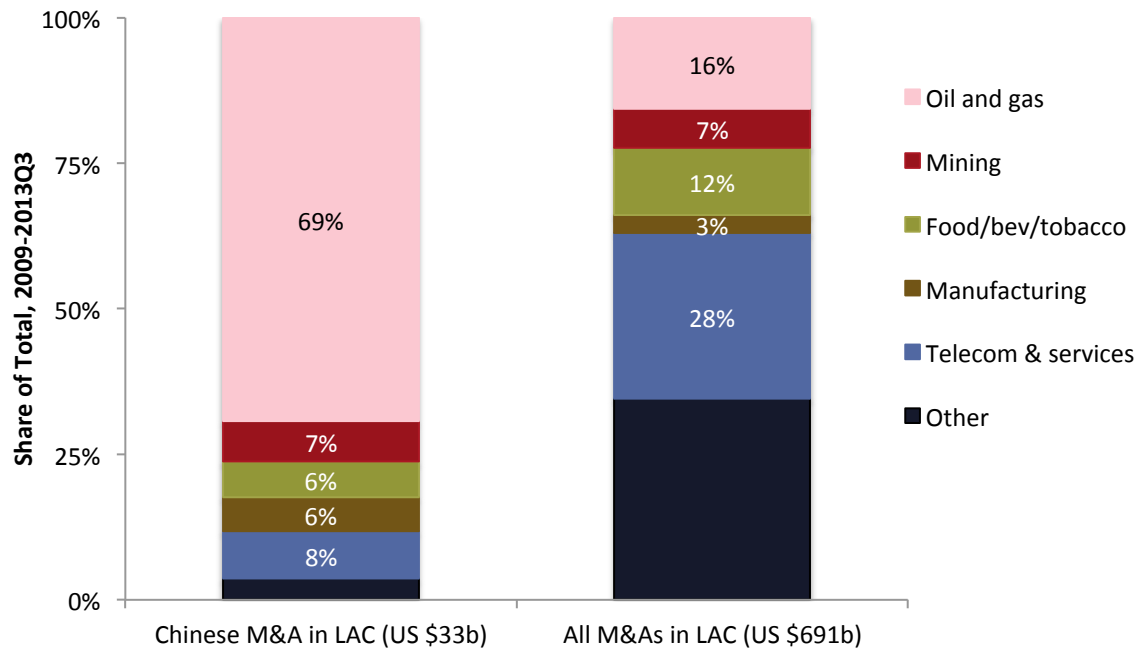
Source: Authors’ calculations based on Financial Times data.

The Nicaragua Canal, which was announced in 2013 and began in 2014, is the largest Chinese investment project in Latin America to date. The canal is expected to entail a total investment of \$40 billion, or nearly 1% of total 2013 GDP for Latin America and the Caribbean. This single project is larger than all other Chinese GFDI in LAC for the last five years, combined.

### Mergers and acquisitions:

Like greenfield projects, Chinese M&As are concentrated in a few sectors: in this case, oil and gas. From 2009 to 2013, over two-thirds of Chinese M&As into the LAC region were in oil and gas, compared to just 16 percent of overall M&As in LAC. This represents a continuation of the trend from 2008 to 2012.

**FIGURE 10: Sector Distribution of M&A FDI, by Market, 2009-2013Q3**



Source: DeaLogic.

