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**One Region, Two Speeds?**  
**Challenges of the New Global Economic Order for Latin**  
**America and the Caribbean**



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# One Region, Two Speeds? Challenges of the New Global Economic Order for Latin America and the Caribbean \*

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## Foreword

The aftermath of the global financial crisis has reshaped world growth and demand patterns, leading to a two-speed recovery, with slow growth in industrial countries and fast growth in emerging markets. This new global scenario is defining a constellation of global macroeconomic conditions that has very different implications for subsets of countries in Latin America and the Caribbean. The report conveys three key messages: first, in this new global economic environment, key structural characteristics of Latin America and the Caribbean countries are defining two quite different regional clusters in terms of opportunities and challenges ahead. Second, substantial changes in trade and capital flow patterns, as well as in the international financial architecture, are already taking place and will impact the regional clusters in different ways. Third, economic policy design will have to accommodate these differences in order to ensure widespread and stable growth.

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## Key words:

Global economic order, crisis, trade exposure, capital flows, fiscal sustainability

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## I. Two Latin Americas during and after the Global Crisis: Who Benefited, Who was Hurt and Why?

### The Global Economy

One of the most surprising aspects of the global financial crisis is the fact that, while the industrialized world is mired in the aftermath of the crisis, with sluggish growth and high unemployment forecasts, emerging economies are undergoing an exceptional expansionary period and have become the engine of global growth.

On the industrialized country front, key macroeconomic variables show severe and persistent deterioration relative to pre-crisis positions. In the United States, three components of aggregate demand, namely private consumption, investment and exports, lie 8%, 30%, and 10% below their pre-crisis trends, respectively. On the aggregate supply side, both imports and GDP stand 21% and 8% below pre-crisis trends (see Figure 1, panels *a*, *b*, *c*, *d* and *e*).

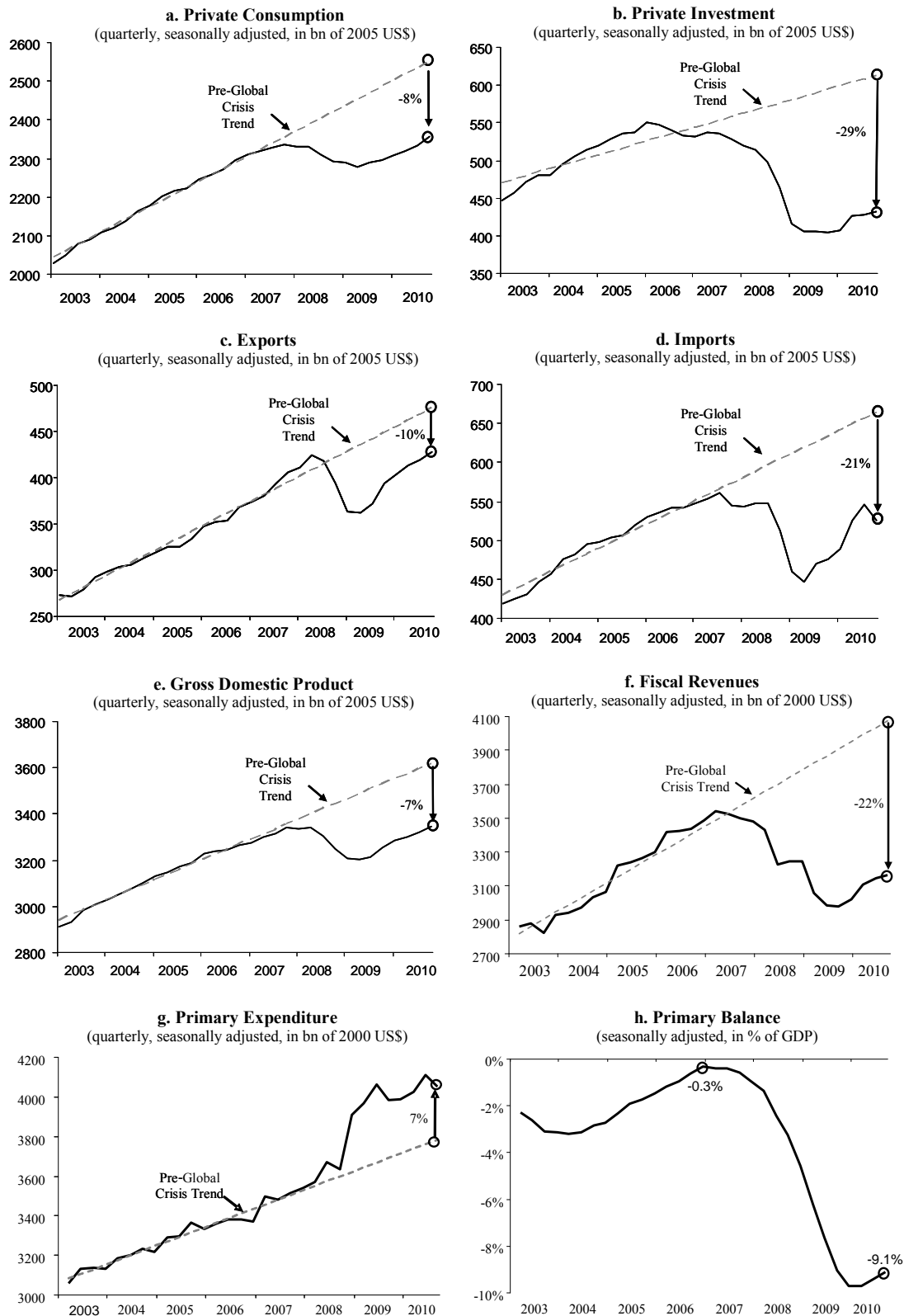
Such a marked slowdown has dealt a blow to fiscal revenues, which are 22% below their pre-crisis trend. The activation of automatic stabilizers, coupled with expansionary fiscal policies, has led to an increase in public expenditure, now standing 7% above its pre-crisis trend. As a result, a spectacular deterioration of the fiscal balance took place, leading to a deficit above 10% of GDP, as well as an associated explosive increase in public debt, reaching 95% of GDP at the end of 2010 (see Figure 1, panels *f*, *g* and *h*).

The situation is also dire in the Euro area, where private consumption, investment and exports, lie 5%, 21%, and 21%, respectively, below their pre-crisis trends. On the aggregate supply side, both GDP and imports stand 8% and 16%, respectively, below pre-crisis trends. Moreover, substantial deterioration of fiscal balances in peripheral Euro-area countries and anemic growth prospects have drastically increased spreads on government debt, raising the specter of default in some of these countries.

In sharp contrast, the emerging market landscape is one of fast growth and substantial changes in the sources of aggregate demand. Taking the paradigmatic case of China as an example, the path of exports has fallen substantially due to recession in industrialized countries. Exports currently stand 20% below pre-crisis trend levels. However, private consumption and total investment lie 7% and 14% above pre-crisis trend levels, respectively, largely due to aggressive expansionary expenditure policies channeled through public investment in order to avoid significant falls in output growth rates (see Figure 2, panels *a*, *b*, *c*, *d*, and *e*). This policy brought about a substantial change in the sources of growth in China: while in the period 2003-2007 exports represented the engine of growth, in the period 2008-2010 this role was

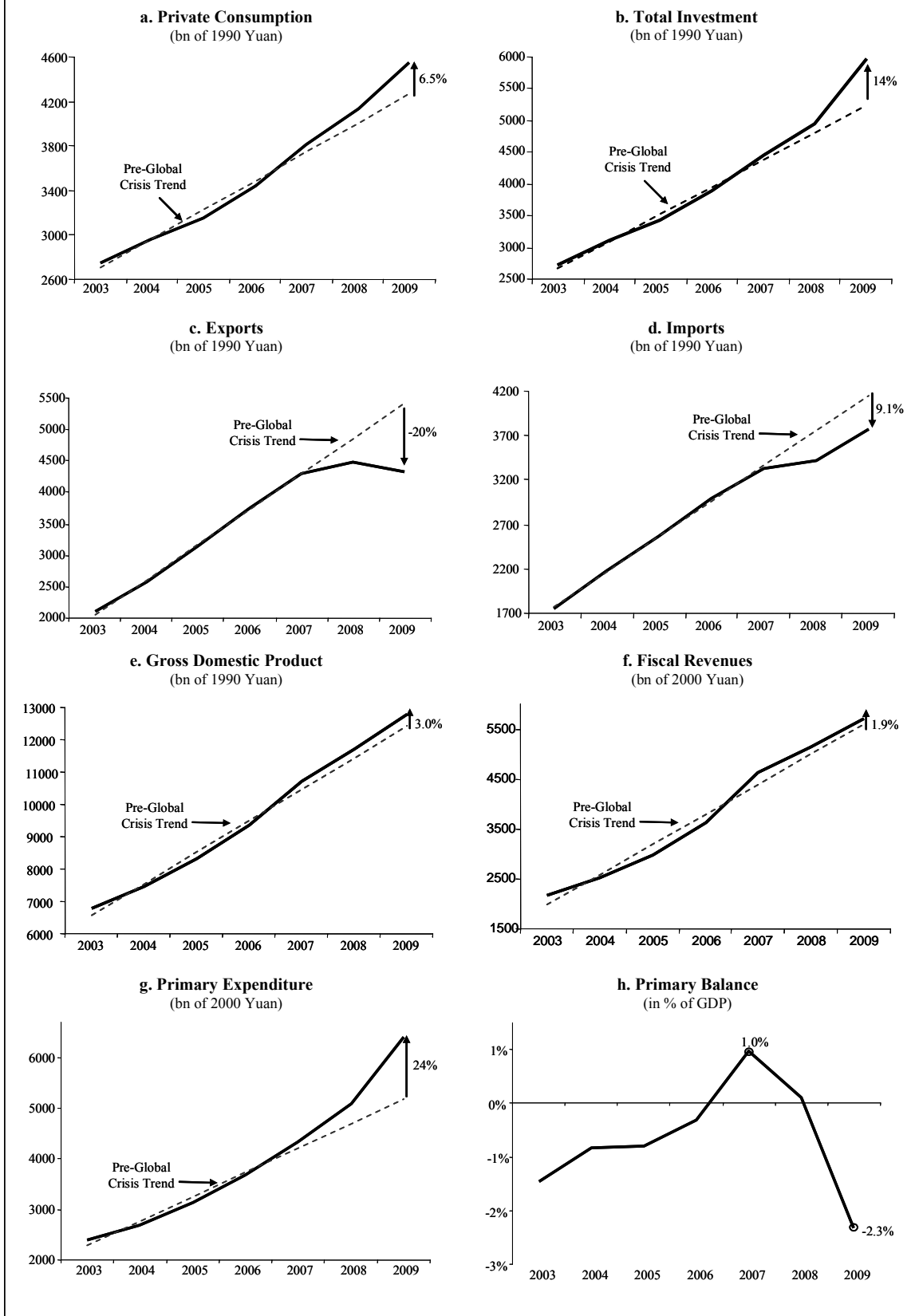
played by public investment, which largely compensated for the deterioration in export growth.

**Figure 1. Aggregate Demand, Aggregate Supply and Fiscal Balance in the US**



Data source: National statistics.

**Figure 2. Aggregate Demand, Aggregate Supply and Fiscal Balance in China**



Although Chinese government revenues are slightly above their pre-crisis trend, a position that is consistent with the increase in domestic demand, public expenditure

lies 24% above its pre-crisis trend as a result of explicit efforts to keep high levels of economic activity and thus offset the substantial fall in external demand. These changes led to deterioration in the fiscal balance, which swung from a surplus of 0.6% of GDP in 2007 to a deficit of 2.4% in 2009 (see Figure 2, panels *f*, *g* and *h*).

This realignment process—with industrial-country consumers engaged in a deleveraging process accompanied by lower consumption and higher savings, firms scaling down on investment projects in view of the deterioration in future prospects, while consumers in emerging economies increase consumption and reduce saving, and emerging-market firms step up investment plans given brighter prospects—has led to a gradual purge in excess expenditure in industrial countries, coupled with a contraction in excess saving in emerging economies. As a result, global imbalances started a correction phase: the current account deficit in the US has narrowed substantially since the beginning of the crisis, while external surpluses in China have also abated.

In sum, the aftermath of the global financial crisis has two salient features. On the one hand, domestic demand in industrial countries is weak, growth is anemic, and unemployment is large, resulting in a important deterioration of fiscal balances and, in some cases, explosive growth in public debt levels. On the other hand, emerging markets have faced increased domestic demand, faster growth, a fall in unemployment levels and relatively comfortable fiscal positions. In this context, a gradual correction of global imbalances has started to take place.

These global macroeconomic adjustments have set the stage for key external drivers of Latin America and the Caribbean's economic activity: world growth, international interest rates, sovereign risk premia, and commodity prices.<sup>3</sup> Global production and demand remain below pre-crisis levels despite rapid emerging-markets expansion because of sluggish recovery in industrial countries. However, there has been a remarkable change in global growth composition: while emerging economies accounted for 50% of world demand growth in 2006, this figure has changed to 75% in 2010. This means that demand has shifted towards emerging economies with a much higher propensity to consume primary goods. This implies a potentially larger demand for products that Latin America and the Caribbean produces and exports, and it may very well explain the apparent paradox that in the midst of a contraction in industrial-country demand, the price of commodities today is higher than in the wake of the global crisis.<sup>4</sup> The price of oil, metals, and foods are 23%, 8%, and 35% higher, respectively, than prevailing levels in 2006 (see Figure 3). At the same time, the cost of

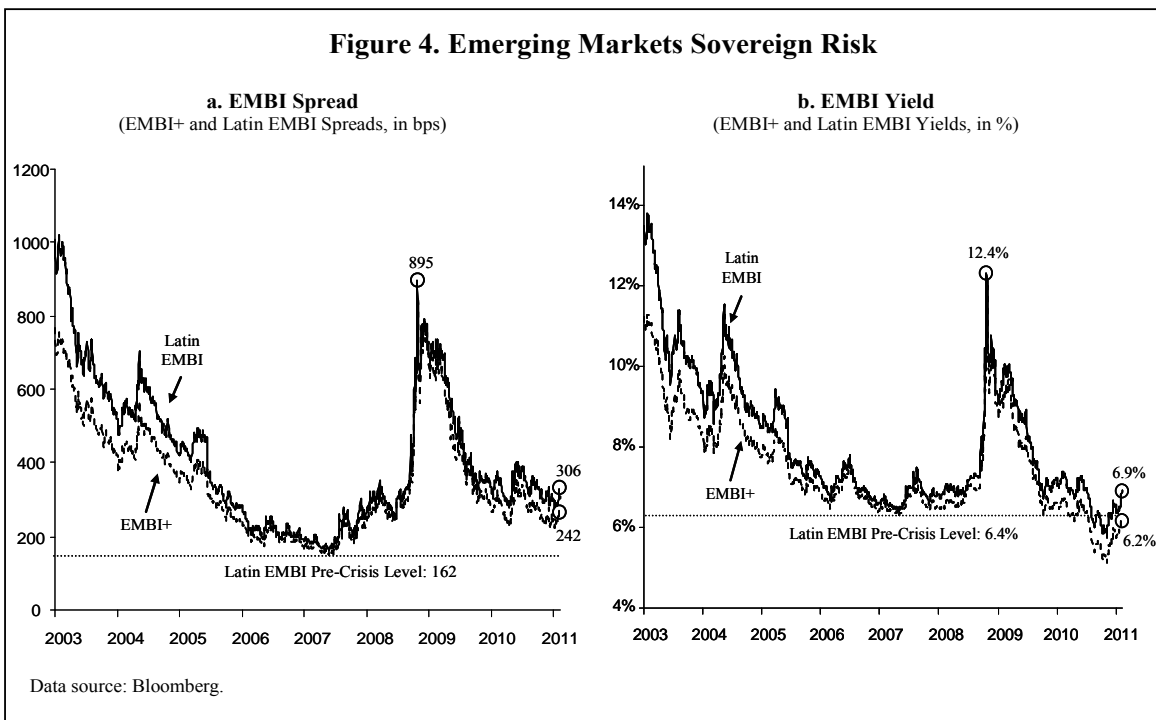
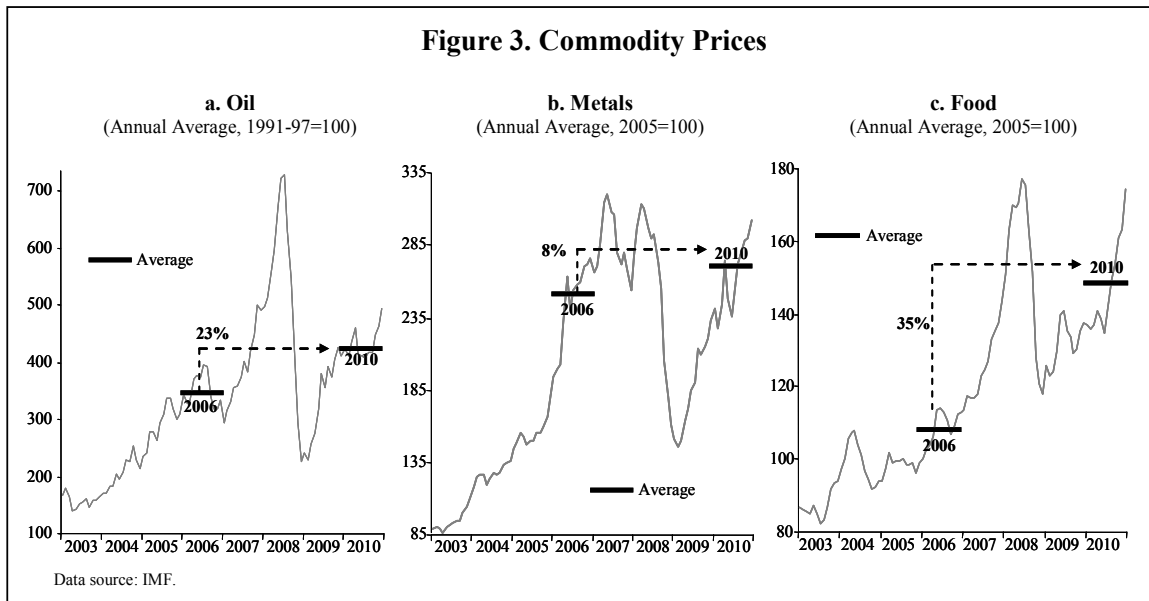
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<sup>3</sup> These variables have been shown to explain a large component of average growth variance in Latin America. See Izquierdo, Talvi, and Romero (2008) for more details.

<sup>4</sup> This may explain more the rise in oil and metals prices, a set of supply shocks appear to account for much of the rise in agricultural commodities. In some cases the market clearly expects these to be reversed over time; there is considerable uncertainty, however, as evidenced by the implicit volatility of commodity option prices.



financing for emerging economies is substantially lower than pre-crisis levels given that excess saving, generated mainly in Asia, is not being absorbed by industrial countries. This situation provides Latin America and the Caribbean with vast and relatively inexpensive financial resources. As a result, capital inflows to the region have resumed at a very rapid pace, reaching the heights obtained prior to the Lehman collapse, and leading to pre-crisis sovereign yields (see Figure 4). Moreover, low interest rates are likely to have given an additional boost to commodity prices by reducing the carry costs of inventories.



## Differential Impact on Latin America and the Caribbean

What has been the impact of this realignment process and subsequent changes in key international macroeconomic variables on Latin America and the Caribbean? The rest of this section argues that this may well depend on which Latin America and the Caribbean we are talking about—the “Mexican-type” or the “Brazilian-type”.

The Mexican economy has substantial performance similarities with the United States: strong and sustained contraction of all components of demand, with private consumption, investment and exports all currently below pre-crisis trends, as well as a strong and sustained contraction in the components of aggregate supply, both output and imports, which also remain well below pre-crisis trends (see left-hand side of Figure 5).

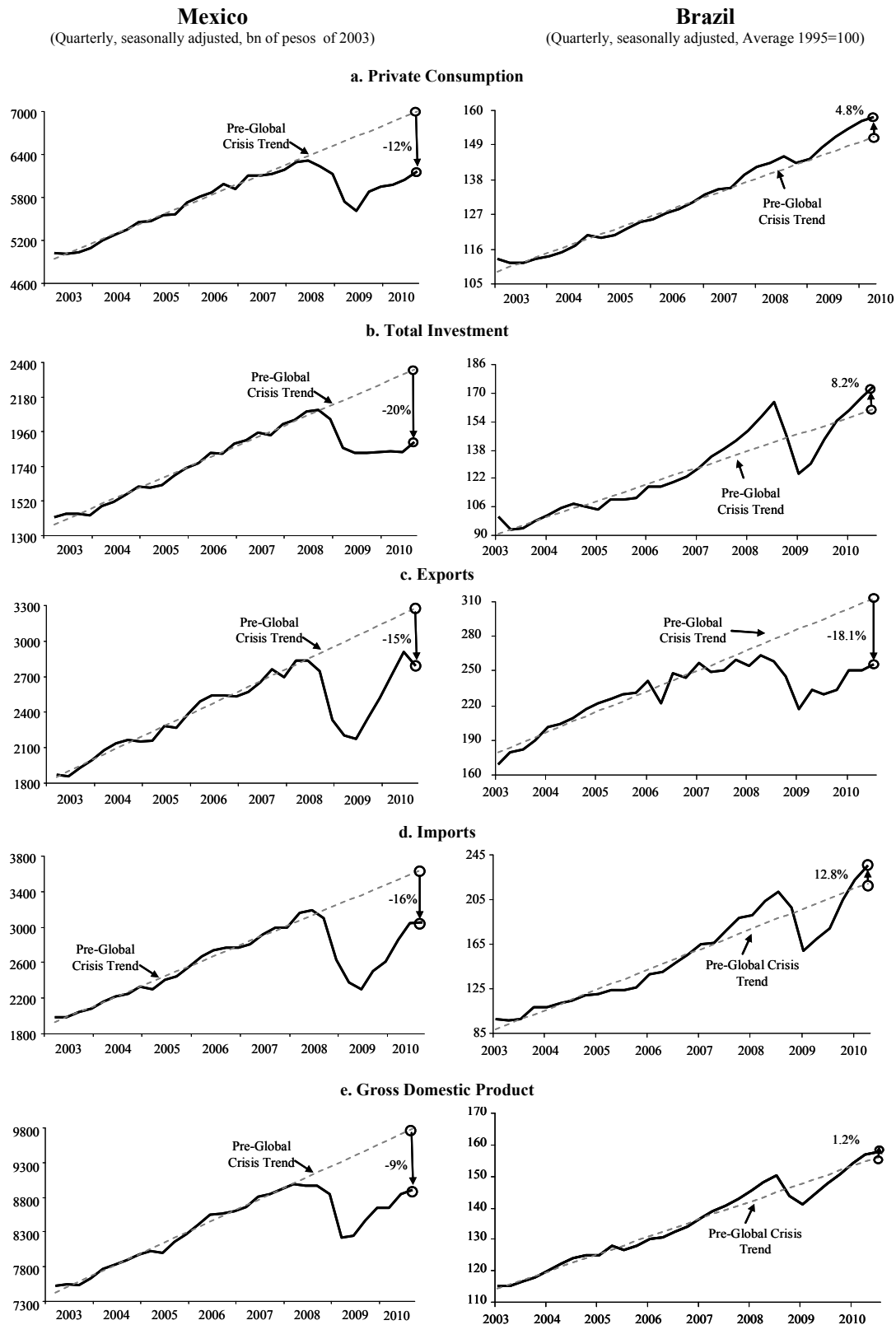
In contrast, the performance of the Brazilian economy is more akin to that of China. While Brazil also experienced a contraction in exports, it was accompanied by a strong expansion in private consumption and investment above pre-crisis trends (see right hand side of Figure 5). These shifts brought about a notable change in the sources of growth: while between 2003 and 2007 exports were the key driver, now it is the turn of domestic demand: consumption, investment and public expenditure.

This contrast in performance has come hand in hand with contrasts in leading indicators tied to future performance prospects: consumer confidence and business confidence indicators in Mexico remain at lower levels than those prevailing before the beginning of the global financial crisis, while in Brazil they stand at significantly higher levels. Moreover, while the real exchange rate vis-à-vis the dollar has depreciated by 9% in Mexico, it has appreciated by 26% in Brazil compared with pre-crisis levels.

How can these differences in performance and prospects be reconciled for two countries that belong to the same region and face a common external environment? In order to analyze this diverging behavior more deeply and understand the causes behind these contrasting patterns, it is useful to rely on a simple framework to shed some light on the issue.

For the purposes of this report a very simple model was constructed, in which a block of industrial economies was proxied by the economic structure of the United States, while a block of emerging economies was represented by the economic structure of China. A third block with a weight corresponding to that of Latin American and Caribbean economies was proxied, alternatively, by the structure of the Mexican or the Brazilian economy, and, given the region’s small share in world output, it was assumed to be a taker of world output and demand, world interest rates, and commodity prices, which are determined by interactions between the industrial and emerging market blocks (excluding Latin America and the Caribbean).

**Figure 5. Aggregate Demand, Aggregate Supply and Fiscal Balance in Brazil and Mexico**



A description of the model is presented in Appendix I, but it suffices to say here that in all blocks output is demand determined, following a very simple Keynesian framework, where private and public consumption depend on output, investment depends on world interest rates, and exports of each block—industrial or emerging—are a function of the output of the other block. This framework is used to mimic the impact of a fall in consumption and investment in the industrial block quantitatively similar to the collapse in those variables observed in the United States in the aftermath of the global crisis.

According to the model, the fall in aggregate spending generates a fall in output in industrial countries, as well as decreases in imports and exports (due to the negative impact of the fall of industrial country output on the rest of the world), together with a fall in consumption and investment, an increase in private saving and an improvement in the current account balance (see Table 1), all elements in line with observed outcomes in industrial countries. A similar pattern takes place in the emerging market block, where most components of aggregate demand fall, except for investment, which increases, given the fall in world interest rates resulting from the fall in aggregate demand and a rise in world saving. At the same time, the current account balance in emerging markets deteriorates. Again, all these elements coincide with observed outcomes in emerging economies.<sup>5</sup>

**Table 1. Model Response to an Exogenous Reduction in Private Spending in Industrial Countries**

	Industrial Countries	Emerging Markets
<b><i>Aggregate Demand</i></b>		
Consumption	↓	↓
Investment	↓	↑
Exports	↓	↓
<b><i>Aggregate Supply</i></b>		
Imports	↓	↓
Domestic Output	↓	↓
<b><i>Fiscal Balance</i></b>		
Revenues	↓	↓
Expenditure	↑	↑
Fiscal Balance	↓	↓
<b><i>Sectoral &amp; External Balances</i></b>		
Private Savings	↑	↑
Public Savings	↓	↓
Current Account	↑	↓

<sup>5</sup> These results are obtained for a given parameterization of the model (see Appendix I for more details).

These interactions result in a contraction of global output, a fall in world interest rates, and a fall in the price of commodities. With these values of the global variables at hand, it is now possible to analyze the differential impact on the Latin America and the Caribbean block when viewed à la Mexico, or à la Brazil. When the structure of the Mexican economy is imposed on the Latin America and the Caribbean block, the behavior of the components of aggregate demand goes hand in hand with that of the components of the industrial world: a fall in consumption, investment and exports. On the aggregate supply side, the effects are also similar to those in industrial countries: output falls, and so do imports (see Table 2).