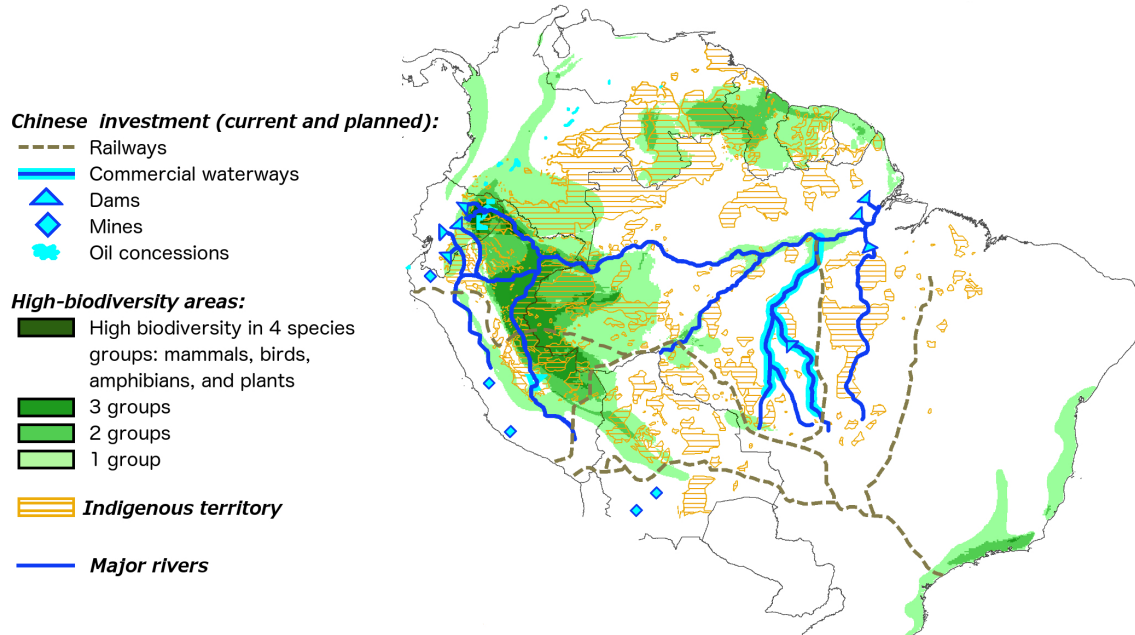
### Chinese investment, deforestation, and indigenous lands

In early 2015, GEGI and other partners from across the hemisphere released a major collaborative study titled *China in Latin America: Lessons for South-South Cooperation and Sustainable Development*. In the report we highlight the emphasis on large-scale infrastructure and extraction projects means that Chinese investment in LAC carries higher environmental and social risks than could be expected from investment in general. While several mines and oilfields have become internationally controversial for encroaching on indigenous lands, it appears that the Nicaragua Canal and upcoming railway projects do manage to avoid indigenous territory, a commendable feat.

Figure 11 shows current and planned Chinese investment projects in South America. Green areas indicate lands that have particularly high levels of biodiversity; the most biodiverse lands, in eastern Ecuador and the northernmost tip of Peru, are heavily populated with Chinese-managed oilfields. Other important lands may be bisected by

the upcoming Chinese-financed transcontinental railway, which has two potential western routes (through northern or southern Peru).

**FIGURE 11: High Biodiversity Areas, Indigenous Territory, and Chinese Investment**

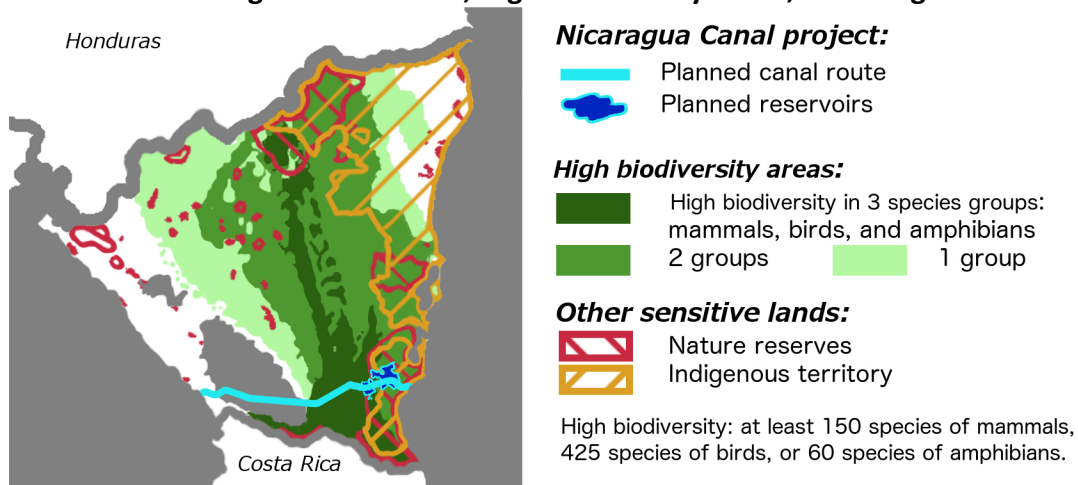


Source: Ray et al. (2015). Note: Mines and some oil concessions are already in operation. Railway locations are approximate, as most plans are not yet final. High biodiversity is defined as the top 6.4% of South American land area for species richness. Indigenous territory includes lands with and without official state recognition.