**Table 2. Model Response to an Exogenous Reduction in Private Spending in Industrial Countries**

	Mexico	Brazil
<i>Aggregate Demand</i>		
Consumption	↓	↑
Investment	↓	↑
Exports	↓	↓
<i>Aggregate Supply</i>		
Imports	↓	↑
Domestic Output	↓	↑

The illuminating differences emerge when imposing the Brazilian structure on the Latin America and the Caribbean block: this time both consumption and investment *increase* and, despite the fact that exports fall given the slowdown in world demand, output *increases*, and so do imports (see Table 2). Two factors must be brought to the forefront in order to understand this differential behavior: i) the weight of exports in total output, and ii) the share of investment in total output. While the Mexican economy is highly integrated, with exports representing 27% of GDP, the Brazilian economy is relatively closed, with exports standing at 10% of GDP. Thus, the fall in world demand has much greater impact on the Mexican economy. On top of this, Mexico depends much more on industrial countries as a source of export demand than Brazil— as of 2007, 91% of Mexican exports went to industrial countries, as opposed to only 51% of Brazilian exports. Moreover, the fall in interest rates has a larger positive impact on the Brazilian economy given the fact that investment—which reacts favorably to a reduction in interest rates—represents a larger share of the Brazilian economy than of the Mexican economy.

It could be argued that the simplicity of the model at hand may not capture many additional ingredients that could alter the performance of Mexican-type or Brazil-type economies used here to highlight their structural differences and the differential

impact of changes in global macroeconomic environment. Thus, for robustness, a much more complex model was used instead to convey whether results would change qualitatively under a more sophisticated framework, involving five regional blocks, including China, the United States, the Euro area, Japan, and the rest of the world, in a new-Keynesian multi-country dynamic stochastic general equilibrium model of the world economy, based on household and firm optimizing behavior and on nominal as well as real rigidities.<sup>6</sup> A fall in aggregate spending generated by a fall in consumption and investment in the United States leads to similar results in that larger trade shares, coupled with lower investment to output ratios in the Mexican-type economy, imply a much larger negative impact of the US-spending shock on a Mexican-type economy's GDP than a Brazil-type economy.

### **Two Latin Americas: A Cluster Analysis Approach**

The structural differences highlighted above are key in assessing future prospect for countries in the region. Brazilian-type countries, being net commodity exporters, with low exposure to industrial countries in terms of exports of goods and services, and much to gain from larger investment demand in response to low world interest rates are the clear winners. On the other hand, Mexican-type countries, mainly net commodity importers and highly exposed to trade in goods and services with industrial countries, are likely to face substantial challenges, in spite of the fact that they too stand to gain from lower world interest rates. Could we be witnessing the emergence of two regional blocks, represented by a Brazilian cluster and a Mexican cluster?

In order to assess this, cluster analysis techniques were employed to group countries using the three categories highlighted above: whether a country is a net commodity importer or exporter, is largely integrated or not to industrial countries in terms of export allocation of goods and services, and whether investment represents a large share of the economy. All categories are measured by their 2003-2006 pre-global crisis averages. The first category is measured as the ratio of net commodity exports relative to GDP. In order to make the analysis more illustrative with the benefit of a two-dimensional framework, the second and third categories were subsumed into one indicator, namely the ratio of investment relative to exports of goods and services to industrial countries.<sup>7</sup>

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<sup>6</sup> See Cova, Pisani and Rebucci (2009, 2010) for details.

<sup>7</sup> Results would not change qualitatively if, instead, the analysis were carried out in a three-dimensional framework, using the ratio of total exports to industrial countries relative to GDP, as well as the share of investment in GDP.

A two-dimensional graph is presented in Figure 6, panel *a*, for all IDB borrowing member countries in the region.<sup>8</sup> The southwest corner of the graph clearly defines a tight Mexican cluster comprised of Central American countries, Caribbean countries, and Mexico, practically all of them being net commodity importers with relatively low ratios of investment-to-exports of goods and services to industrial countries. A second, more dispersed Brazilian cluster is placed along the northeast corner, and it contains all South American countries (Argentina, Brazil, Bolivia, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, and Venezuela) plus Trinidad and Tobago. A salient characteristic of this group is that they are all net commodity exporters, and for most, their ratio of investment-to-exports of goods and services to industrial countries is relatively high.<sup>9</sup> Moreover, this classification of two regional clusters is robust to the inclusion of remittances, an issue that is particularly relevant for Central American and Caribbean countries.<sup>10</sup> Results are shown in Figure 6, panel *b*, again for averages during the period 2003-2006. If anything, the Mexican cluster becomes more compact, pointing to an even clearer distinction among groups.<sup>11</sup>

The cluster analysis above suggests that these underlying characteristics were already present before the global crisis. How has the global crisis changed these patterns? The answer comes in Figure 6, panel *c*, which shows that, in fact, the distance between the Mexican and Brazilian clusters has widened with the relative worsening of the Mexican cluster and the improvement of the Brazilian cluster using 2009 data. This widening is confirmed by the fact that the distance between the centroid of the Mexican cluster and that of the Brazilian cluster has increased relative to that prevailing in 2003-2006 (see Appendix II for details). Moreover, the Mexican cluster has become even more compact, pointing to the larger common challenges ahead for this group.<sup>12</sup> Results remain the same when remittances are added into the equation, as depicted in Figure 6, panel *d*.

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<sup>8</sup> Except for Haiti (due to lack of data).

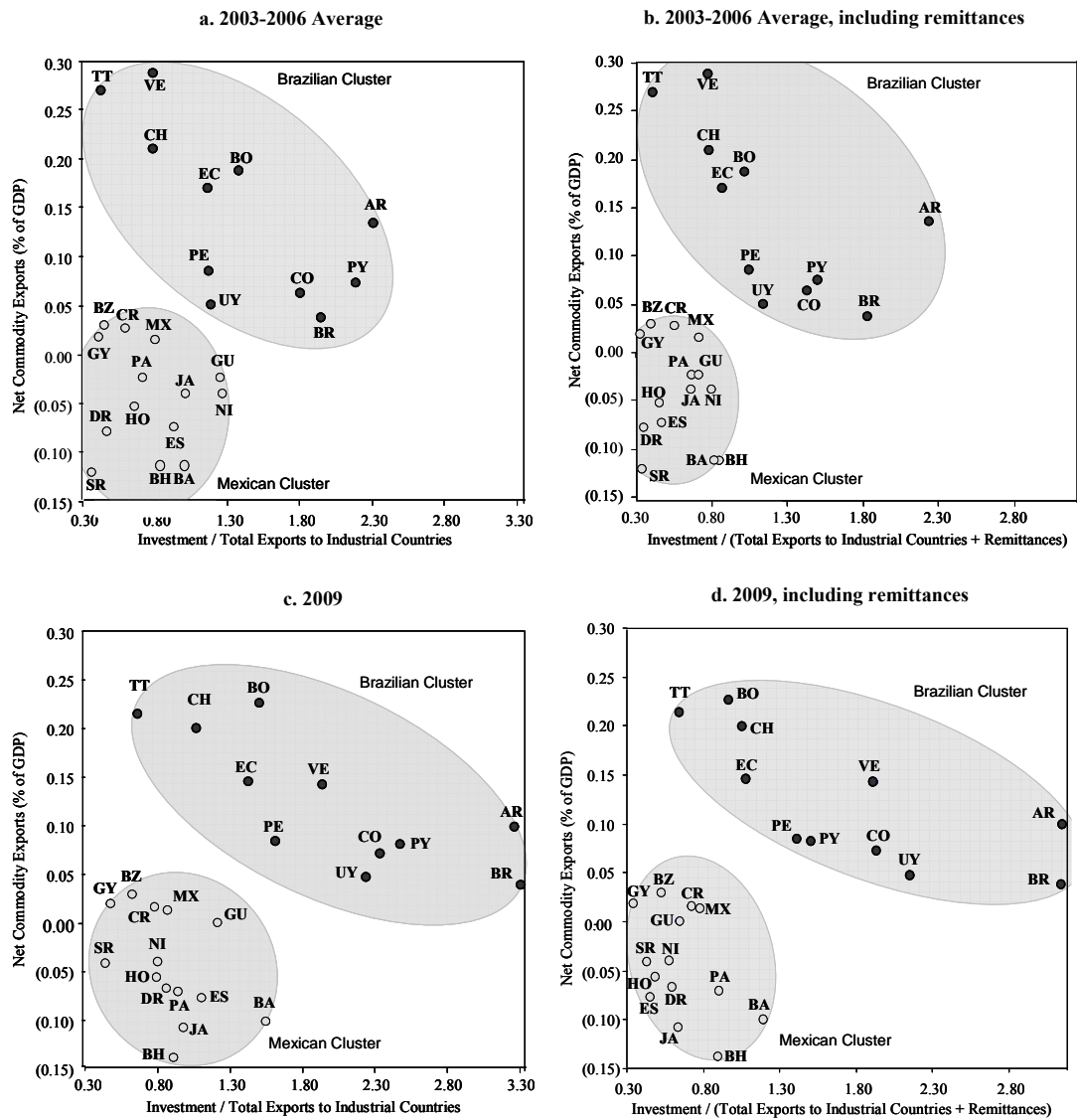
<sup>9</sup> This visual assertion regarding the emergence of two groups is confirmed by cluster analysis using either conventional hierarchical cluster methods or K-means cluster methods. Standard grouping optimization tests confirm the usefulness of splitting Latin America and the Caribbean into two clusters. See Appendix II for details.

<sup>10</sup> This is done by assuming that remittances come from industrial countries. Thus, remittances are added to exports of goods and services to industrial countries when computing ratios of investment to exports to industrial countries.

<sup>11</sup> Again, this result is confirmed by cluster analysis using either conventional hierarchical cluster methods or K-means cluster methods (see Appendix II).

<sup>12</sup> This is measured by the reduction in the mean squared error of the Mexican cluster (see Appendix II).

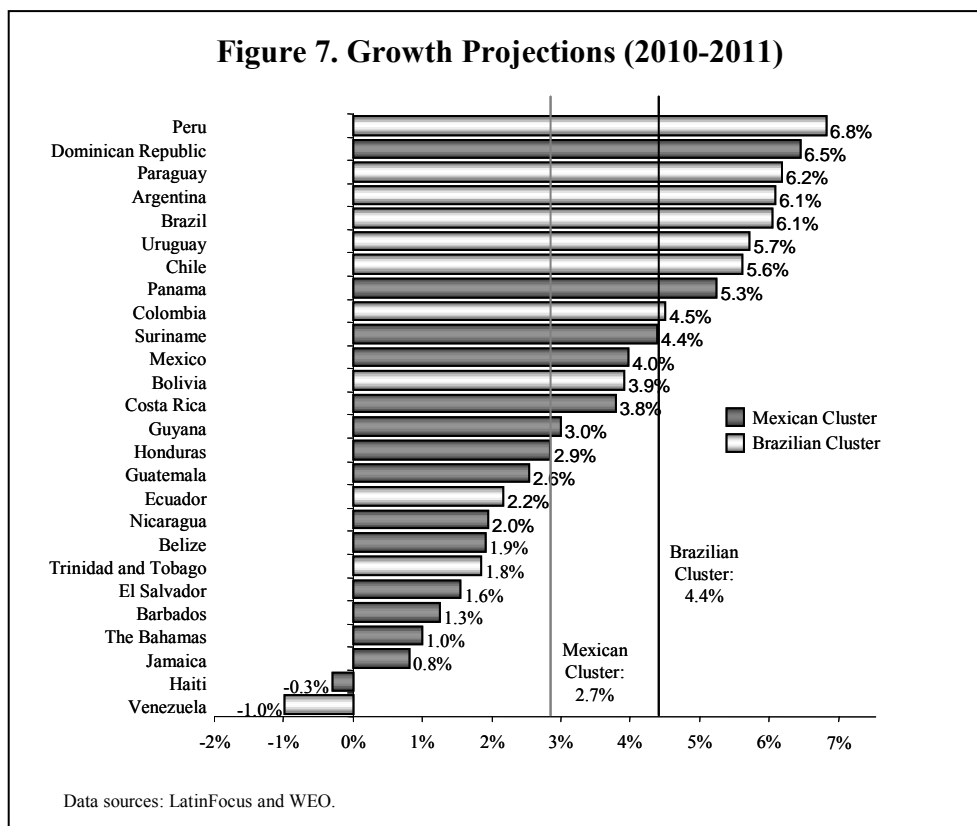
Figure 6. Cluster Analysis



Data sources: DOT, WEO and WITS.  
Industrial Countries as defined in DOT.



It is interesting to corroborate that the fortunes of these clusters are to a large extent validated by market growth estimates and forecasts for the years 2010 and 2011, respectively.<sup>13</sup> While the Mexican cluster is expected to grow over this period at an average rate of 2.7%, the Brazilian cluster is expected to grow on average at a rate of 4.4%, close to 2 percentage points above the Mexican group.<sup>14</sup> Figure 7 shows individual growth forecasts, together with cluster average growth forecasts. Average forecasts behave as expected; however, the average naturally hides certain heterogeneity, such as the cases of Venezuela and the Dominican Republic. These are good examples of how countries that may be particularly well positioned to profit from the current external environment, as in the case of Venezuela, or may be in a relatively unfavorable position, as in the case of Dominican Republic, are affected by other factors not included in the cluster analysis that may be important in determining outcomes.



<sup>13</sup> Forecasts are based on information coming from LatinFocus and WEO.

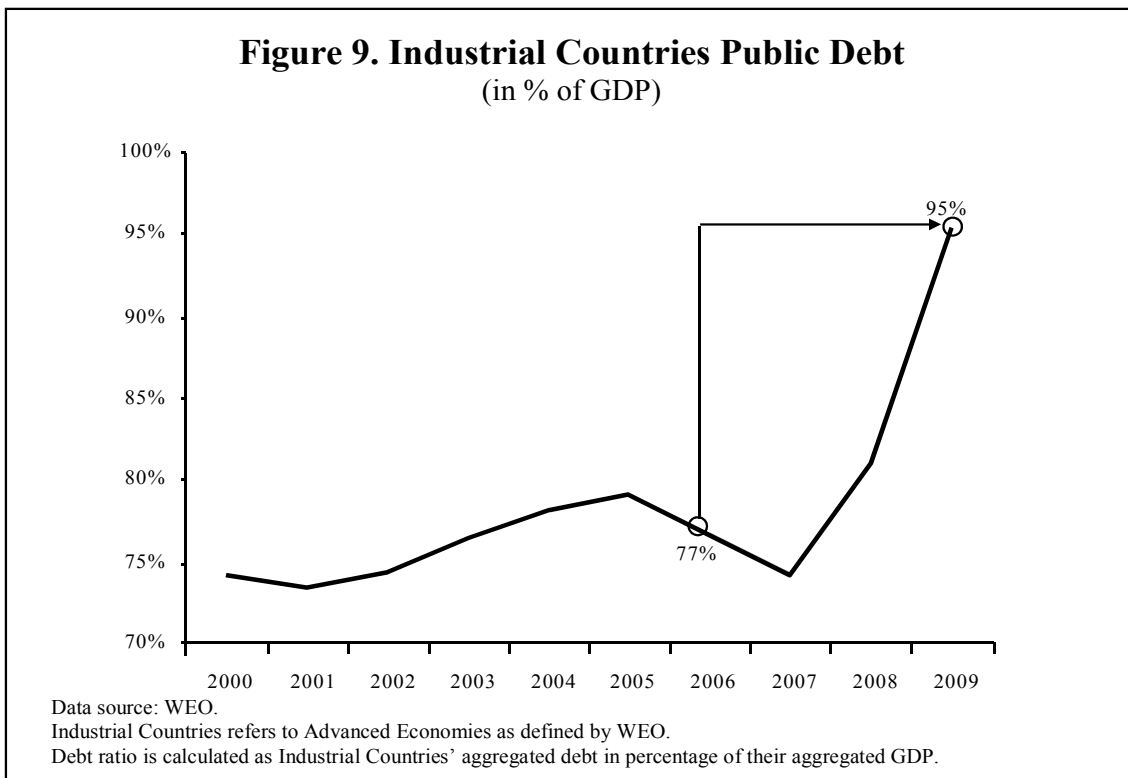
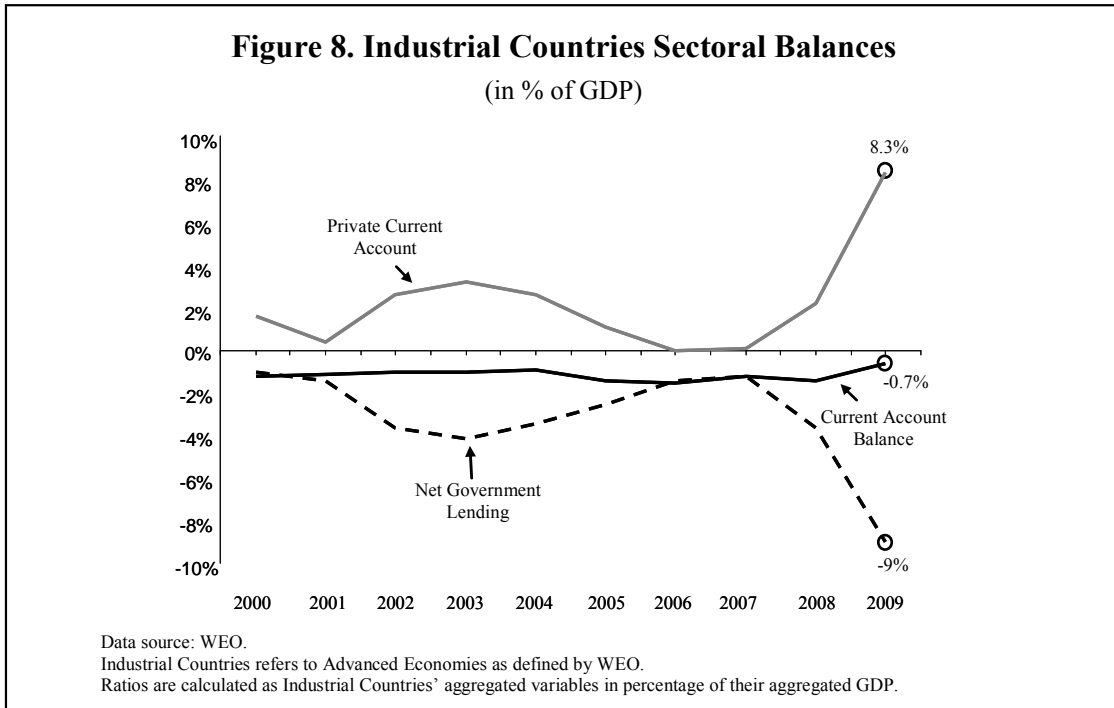
<sup>14</sup> This difference in mean growth between clusters is significant at the 5% level.

## II. What's Next? Latin America and the Caribbean's Insertion in the Post-Financial Crisis New Global Economic Order

Chapter I hinted at the differential impact of the global financial crisis on the world economy key players and concomitant changes in the composition of world output and demand from industrial countries to emerging markets, in commodity prices, and in the direction of capital flows, that could affect regional clusters differently. To what extent are these changes already taking place, and what have been the consequences so far of these changes for the patterns of trade, foreign direct investment and other capital flows across Latin America and the Caribbean? Moreover, how will developing changes in the international financial architecture affect the region? In other words, what will be the key characteristics of the new global economic order, and what will Latin America and the Caribbean's insertion into the new global economic order look like?

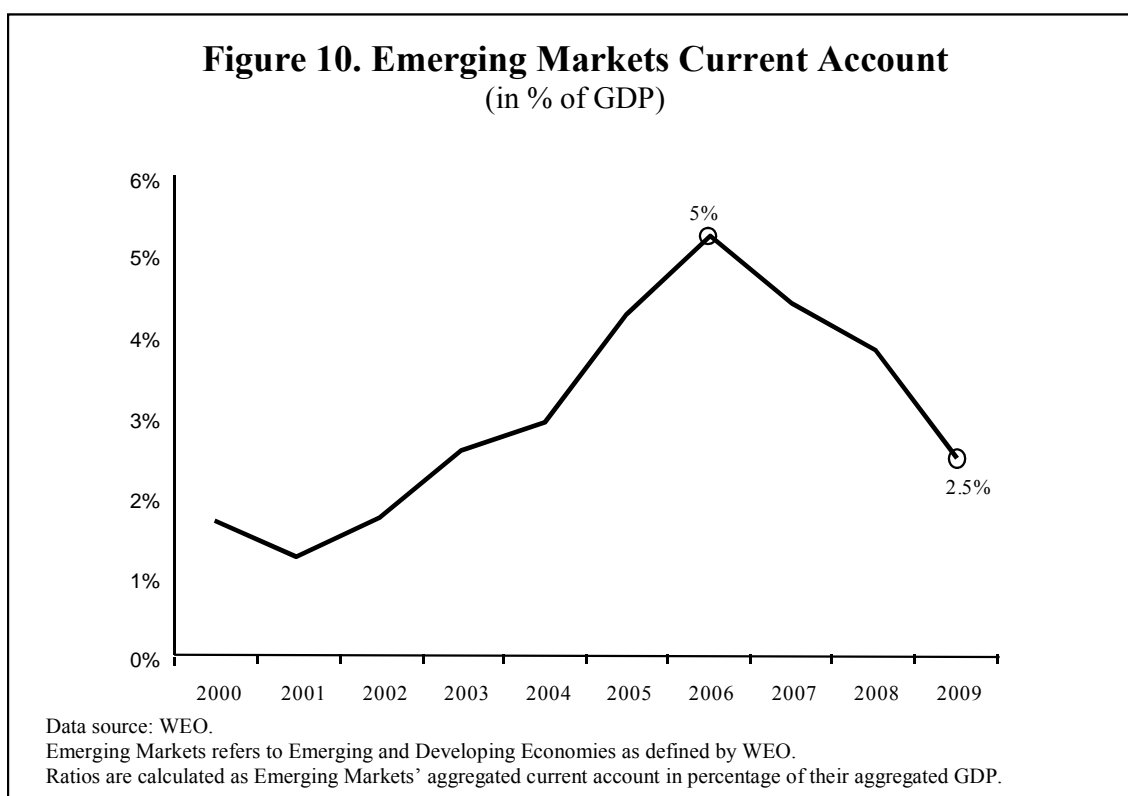
In the aftermath of the global crisis, industrial countries engaged in a process of gradual rebalancing at the economy-wide level, but with a remarkable contrast between the private and public sectors. A clear understanding of this pattern is crucial to assess future developments. Consider the set of industrial countries, displayed in Figure 8. In 2006, the deficit in the current account of this group was equivalent to 1.6% percent of GDP. In 2009 it was 0.7% of GDP, and a similar figure is expected to have materialized for 2010. At a first glance, this adjustment does not seem very relevant. However, key differences emerge when focusing on the current account balance of the private sector. While its current account was almost fully balanced by 2006 (-0.1% of GDP), net private saving soared by 2009, leading to a private current account surplus of 8.3% of GDP and showing an adjustment between 2006 and 2009 of 8.4 percentage points of GDP. In sharp contrast, the current account balance of the public sector deteriorated sharply, from a deficit of 1.5% of GDP in 2006 to a deficit of 9% of GDP in 2009, and it is expected to have narrowed only slightly in 2010.

Thus, so far the substantial adjustment in private sector accounts has been largely compensated by massive public sector dissaving. However, mounting pressure continues to develop in industrial countries towards adjustment in government balances. Pressures for public sector adjustment rely on the fact that public debt in industrial country governments has exploded in recent years, increasing on average from 77 to 95 percent of GDP since 2006 (see Figure 9). If the fiscal adjustment were swift enough, without substantial compensation from the private sector, aggregate demand in industrial countries is likely to grow sluggishly and the process of global rebalancing will continue.



The main working hypothesis in this report is that the new global economic order emerging in the aftermath of the global crisis will be one of gradual global rebalancing. Gradual adjustment in the public sector and continued adjustment in current account balances in industrial countries will be coupled with a reduction of current account surpluses in emerging countries, and this rebalancing will take place in a context of continued cooperative international trade and financial arrangements. As a matter of

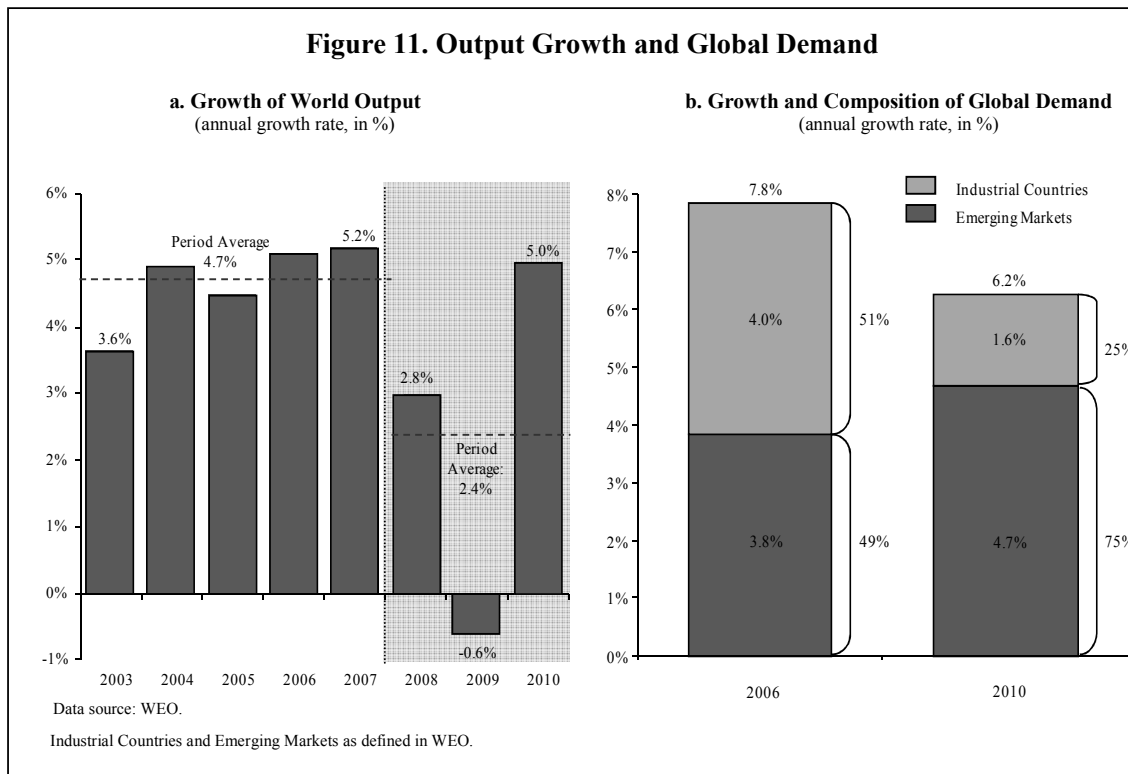
fact, the global rebalancing process has so far been portrayed by gradual adjustment in industrial countries, accompanied by a smooth reduction of current account balances in Emerging Markets, as depicted in Figure 10. Although the pace of rebalancing has slowed in 2010 relative to the period 2007-2009, adjustment is likely to continue, with fiscal retrenchment in the industrial world and sustained expansion of economic activity in emerging economies.<sup>15</sup>



## New Trade Patterns

The reallocation of world output and world demand from industrial countries to emerging markets that have a high propensity to consume primary commodities was accompanied by the emergence of new world trade patterns. Although world output grew about 5% in 2010 (see Figure 11, panel *a*), the contribution of emerging economies to world growth increased substantially, to the detriment of advanced country growth. Moreover, as Figure 11, panel *b* shows, there have also been substantial changes in the composition of world demand growth. By 2006, world demand growth was divided evenly between industrial and emerging economies. This pattern was substantially different in 2010, with emerging economies now accounting for three-quarters of world demand growth.

<sup>15</sup> It must be acknowledged that some analysts—such as Blanchard and Milesi-Ferreti (2010)—suggest that global rebalancing could potentially revert.



As mentioned above, this shift in demand has implications for commodity prices given different propensities to consume primary commodities. Commodity imports in industrial countries are approximately 15% of total imports while in BRIC countries this figure rises to 25%.<sup>16</sup> This shift in demand growth towards countries with a higher propensity to consume primary commodities is likely to continue supporting, together with low world interest rates, high commodity prices.