Similarly, the Nicaragua Canal (shown in Figure 12) intersects highly-biodiverse areas of Nicaragua. Indeed, there is no route through Nicaragua that can avoid the areas with the most high-biodiversity areas, which occupy the center of the country. Furthermore, the entire country lies within the Mesoamerican Biodiversity Hotspot, meaning that its conservation is a matter of global importance.<sup>2</sup> It would be impossible to avoid crossing either indigenous territory or nature preserves, as the only section of the Atlantic coast not in indigenous territory is part of the Cerro Silva Natural Reserve. The final route, however, crosses through both the Cerro Silva Natural Reserve as well as Kriol and Rama indigenous territory (HKND Group, 2014).

<sup>2</sup> Biodiversity hotspots are defined as areas with at least 1,500 endemic plant species, which have lost at least 70 percent of their original habitats. Mesoamerica far exceeds this standard, with 5,000 endemic plant species. For more on the Mesoamerican Biodiversity Hotspot and Nicaragua’s biodiversity in particular, see Critical Ecosystem Partnership Fund (2001).

**FIGURE 12: Nicaragua Canal Route, High Biodiversity Areas, and Indigenous Territory**



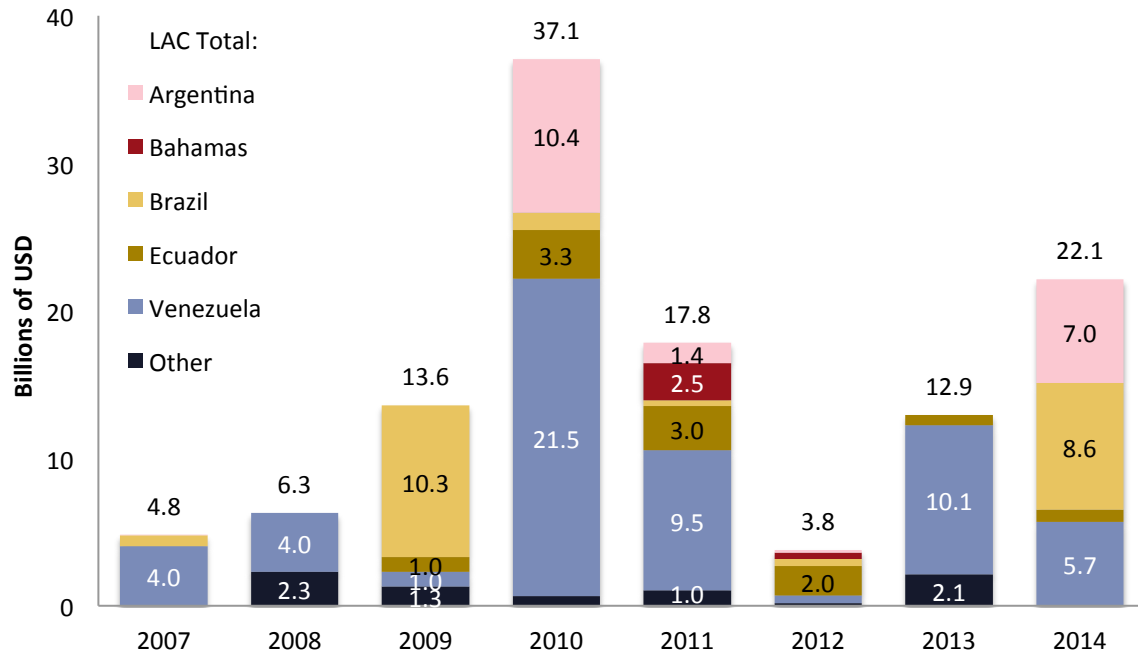
Source: Compiled from Anderson et al. (2008), Congreso Mesoamericano de Areas Protegidas (2010), HKND Group (2014), and León Áviles (2013).

Environmental Resources Management conducted seven community consultation meetings for the project, in seven sites along the canal route, and reports that 5,000 people attended, but the resulting report does not specify the number of Rama and Kreol participants, nor their feedback about the project (Blaha and Erbe, 2014). While the extent of indigenous consultation is unclear, it would be challenging for those who did not attend to find out more about the project, as the HKND Group reports are available only in English.

## Chinese Finance in LAC

The BU Global Economic Governance Initiative maintains a joint database of Chinese lending to LAC, with the Inter-American Dialog (Gallagher and Myers 2014). Loans from China to LAC rose sharply in 2013 and 2014, especially in Argentina, Brazil, and Venezuela. The 2014 level, \$22.1 billion USD, is the highest total on record except for the post-crisis year of 2010.