These substantive shifts due to global rebalancing and reallocations in global demand have had their impact on trade patterns in Latin America and the Caribbean, which have changed substantially in 2009 vis-à-vis 2006. Take, for example, the paradigmatic case of Brazil: by 2006, exports to other BRICs represented 9% of total exports. This figure grew to 17% of total exports by 2009, while exports to industrial countries diminished to 44% of total exports in 2009, from 50% in 2006 (see Figure 12, panel *a*). It could be argued that this shift in shares is due to the fact that exports to industrial countries fell during the period 2006-2009 as a consequence of the aftershocks of the global crisis. However, as shown in Figure 12, panel *b*, although exports to industrial countries fell by 4%, the notable shift in trade shares is mostly due to the exceptionally

<sup>16</sup> The BRIC countries consist of Brazil, Russia, India, and China. A percentage of the commodity imports are re-exported in manufactured or other goods rather than consumed in the BRICs. BRIC manufacturing, however, tends to be more commodity intensive than advanced country manufacturing, although this may decline over time given the high price of commodities and modernization of manufacturing processes.

high 94% increase in exports to BRICs.<sup>17</sup> The pattern is quite different for the contrasting Mexican economy where, despite the 9.8% fall in exports to industrial countries during the period 2006-2009, the latter still represented 91% of total exports by 2009 (see Figure 12, panel c). Although exports to BRICs also increased substantially from the very small levels prevailing in 2006 (see Figure 12, panel d), they only represented about 3% of total exports by 2009.

These shifts in trade patterns in the Mexican and Brazilian economies also apply to the regional clusters defined in Section I, as shown in Figure 13, panels *a* and *b*. The Brazilian cluster displays an increase in the share of exports to BRICs from 13% in 2006 to 19% in 2009, together with a declining share in exports to industrial countries, from 56% in 2006 to 49% in 2009. Variations are smaller for the Mexican cluster, where exports to BRICs increase their share from 2% to 3% of total exports, while export shares to industrial countries fall from 90% to 87%.<sup>18</sup>

Moreover, it is likely that these changing patterns will continue in the future, as they are not just a consequence of recession in industrial countries. Export projections based on growth forecasts of trading partners weighted by 2009 export shares suggest that by 2013 the Brazilian cluster is likely to ship more than *a quarter* of total exports to BRICs, while decreasing shipments to industrial countries so that their share in total exports falls to 42%. The Mexican cluster is also expected to show increases in the share of exports to BRICs to about 7% of total exports by 2013, but the weight of industrial country exports is likely to remain large—at about 87%. These projections suggest that not every country in LAC will benefit equally from this change in trade patterns. Moreover, countries where export capacity is essentially oriented towards industrial countries—and at a disadvantage in supplying emerging economy demand—may bear the burden of undergoing substantive productive restructuring in the years to come. Figure 14 portrays the disparities mentioned above at the individual country level by looking at the share of exports of goods and services to industrial countries as a share of GDP.<sup>19</sup> At the low end of the spectrum lie most Brazilian-cluster countries—with Brazil and Argentina at the bottom of the list—while Mexican-cluster countries stand at the higher end of the spectrum.

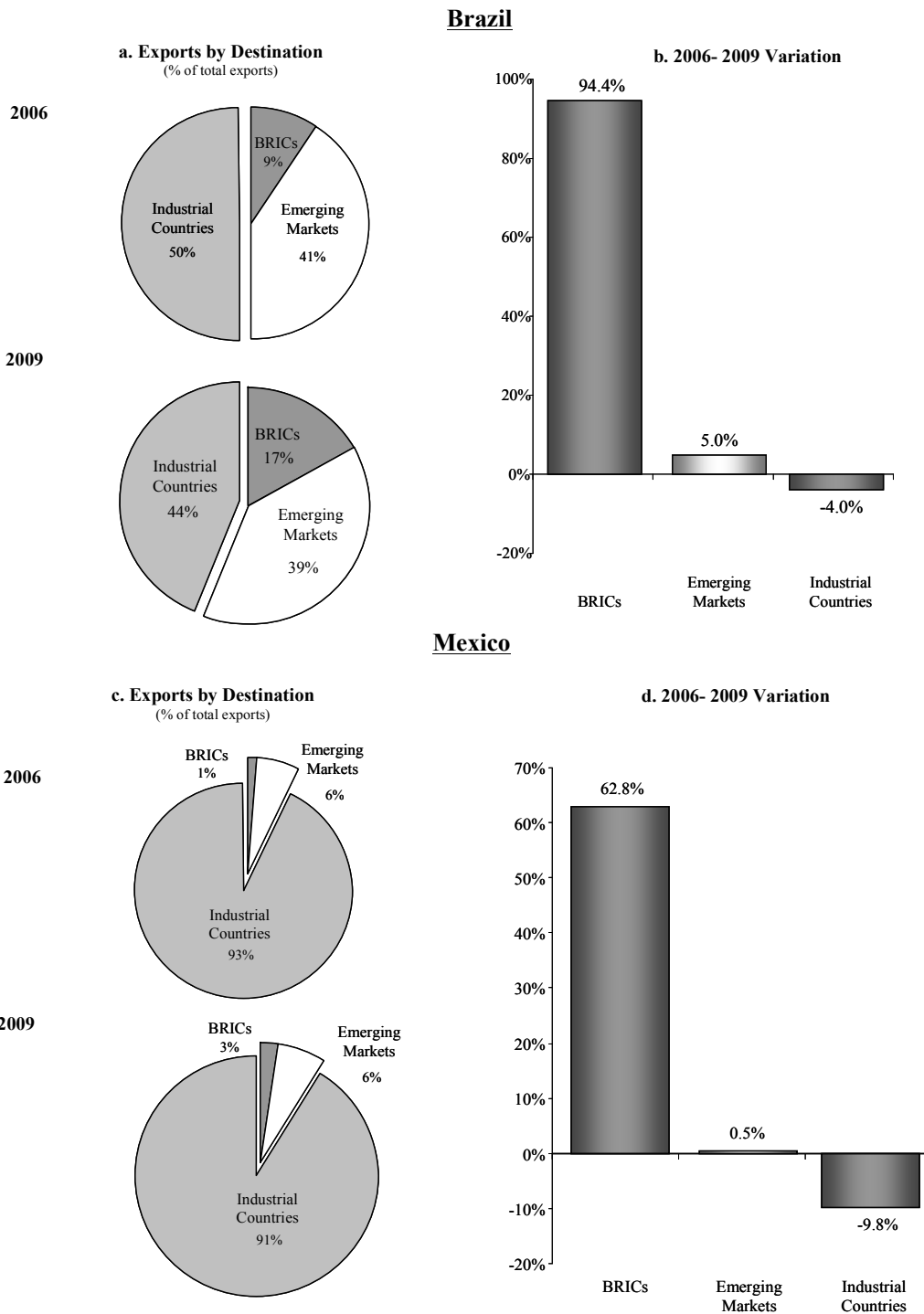
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<sup>17</sup> It could also be argued that this change in patterns has resulted from changes in commodity prices. A careful inspection of Brazilian exports at constant prices—Brazil being one of the few countries in the sample with detailed data at constant prices—suggests that even when controlling for price effects, this change in patterns is still present in the data.

<sup>18</sup> These results are qualitatively very similar using averages of individual country export shares.

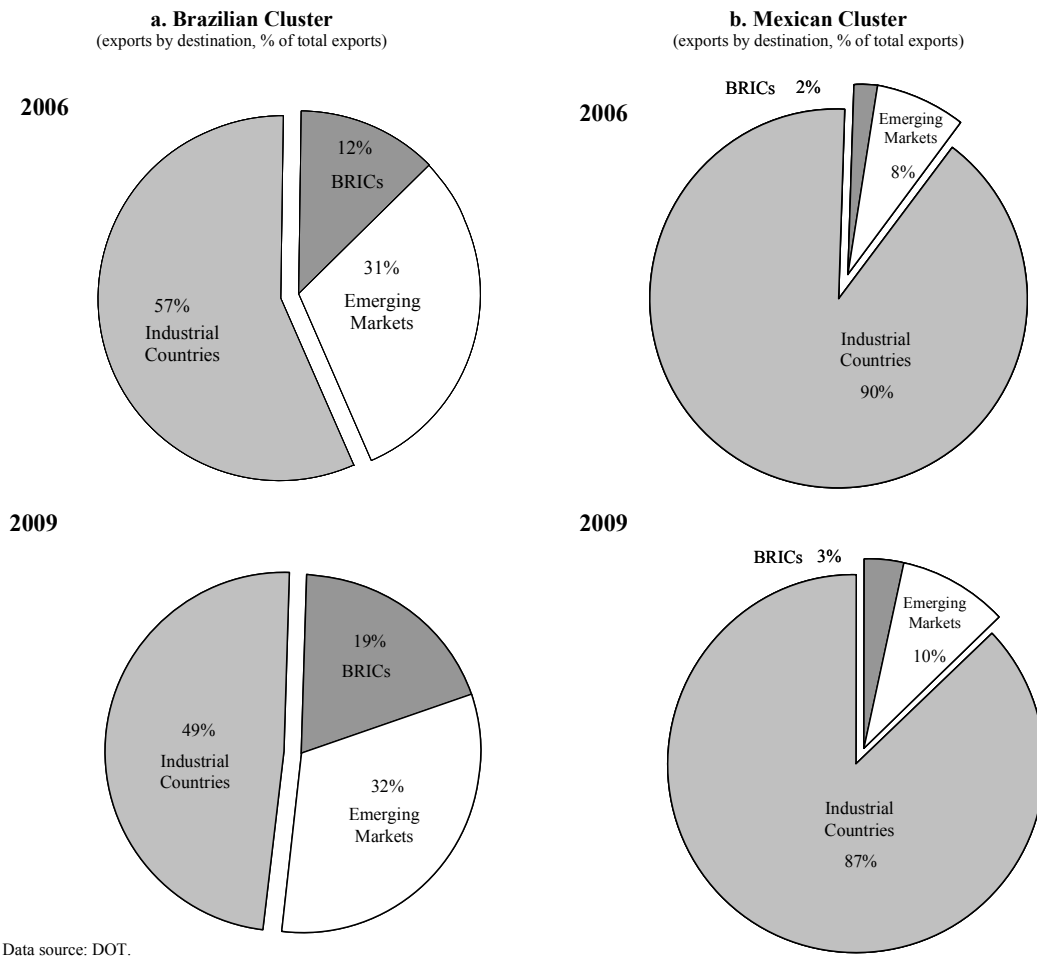
<sup>19</sup> This analysis ignores second-round effects—i.e., exports to Emerging Markets that re-export to Advanced Economies—which in some cases could be important.

**Figure 12. Change in Latin America's Trade Patterns: Brazil and Mexico**



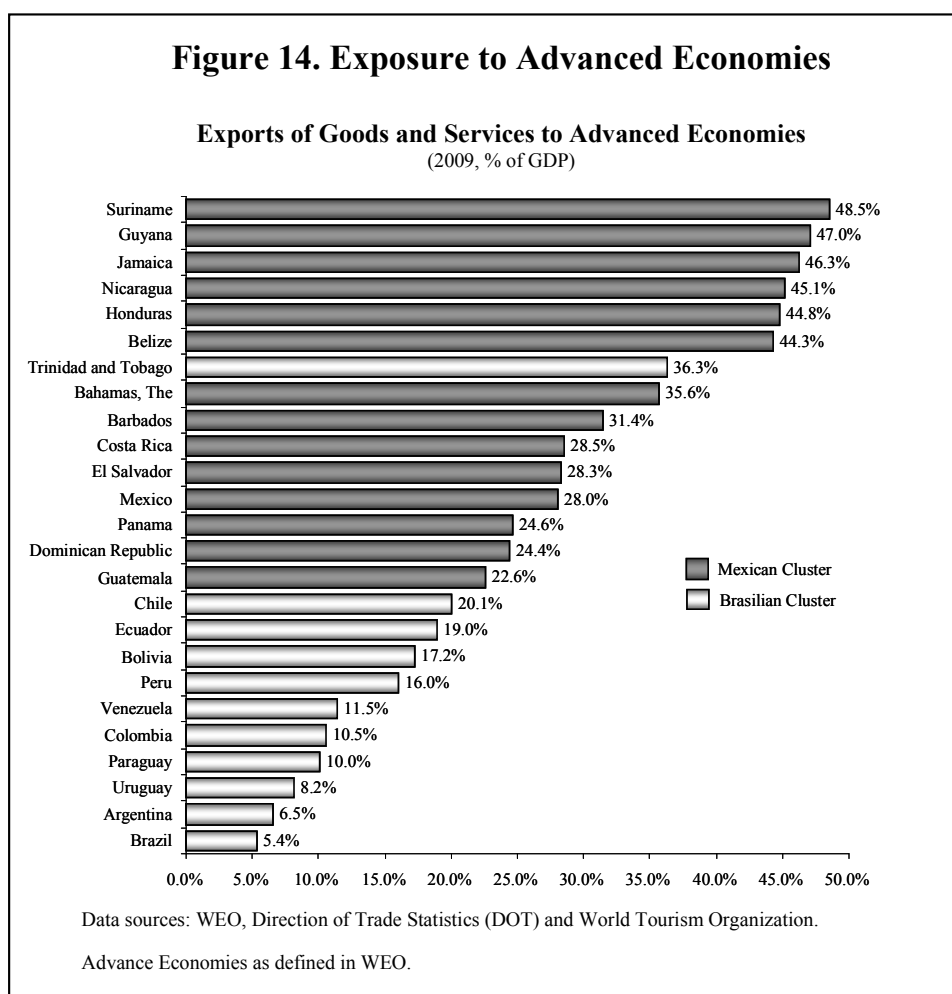
Data source: Direction of Trade Statistics (DOT) – IMF.  
BRICs includes Brasil, Russia, India and China. Industrial Countries and Emerging Markets as defined in DOT.

**Figure 13. Change in Latin America's Trade Patterns: Brazilian and Mexican Clusters**



Data source: DOT.  
 BRICs includes Brazil, Russia, India and China. Industrial Countries and Emerging Markets as defined in DOT  
 Shares are calculated using the aggregated data of all the countries included in each cluster.





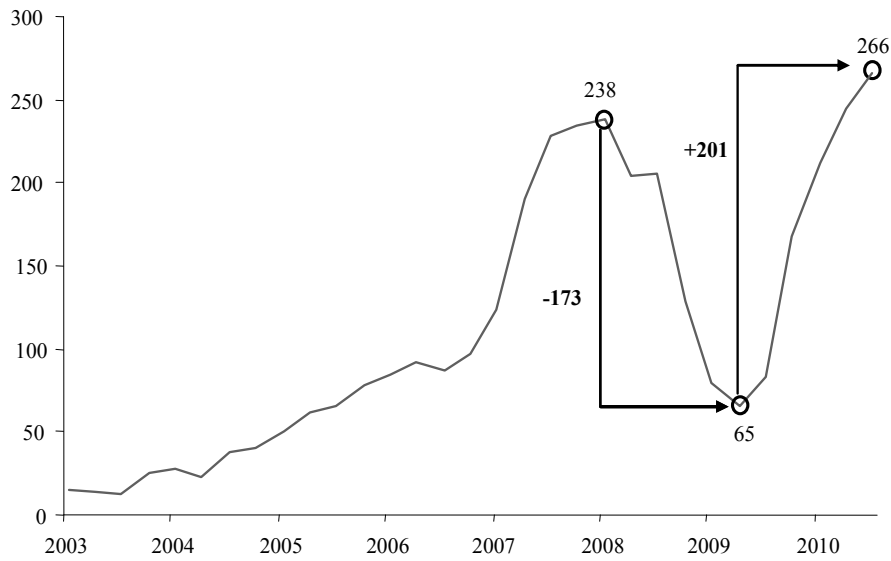
## New Capital Flow Patterns

The current global rebalancing process has so far been very favorable for Latin America and the Caribbean's capital account performance. Despite a collapse in capital flows to the region in the aftermath of the Lehman crisis, these flows have bounced back very quickly, reaching a historical record of US\$ 266 billion in 2010 (see Figure 15).<sup>20</sup>

This suggests ample availability of inexpensive capital and credit due to a reallocation of world saving towards EMs. However, it is worth highlighting that this effect has been particularly important for Latin America and the Caribbean, whose share in total flows to EMs has increased substantially, from 12% in 2006 to 25% in 2009, suggesting that markets are confident about the region's insertion into the new global economic order. Out of all other emerging regions used for comparison, only East Asia and China share Latin America and the Caribbean's fortune in that they also increased substantially their share in total flows to EMs (see Figure 16).

<sup>20</sup> Capital inflows are calculated as the sum of liabilities in the capital and financial accounts of the Balance of Payments of each country

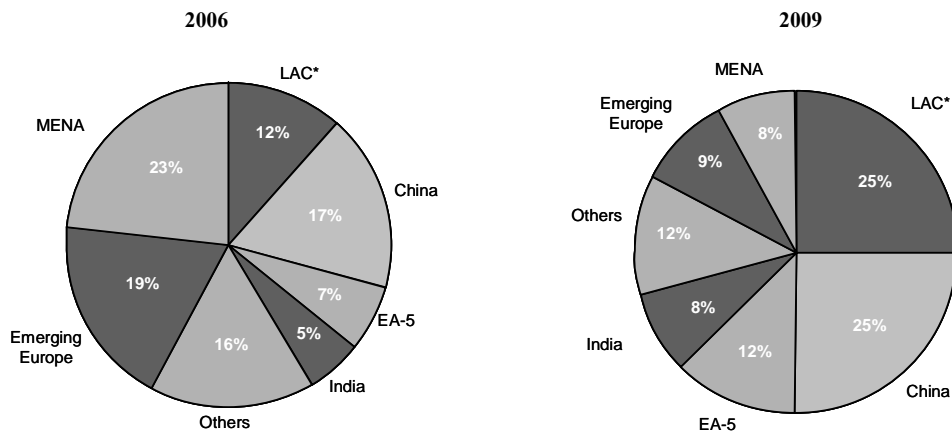
**Figure 15. Capital Inflows to Latin America**  
(LAC-7, in bn of US\$)



Data source: IFS.

LAC-7 is sum of the seven major Latin American countries, namely Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. These countries represent 91% of Latin America's GDP.

**Figure 16. Shares of Capital Inflows**  
(in % of total inflows to EM's)



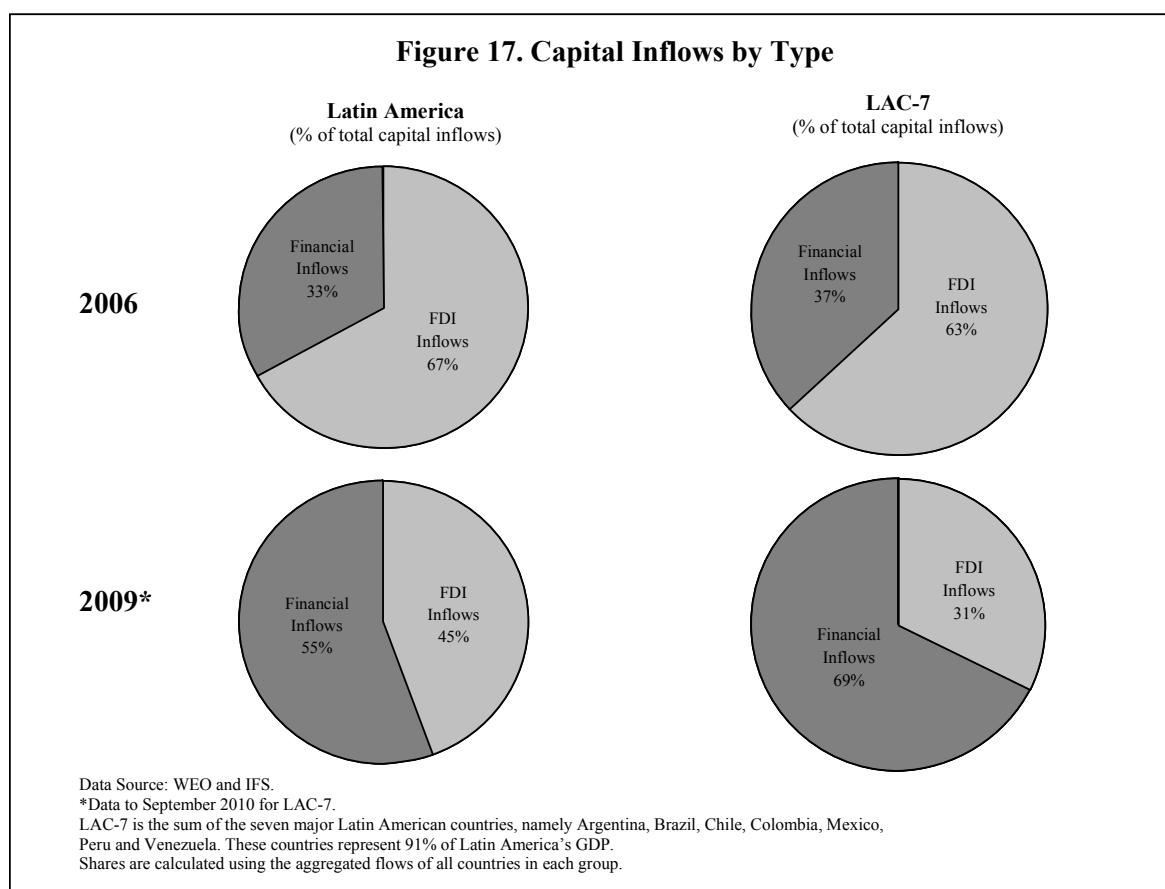
Data source: WEO and IFS.

\*Excludes The Bahamas

LAC, MENA, EA-5 and Emerging Europe refer to Latin America and the Caribbean, Middle East and Africa, ASEAN-5 and Central and Eastern Europe as defined by WEO, respectively.

However, the increase in capital flows to the region comes in a new guise: non-FDI flows are now predominant. While by 2006 one third of total capital inflows were non-FDI—or financial—flows, they now represent 55% of total inflows (see Figure 17). This pattern is even starker for the seven largest Latin American economies (LAC-7), where

financial flows, which only represented 37% of total flows in 2006, increased remarkably to 69% of total flows in the year ending in September 2010.<sup>21</sup>

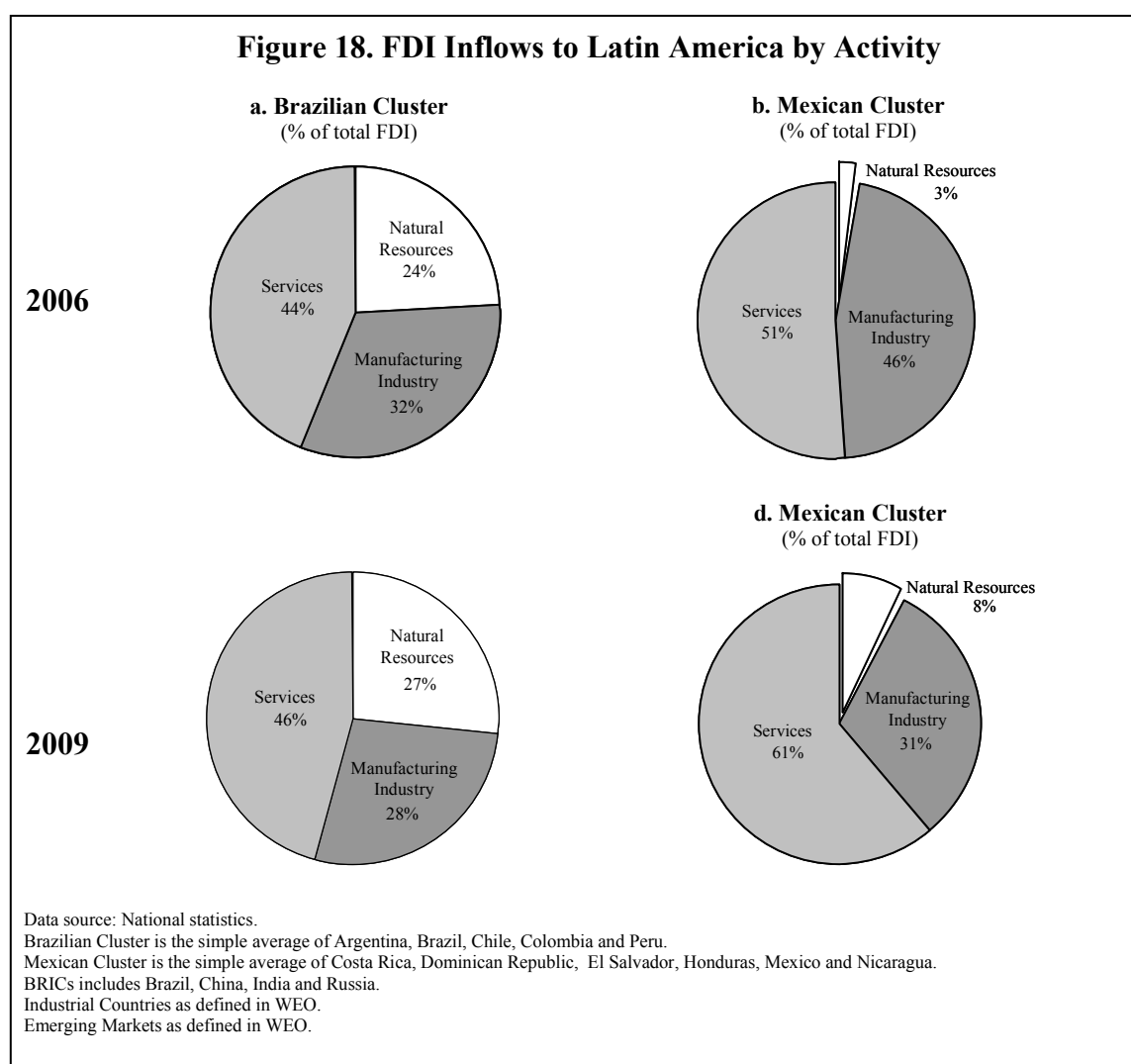


This changing pattern in capital inflow composition is posing additional macroeconomic challenges to the region, as it is highly likely that the new composition of capital flows, if intermediated through Latin America and the Caribbean's financial system, will trigger rapid growth in credit and put larger pressures on the real exchange rate. As a general rule, the same magnitude of capital inflows in the form of FDI, more oriented towards purchases of tradable goods (such as imports of machinery and equipment), puts less pressure on the real exchange rate.<sup>22</sup> Moreover, increased flows intermediated through Latin America and the Caribbean's financial system underlines the importance of ensuring that the region's financial systems remain sound. In a period of strong growth, all loans are good loans at the time they are extended; it is only when growth subsides that risks and vulnerabilities tend to be revealed. This suggests that banking regulation and supervision are key precisely at this time of strong credit growth. Section III on policies will tackle these issues and the relevant challenges in further detail.

<sup>21</sup> The LAC-7 group includes Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela.

<sup>22</sup> See Combes, Kinda and Plane (2011), Jongwanich (2010) and Athukorala and Rajapatirana (2003)

Concerning FDI flows, which countries in the region will be the main recipients? In the new global economic order, the beneficiaries should be those countries who are recipients of FDI in sectors of activity oriented towards exports to emerging markets. In this vein, the Brazilian cluster appears *prima facie* more attractive for foreign investors, since natural-resource-related activities represent a significantly larger share in total FDI than in the Mexican cluster, where manufacturing-industry FDI is dominant (see Figure 18).<sup>23, 24</sup> In fact, there have been already substantial changes in the allocation of FDI between both clusters: while FDI entering the Mexican cluster represented 39% of total regional FDI in 2006, this figure decreased to 29% in 2009, in line with expectations given the favorable positioning of the Brazilian cluster in the new global order.