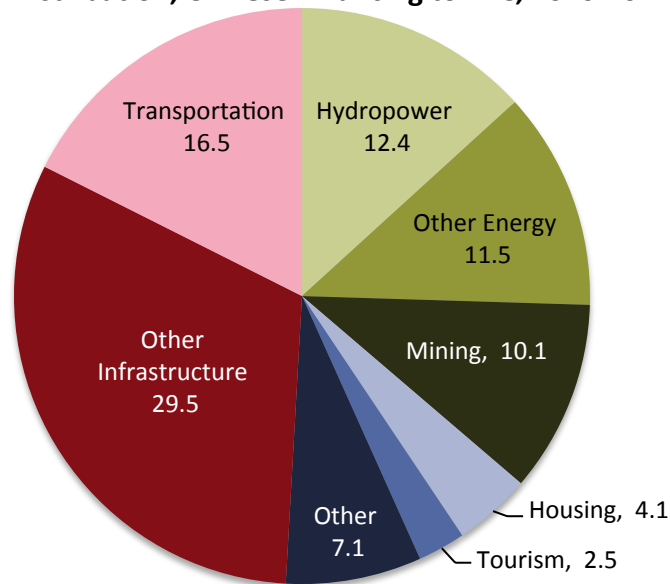
**FIGURE 13: Chinese loans to Latin America and the Caribbean, 2007-2014**



Source: Gallagher and Myers (2014).

The \$22.1 billion in new Chinese loans in 2014 are larger than combined loans from the two traditional multilateral lenders (the World Bank and the Inter-American Development Bank) combined (Gallagher and Yuan 2015). Since 2010, China has lent LAC \$93.7 billion USD, about half of which was designated for infrastructure projects. Most of the remaining half went to dams, oil and gas, and mining projects, as Figure 14 shows.

**FIGURE 14: Sector Distribution, Chinese Financing to LAC, 2010-2014 (US \$93.7 billion)**



Source: Gallagher and Myers (2014).

Major loans in 2013 and 2014 included:

- US \$9 billion (combined over 2013 and 2014) to increase the size of the Chinese-Venezuelan joint investment fund, which finances infrastructure projects within Venezuela.
- US \$7.5 billion to the partially public Brazil mining firm Vale in 2014, including \$5 billion from the Bank of China for purchasing equipment and \$2.5 billion, from the China Export-Import (Ex-Im) Bank for financial service purchases.
- US \$4.7 billion for new hydroelectric dam construction in Argentina in 2014, from the Bank of China, the China Development Bank (CDB), and the Industrial and Commercial Bank of China (ICBC).
- US \$2.3 billion to public Argentinian rail companies for a new line and new metro cars in 2014, from the CDB, ICBC, and China Ex-Im Bank.

## Prospects for 2015 and Beyond

There is every reason to expect the China-LAC relationship to continue to deepen in the next few years. In January 2015, China's President Xi Jinping hosted a major summit with representatives from the Community of Latin America and Caribbean States (CELAC), where he pledged US \$250 billion in new investments over the next decade. He also stated that he expected China-LAC trade to rise to US \$500 billion in the same period (Rajagopalan 2015).

### *Trade*

The January CELAC summit saw predictions of \$500 billion in LAC-China trade in the next 10 years. However, there are several other factors putting a potential damper on the trade relationship. First, China's economic growth is expected to slow over the coming years and demand for imports may slow with it. The IMF (2014a, 2014b) projects China's GDP growth to slow from the 7.7% and 7.4% growth it saw in 2013 and 2014 to 7.1% in 2015 and 6.8% in 2016. Standard and Poor's projects even slower growth, of 6.9% and 6.6% for 2015 and 2016 (Kitchen, 2015). Both the IMF and S&P link their slower growth forecasts to a shift in Chinese policy priorities from investment (especially housing construction) to consumption, which is expected to dampen the demand for metals.

Secondly, prices of LAC's most important exports to China (iron, copper, soy, and petroleum) are widely projected to fall in 2015 before beginning to pick up again. The prices of iron and copper have been falling in nominal terms since 2011, and are expected to remain low in the medium term. Copper fell from US \$8,828 per metric ton in 2011 to US \$6,863 in 2014. Goldman Sachs expects it to fall further to \$6,217 in 2015 while Standard and Poor's expects it to drop to an average of \$5,952 for the year (Cang, 2014; Standard and Poor's, 2015). Iron fell from US \$1.68 to \$0.98 per dry metric ton unit (DMTU) from 2011 to 2014; Standard and Poor's expects it to fall to US \$0.65 for the next two years (Ibid). Regarding petroleum, the US Energy Information Administration expects oil prices to fall by about 40% in 2015 compared to 2014, before rising by about 30% in 2016 (US EIA, 2015). Finally, the USDA expects soy prices to fall 15-30% in price in 2015 compared to 2014.