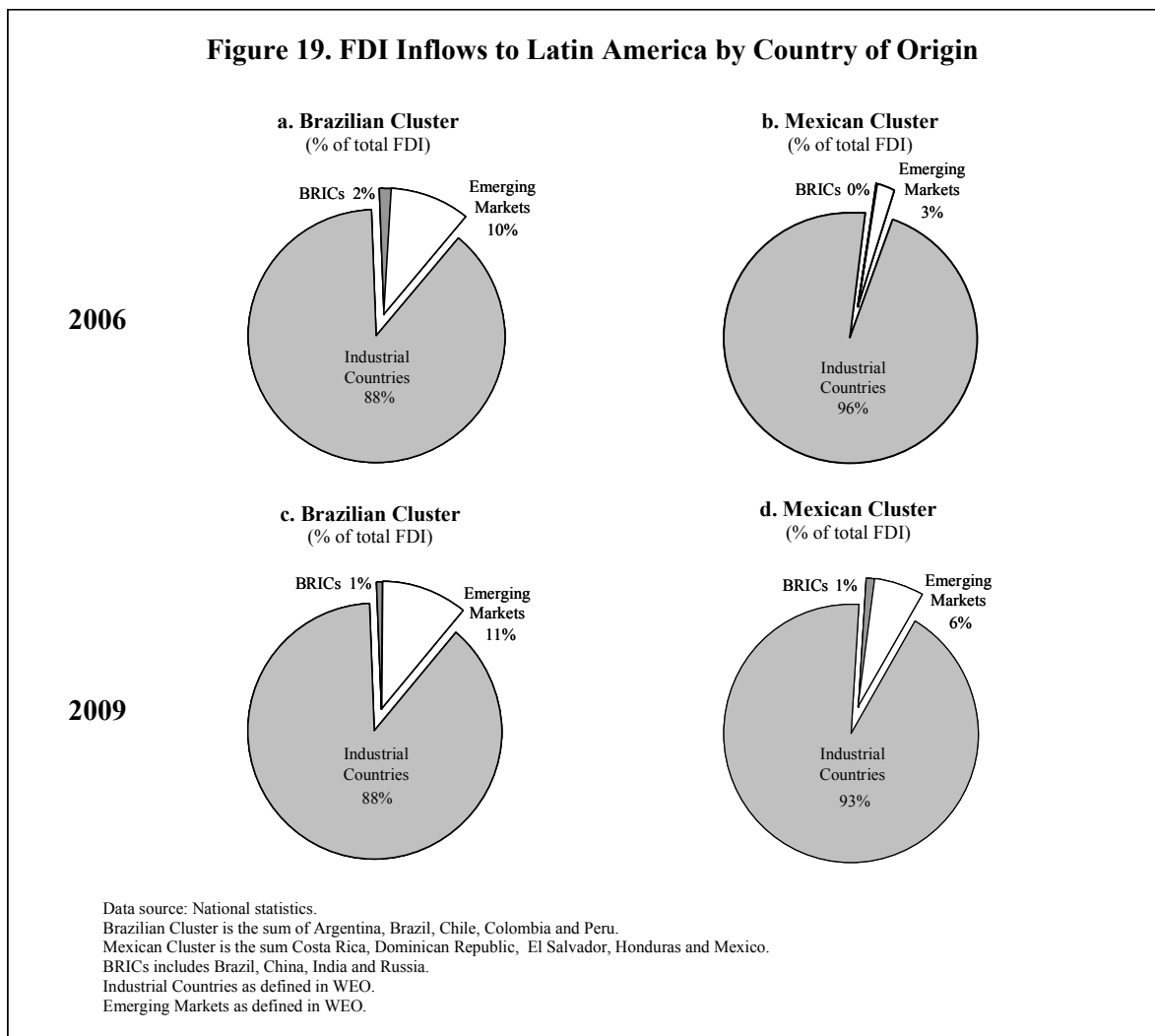


It is interesting to note, however, that the origin of FDI has not changed substantially in either cluster between 2006 and 2009, and that industrial countries are still the

<sup>23</sup> This measure was obtained with information from Argentina, Brazil, Chile, Colombia, Mexico and Peru. This information was not available for other countries in the Brazilian cluster.

<sup>24</sup> This is probably a lower bound since this measure does not include infrastructure FDI related to the extraction of natural resources.

dominant players: in 2009, FDI stemming from industrial countries represented about 88% of total FDI in the Brazilian cluster, and 93% in the Mexican cluster (see Figure 19, panels *a*, *b*, *c* and *d*). Therefore, the key characteristic to notice is not the origin of FDI flows but the ultimate market to which FDI investments are targeted. FDI that is complementary with demand stemming from industrial countries will be adversely affected relative to FDI that is complementary with demand stemming from EMs. This fact may pose substantial challenges to the Mexican cluster, particularly so in economies that have traditionally financed their current account deficits with FDI flows, as is the case in many Central American countries. This issue will be addressed in the next chapter.



## New International Financial Architecture

The global financial crisis brought with it not only changes in the engines of world growth, trade and capital flows patterns, but also a set of innovations regarding the international financial architecture available to support emerging markets in times of systemic liquidity crisis. As stated in the IDB's 2010 Macro Report, many of these

innovations came as a byproduct of the fact that the global financial crisis was triggered by events in industrial countries, leaving emerging markets as innocent bystanders. The collapse of emerging markets in such a scenario would have hampered global recovery and raised the question of whether such collapses could have been avoided.

Instruments now available to emerging markets include the IMF's Flexible Credit Line (FCL), currently used by three member countries, but potentially available to other countries. In light of the partial success of the FCL, the IMF is currently exploring several ways to enhance its menu of liquidity facilities.<sup>25</sup> These include, most notably, enhancements to the FCL to achieve two objectives: i) make it available, under less generous conditions, to members that are not eligible under the current ex-ante conditionality; and ii) make it more attractive to already eligible or potentially eligible but indifferent members.

Regarding the first objective, the IMF launched a Precautionary Credit Line (PCL) subject to lower requirements than the FCL but with ex-post conditions on performance, albeit lighter than High Access Precautionary Arrangements (HAPA)—the second line offered by the IMF during the global financial crisis, available to several countries that would not qualify for FCL status. Essentially, this new facility lies halfway between a HAPA (itself a streamlined Stand-By Arrangement) and the original FCL. Regarding the second objective, the lengthening of the FCL eligibility period (FCL arrangements can now be approved for one year, or two years with an interim review after one year) and the fact that lending cap was removed—access levels are to be assigned on a country-by-country basis, presumably ex ante—are steps in the right direction.

Some of the more ambitious innovations are still proposals waiting for IMF Board consideration under a new encompassing name: the Global Stabilization Mechanism (GSM). The GSM, which in principle would be activated at the onset of a global crisis, introduces two important additions. The first is the option to unilaterally grant access to the FCL to "systemic" countries such as Brazil and Mexico. Second, the GSM would manage a new liquidity window (the Short-Term Liquidity Line, or SLL) without ex-post conditionality, which would be available to PCL-eligible countries during episodes of global distress—in other words, extending an FCL-type of assistance to PCL eligible countries. Overall, the GSM probably reflects the current frontier where the internal policy discussion and the external member demand for reform can bring about new IMF facilities, and this would be a positive development. Nevertheless, from the perspective of emerging economies, the proposal has some drawbacks in terms of its

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<sup>25</sup> This section draws on Fernández-Arias and Levy-Yeyati (2010).

ability to constitute a full-fledged International Lender of Last Resort (ILOLR). These considerations are discussed in Box 1.

Irrespective of future potential arrangements, it is undeniable that Emerging Markets (EMs) currently have access to a set of international liquidity tools that were unimaginable at the time of the previous systemic crisis faced by EMs in the aftermath of the Russian collapse of 1998. In particular, Latin America was able to establish enhanced credibility in the aftermath of the global crisis, having weathered the storm without a single financial crisis in the region. While several issues remain in terms of access to liquidity facilities, increased resilience to financial crises, coupled with the availability of new liquidity instruments, implies a reduction in the risk of contagion from other EM crises to EMs with sound fundamentals and access to ILOLR facilities. This reduction in the probability of disruptive liquidity crises in otherwise fundamentally sound economies—so prevalent in the past—implies significant improvements in long-term prospects as the incidence of disruptive liquidity crises diminishes. Thus, it is conceivable that the global economy may experience a further reallocation of world capital in favor of EMs with sound fundamentals and access to ILOLR facilities, over and above the reallocation implicit in global rebalancing. This scenario entails the possibility of even larger inflows of capital to Latin America and the Caribbean—particularly countries belonging to the Brazilian cluster—that will pose severe challenges for EM policymakers, as will be discussed below.

The combination of factors described throughout this section—new trade patterns, new capital flow patterns and new international liquidity arrangements—point to a generally favorable environment for Latin America and the Caribbean countries. However, as has already been argued, the favorable environment applies more forcefully to Brazilian-cluster economies, and in particular, to those with sound domestic policies and preferred access to international liquidity arrangements.

#### **BOX 1 - Remaining Issues for a Full-Fledged Multilateral Safety Net**

Financial integration is deepening, and more countries are enjoying the benefits. However, as the recent global crisis has demonstrated, this process also entails risks, and there is an increasing need for a system of ILOLR to deal with potential systemic financial liquidity crises in vulnerable countries. Moreover, as financial sectors grow in emerging economies, there is also the need to ensure that the international financial architecture is adequate to deal with country-specific financial crises, which besides lending may call for country economic adjustment and, in some cases, debt

restructuring, to regain sound fundamentals and solvency. Unprecedented progress notwithstanding, the multilateral global safety is not yet up to the task.<sup>26</sup>

#### *The Need for a Wide-Coverage International Liquidity Window*

While the IMF has made commendable progress with the creation of the FCL/PCL, this progress has not yet translated into an effective global liquidity safety net. The FCL/PCL retains some of the characteristics that impeded the development of its predecessors, namely: i) the need for country application to qualify, which discourages participation due to political stigma; and ii) the need for Board approval of access, which will cause delay and fuel uncertainty, directly contradicting the essence of a protection mechanism. Moreover, the FCL, and now the PCL, are necessarily selective because they offer support for any kind of financial crisis. An ILOLR specifically triggered by a systemic liquidity crisis should include automatic eligibility requirements, consistent with the kind of comprehensive coverage required of a global liquidity safety net to protect broadly and curtail contagion. The GSM under discussion does contain specific triggers (albeit as certified by the IMF Board), but being built on top of FCL/PCL countries plus selected "systemic" countries, it cannot deliver broad coverage.

An effective ILOLR needs to provide liquidity funded by the world's "issuers (or hoarders) of last resort" in a position to lend liquidity in a global crunch following the traditional IMF model of agreement to borrow, thus eliminating the inefficient carrying cost of reserve hoarding. An effective global safety net requires assurances that liquidity would be made widely available to emerging economies as a class and not on a selective case-by-case basis. An effective and workable ILOLR for systemic liquidity crises centered in the IMF would rest on two pillars: i) unilateral country pre-qualification to the facility in the course of Article IV consultations to ensure broad-based country participation, and ii) an automatic trigger to allow access to the facility to ensure decisive response.

Unilateral country pre-qualification is needed to eliminate the political stigma countries associate with applying for IMF approval, which has hampered previous attempts to establish credit line programs. The key eligibility condition would be adequate financial safeguards for repayment. Given the excellent historical record of repayment to the IMF and the fact that this facility specifically deals with systemic liquidity crises, there is a presumption of eligibility; the Article IV process would identify the exceptional cases in which that presumption should not hold. As a result, comprehensive participation would occur.

An automatic trigger to give free access to the facility to qualified countries is needed for a credible and agile facility. Countries with the highest standards (e.g., FCL grade)

<sup>26</sup> The following analysis draws from Fernández-Arias (2010a, 2010b).



and those able to pledge marketable collateral (e.g., sovereign wealth funds) could have free access (at penalty rates to discourage non-emergency use). In order to obtain comprehensive protection, for the rest of emerging markets, access would be contingent on the objective verification of a systemic liquidity crisis, for example in the form of a widespread increase in the EMBI beyond an agreed-upon threshold.

#### *Adjustment and Debt Restructuring Windows*

The more developed the ILOLR, the greater the need for an appropriate exit strategy for the ILOLR if the problem turns out to be one of solvency rather than liquidity. A possible arrangement would be to have several windows that offer programs structured in tiers defined by pre-qualification standards catering to countries' capacity. Country eligibility to these windows would depend on the nature of the crisis being faced. For example, a facility designed to cover systemic liquidity crises would deliver substantial upfront lending to almost all countries in need, but particular cases may then require a transition to another window designed to address a solvency rather than a pure liquidity crisis. This other window would be more akin to that created to deal with idiosyncratic financial crises traceable to weak fundamentals. In general, this would tie continuing financial support to specified ex-post conditionality.

In some cases, countries may need to restructure debts. The current system has led to a bipolar approach whereby countries either pursue a market friendly restructuring that risks not solving the underlying problem, or one with deep principal haircuts that have led to serious legal problems.<sup>27</sup> Improvements are urgently required to enable orderly and equitable solutions. A possible framework would be to encourage a legal reform to enable the multilateral system to protect borrowers with standstills and to be able to impose seniority rules, as in domestic bankruptcy. The ability to legally impose standstills on payments empowers the ILOLR and reduces the risk that financial support to the country becomes a bailout to private creditors that have already earned substantial risk premia. In that way, standstills facilitate orderly workouts when debt restructuring is necessary to restore solvency. Seniority rules allow for greater efficiency in the work-out by enabling new private lending—which would then be more senior. This allows the ILOLR to leverage new private money. The Debt Restructuring Facility (DRF) would be voluntary and would be called by the country in need of "bankruptcy" protection. In practice, this decision is intimately tied to that of the ILOLR, transitioning a country from its window designed to deal with a liquidity crisis to a window designed to deal with a severe solvency crisis.<sup>28</sup> The ILOLR and DRF would

<sup>27</sup> See Powell (2011).

<sup>28</sup> Arozamena and Powell (2005) present a game theoretic model where the IMF gives liquidity protection against pure liquidity shocks, but as fundamentals deteriorate, a first best solution breaks down; the authors argue that the financial architecture is incomplete unless there is a well-defined exit strategy for the lender of last resort.

then indicate an internationally agreed road map for countries to restructure their debts to regain solvency in an orderly and equitable fashion. Countries unfortunate enough to be in this position would not be forced to go through a period of contentious unilateral default and live with the legal and reputational consequences, and given the existence of an agreed road map, would be less tempted to delay in seeking a resolution or tempted to gamble for redemption.