Of course, commodity prices fell in 2013 as well, and yet LAC exports to China continued to rise during that year. This may be because, even though China's imports have been falling (43% to 30% of GDP from 2005 to 2013, according to the World Bank), LAC has become a more important source of those imports, rising from 2% to 4% of China's imports of goods in the same time period. For raw materials, LAC has become more important still to China, representing 19% of all of China's agricultural imports and 10% of China's extractive imports in 2103. So it may be that the strengthening relationship between China and LAC, reflected in the projections made at the CELAC summit, will outweigh the overall slump in prices and Chinese import demand.

## ***Financing and Investment***

Figures 5 and 6, above, show the expected locations of upcoming Chinese investments, including major dams, oilfields, railroads, and commercial waterways. Many of these projects have become global flashpoints of controversy because of the proximity of delicate ecosystems and indigenous lands. For example, though the Nicaragua Canal avoids indigenous territory, it does cut through the Cerro Silva Nature Preserve. It is still unclear how the project will deal with North-South wildlife migration paths or communities living along the canal path.

Other upcoming infrastructure projects include major dams (such as the Coca-Codo Sinclair in Ecuador, currently under construction) and railways (most notably the Brazil-Peru Transcontinental Railway). As Figure 5 shows, the Transcontinental Railway may cut through highly-biodiverse lands in central and northern Peru, or it may avoid these areas in favor of less sensitive territories to the south. It will be important to watch the development of the railway's final plans, as they will have a major impact on the project's environmental aspects.

## References:

### **Databases:**

Financial Times (No Date). "fDiMarkets." Online database, accessed January 15, 2015. <http://www.fdimarkets.com>.

Gallagher, Kevin and Margaret Myers (2014). "China-Latin America Finance Database." Online database, accessed March 23, 2015. [http://www.thedialogue.org/map\\_list](http://www.thedialogue.org/map_list).

Groningen Growth and Development Center (2014). "GGCD 10-Sector Database." Online database, accessed March 20, 2015. <http://www.rug.nl/research/ggdc/data/10-sector-database>.

IMF (International Monetary Fund) (2014a). "IMF eLibrary Data." Online database, accessed March 25, 2015. <http://elibrary-data.imf.org/>.

IMF (2015). "World Economic Outlook Database: October 2014 Edition." Online database, accessed March 27, 2015. <https://www.imf.org/external/pubs/ft/weo/2014/02/weodata/index.aspx>.

United Nations Statistics Division. "UN COMTRADE: United Nations Commodity Trade Statistics Database." Online database, consulted March 26, 2015. <http://comtrade.un.org>.

### **Published Works:**

Anderson, E.R., E.A. Cherrington, A.I. Flores, J.B. Perez, R. Carrillo, and E. Sempris, (2008). "Potential Impacts of Climate Change on Biodiversity in Central America, Mexico, and the Dominican Republic." Panama City, Panama: Centro del Agua del Trópico Húmedo para America Latina y el Caribe /USAID. [http://www.cathalac.org/images/en/publications/cimate\\_change/climate\\_biodiversity\\_cathalac\\_lowhres.pdf](http://www.cathalac.org/images/en/publications/cimate_change/climate_biodiversity_cathalac_lowhres.pdf).

Blaha, David and Matt Erbe (2014). "Nicaragua Canal: Public Consultations Overview." Washington, DC: Environmental Resources Management. <http://hknd-group.com/portal.php?mod=attachment&id=120>.

Cang, Alfred (2014). "Goldman Cuts Copper Price Forecast on Rising Dollar, Falling Oil." *BloombergBusiness*, November 18. <http://www.bloomberg.com/news/articles/2014-11-18/goldman-cuts-copper-price-forecast-on-rising-dollar-falling-oil>.

Critical Ecosystem Partnership Fund (2001). "The Southern Region of the Mesoamerican Biodiversity Hotspot: Nicaragua, Costa Rica, Panama."

<http://www.cepf.net/Documents/final.mesoamerica.southernmesoamerica.ep.pdf>.

Congreso Mesoamericano de Areas Protegidas (2010). "Áreas Nacionales Protegidas de Nicaragua." *Memoria Electrónica*.

[http://congresomesoamericano.conanp.gob.mx/assets/galleries/199/12anp\\_nic.jpg](http://congresomesoamericano.conanp.gob.mx/assets/galleries/199/12anp_nic.jpg).

Gallagher, Kevin and Fei Yuan (2015, forthcoming). "Safeguarding Sustainable Development? Multilateral Development Banks in Latin America." Boston, MA: Boston University Global Economic Governance Initiative.

Gallagher, Kevin and Roberto Porzecanski (2010). *The Dragon in the Room: China and the Future of Latin American Industrialization*. Stanford University Press.

Gallagher, Kevin, Amos Irwin, and Katherine Koleski (2012). "The New Banks in Town: Chinese Finance in Latin America." Inter-American Dialog and Tufts University.

<http://ase.tufts.edu/gdae/Pubs/rp/GallagherChineseFinanceLatinAmerica.pdf>.

HKND Group (2014). "Nicaragua Canal Project Description." Hong Kong Nicaragua Canal Development Group. <http://hknd-group.com/portal.php?mod=view&aid=148>.

IMF (2014b). "Regional Economic Outlook Update: Asia and Pacific Department." October 10. <http://www.imf.org/external/pubs/ft/reo/2014/apd/eng/areo1014.pdf>.

Kitchen, Michael (2015). "S&P cuts GDP outlook for China, Japan; raises outlook for India." *MarketWatch*, February 26. <http://www.marketwatch.com/story/sp-cuts-gdp-outlook-for-china-japan-raises-outlook-for-india-2015-02-26>.

Lall, Sanjaya (2000). "The Technological Structure and Performance of Developing Country Manufactured Exports, 1985-98." *Oxford Development Studies* 28:3, 337-369.

Lall, Sanjaya and John Weiss (2005). "People's Republic of China Competitive Threat to Latin America: An Analysis for 1990-2002." *Oxford Development Studies* 33:2, 163-194.

León Áviles, José (2013). "Experiencias de políticas públicas en la Costa Caribe de Nicaragua." Managua: Gobierno de Reconciliación y Unidad Nacional, Consejo de Desarrollo de la Costa Caribe. <http://myslide.es/documents/jose-leon-aviles-consejo-de-desarrollo-costa-caribe-experiencias-de-politicas-publicas-en-la-costa-caribe-de-nicaragua.html>.

Leung, Denise, Yingzhen Zhao, Athena Ballesteros, and Tao Hu (2013). "Environmental and Social Policies in Overseas Investments: Progress and Challenges in China." Washington, DC: World Resources Institute.

<http://www.wri.org/publication/environmental-and-social-policies-overseas-investments>.

Mesquita Moreira, Mauricio (2007). "Fear of China: Is There a Future for Manufacturing in Latin America?" *World Development* 35:3 (March), 355-376.

Myers, Margaret (2014). "China Eyes Latin America to Fill Its Kitchen Cupboard." *Caixin Online*, January 8. <http://english.caixin.com/2014-01-08/100626498.html>.

Rajagopalan, Megha (2015). "China's Xi Woos Latin America with \$250 Bln Investments." *Reuters*, January 8. <http://in.reuters.com/article/2015/01/08/china-latam-idINKBNOKH0BC20150108>.

Ray, Rebecca, Kevin Gallagher, Andrés López, and Cynthia Sanborn (2015). "China in Latin America: Lesson for South-South Cooperation and Sustainable Development." Boston, MA: Boston University Global Economic Governance Initiative. <http://www.bu.edu/pardeeschool/research/gegi/program-area/chinas-global-reach/chinas-global-reach-environment-and-development/working-group/>.

Standard and Poor's (2015). "Global Metals & Mining Price Assumptions Update Live Webcast." February 4. [http://www.standardandpoors.com/spf/upload/Events\\_US/US\\_CO\\_Event\\_Webcast\\_15FEB\\_MetalsMiningSlides.pdf](http://www.standardandpoors.com/spf/upload/Events_US/US_CO_Event_Webcast_15FEB_MetalsMiningSlides.pdf).

Timmer, M.P., G.J. de Vries, and K. de Vries (2014). "Patterns of Structural Change in Developing Countries." Groningen: Groningen University, Groningen Growth and Development Center Research Memorandum 149. <http://www.ggdc.net/publications/memorandum/gd149.pdf>.

USDA (US Department of Agriculture) (2015). "World Agricultural Supply and Demand Estimates." March 10. <http://www.usda.gov/oce/commodity/wasde/latest.pdf>.

US EIA (Energy Information Administration) (2015). "Short-Term Energy Outlook," March 10. <http://www.eia.gov/forecasts/steo/index.cfm>.