#### *On the Issue of Moral hazard*

The concern with moral hazard among funding countries i.e., that financial markets will over-lend and countries over-borrow because of a deep-pocketed ILOLR ready to come to the rescue in the case of a financial crisis—is probably the most serious impediment to progress in developing a more full ILOLR. However, both Arozamena and Powell (2005) and Fernández-Arias (2010a) suggest that moral hazard concerns are exaggerated. The former shows, in a repeated game theoretic model that explicitly allows for moral hazard, that in most cases moral hazard is controlled. The latter argues that a multilateral ILOLR is in a good position to avoid moral hazard and implement a number of effective solutions to control problems commonly associated with the moral hazard issue

#### **Risks to Global Conditions**

The analysis above proceeded under the assumption that the world economy will converge to a process of gradual global rebalancing characterized by progressive adjustment in fiscal accounts in industrial countries, and continued adjustment in their current account balances, juxtaposed with a cutback in current account balances in surplus emerging economies, without major disruptions in international trade and financial arrangements.

However, global rebalancing carries the seeds of severe tensions for the current system of international trade and financial cooperation, thus raising the specter of trade protectionism, currency wars and/or a new wave of financial panic.

First, sluggish growth and high unemployment in industrial countries have led to very lax monetary policies which, to the extent that they are not absorbed domestically, may pose substantial exchange rate appreciation pressure in emerging economies. The latter may decide to intervene in exchange rate markets with further reserve accumulation and/or introducing capital controls, thus resisting global rebalancing. This inherent conflict of interest may lead to tensions between industrial countries and emerging economies, as illustrated by ongoing tensions in the US-China relationship.

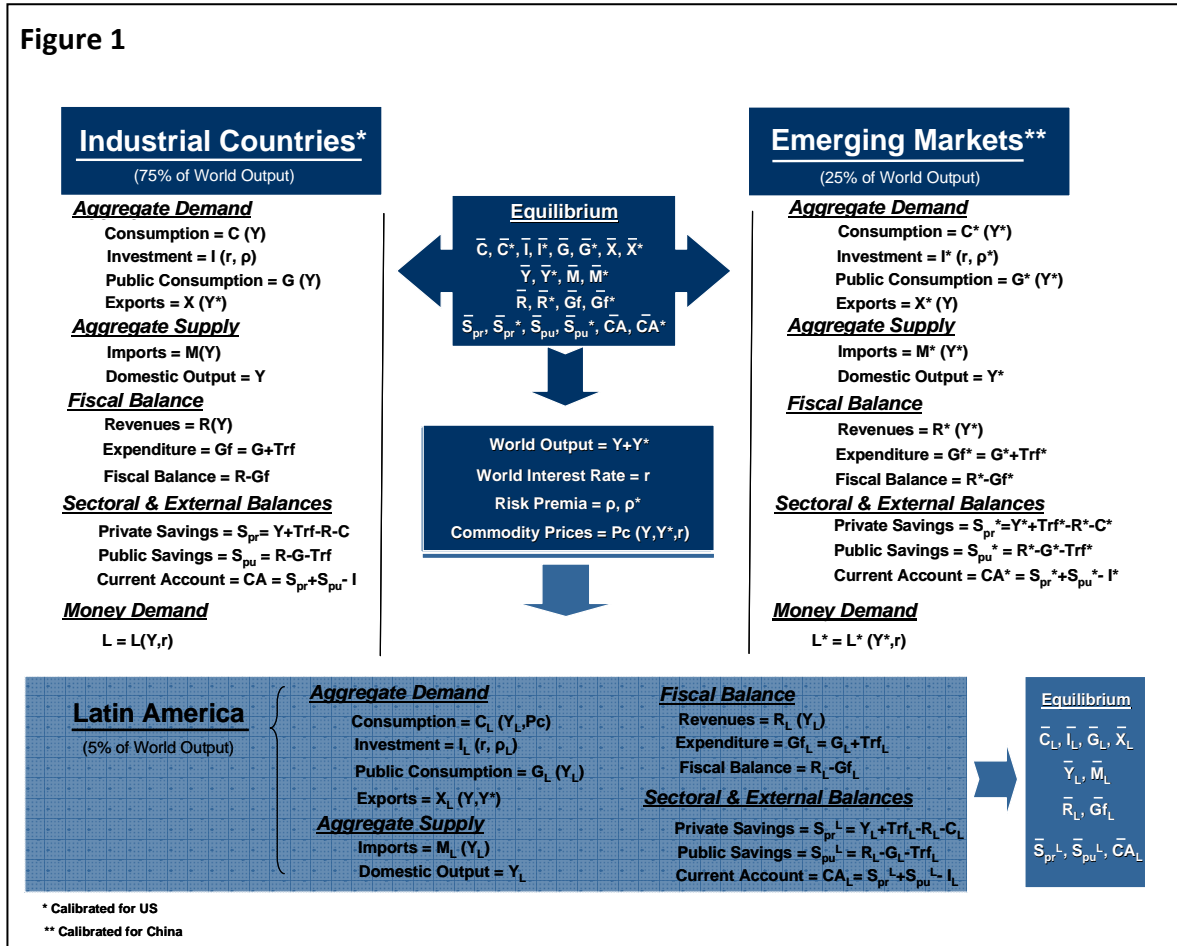
Second, very severe tensions in some countries in the Euro area (due to the need for exchange rate realignments while lacking their own currencies), and the possibility that liquidity risks on their sovereign debt may turn into solvency risk—further raising the specter of insolvency in their financial systems—may lead to massive adjustment and further recession. Recent developments, such as the Irish financial crisis and its subsequent bailout—though currently contained—point in this direction.

Although the report does not consider the abovementioned risks in its depiction of the new world economic order, the huge adjustments and the massive reallocation of production, trade and capital that global rebalancing implies will no doubt severely strain the system in such a way that the materialization of these risks cannot be completely discarded.

### Appendix I: Three-Region Basic Model

This appendix briefly presents the very simple three-region Keynesian model used in this report to provide a sense of the forces behind the macro adjustment in Latin American economies in the aftermath of the global financial crisis.

Figure 1



In this model output is demand determined, private and public consumption depend on output, investment depends on interest rates, exports of each block—industrial or emerging—are a function of the output of the other block and imports depend on output. The model was closed by introducing a money demand function that depends positively on output and negatively on interest rates (see Figure 1). Uncovered interest rate parity was assumed to avoid international arbitrage.

The representative industrial region (70 percent of world output) was proxied by the economic structure of the United States, while the representative emerging market region (25 percent of world output) was proxied by the economic structure of China. Finally, given its small share in world output (5%), Latin America was assumed to be a taker of world demand, international interest rates, and commodity prices, which are determined by interactions between the industrial and emerging market blocks. For Latin America, the model recognizes that there exist two different representative

countries with significant structural differences: Brazil and Mexico. For instance, while the Mexican economy is highly integrated, with exports representing 27% of GDP, the Brazilian economy is relatively closed, with exports standing at 10% of GDP. Additionally, Mexico depends much more on industrial countries as a source of export demand than Brazil—as of 2007, 91% of Mexican exports were placed in industrial countries, whereas only 51% of Brazilian exports found their way into industrial economies. In all cases, linear functions were imposed for the calibration of the parameters of the model in order to match relevant macro aggregates (see Table).

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**Calibrated Variables**  
(in percent of GDP)

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	<b>USA</b>	<b>China</b>	<b>Mexico</b>	<b>Brazil</b>
Private Consumption	70%	38%	69%	56%
Private Investment	17%	30%	19%	22%
Public Expenditure*	19%	29%	14%	19%
Imports*	17%	32%	32%	8%
Exports*	11%	40%	30%	11%
General Government Total Expenditure	32%	19%	-	-
General Government Revenue	30%	19%	-	-
Fiscal Deficit	-2%	-1%	-	-
Exports to Industrial Countries**	-	-	92%	44%

\* from National Accounts

\*\* in percent of total exports

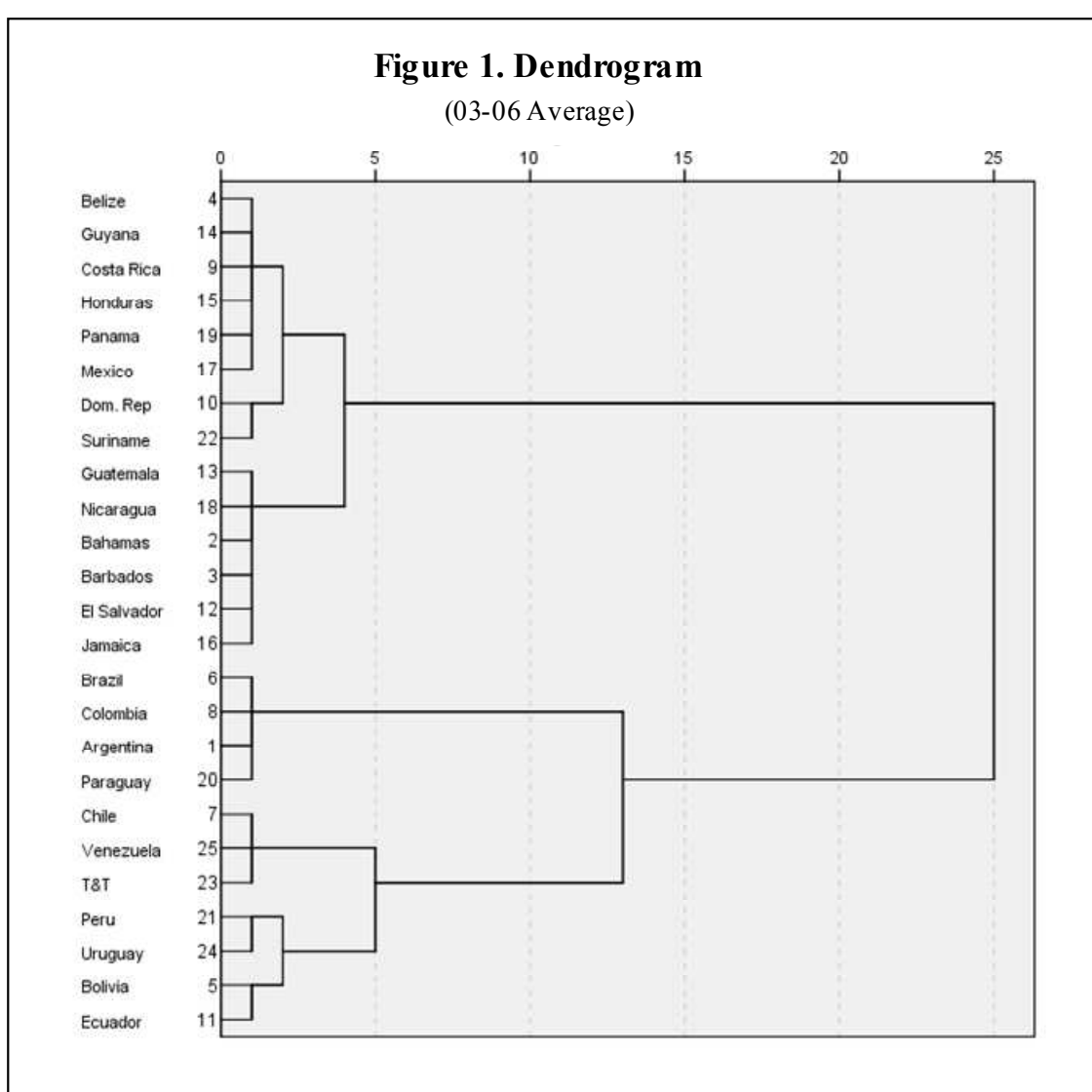
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## Appendix II: Cluster Analysis

This appendix introduces the details of the cluster analysis that was performed to group Latin American and Caribbean economies based on relevant structural characteristics.<sup>29</sup> A three dimensional cluster analysis for Latin American and Caribbean countries was carried out using 2003-06 average data of: i) net commodity exports (in percent of GDP); ii) the investment to GDP ratio; and iii) export exposure to industrial countries, captured as the share of exports to industrial countries in GDP. Alternatively, a two-dimensional cluster analysis was performed considering: i) net commodity exports (in percent of GDP) and ii) the ratio between the investment ratio and that of exposure to advanced countries. Since the results were identical, the two-dimensional version is preferred for simplicity.



<sup>29</sup> The relevance is defined in terms of the features of the new global order discussed in this report.

The agglomerative hierarchical clustering initially considers each country as a cluster and progressively merges them until the whole sample is considered a single cluster. The result of this is a cluster tree that shows the distance between the clusters that merge and which can be cut at any level to produce different clusterings (see Figure 1). According to a Bayesian Information Criterion (BIC) and Akaike's Information Criterion (AIC) the optimal number of clusters is two. Thus, two different regional clusters were defined: i) the "Brazilian Cluster" which includes South American countries and Trinidad and Tobago and ii) the "Mexican Cluster" which includes Central American and the Caribbean countries (see Table).

<b>Clustering Results</b>	
<b>Brazilian Cluster</b>	<b>Mexican Cluster</b>
<b>Brazil</b>	<b>Mexico</b>
Argentina	The Bahamas
Bolivia	Barbados
Chile	Belize
Colombia	Costa Rica
Ecuador	Dominican Republic
Paraguay	El Salvador
Peru	Guatemala
Trinidad and Tobago	Guyana
Uruguay	Honduras
Venezuela	Jamaica
	Nicaragua
	Panama
	Surinam

### *Robustness*

For robustness, k-means clustering was carried out setting the number of clusters to two.<sup>30</sup> The seeds for these clusters were the centroids of the clusters previously defined in the hierarchical method<sup>31</sup>. Under this alternative approach the results obtained were exactly the same.

In a final robustness check, a new relevant structural characteristic such as the dependence on remittances from industrial countries (in percent of GDP) was added to export exposure. After performing hierarchical clustering, and k-means clustering, the

<sup>30</sup> K-means clustering requires fixing the number of clusters beforehand.

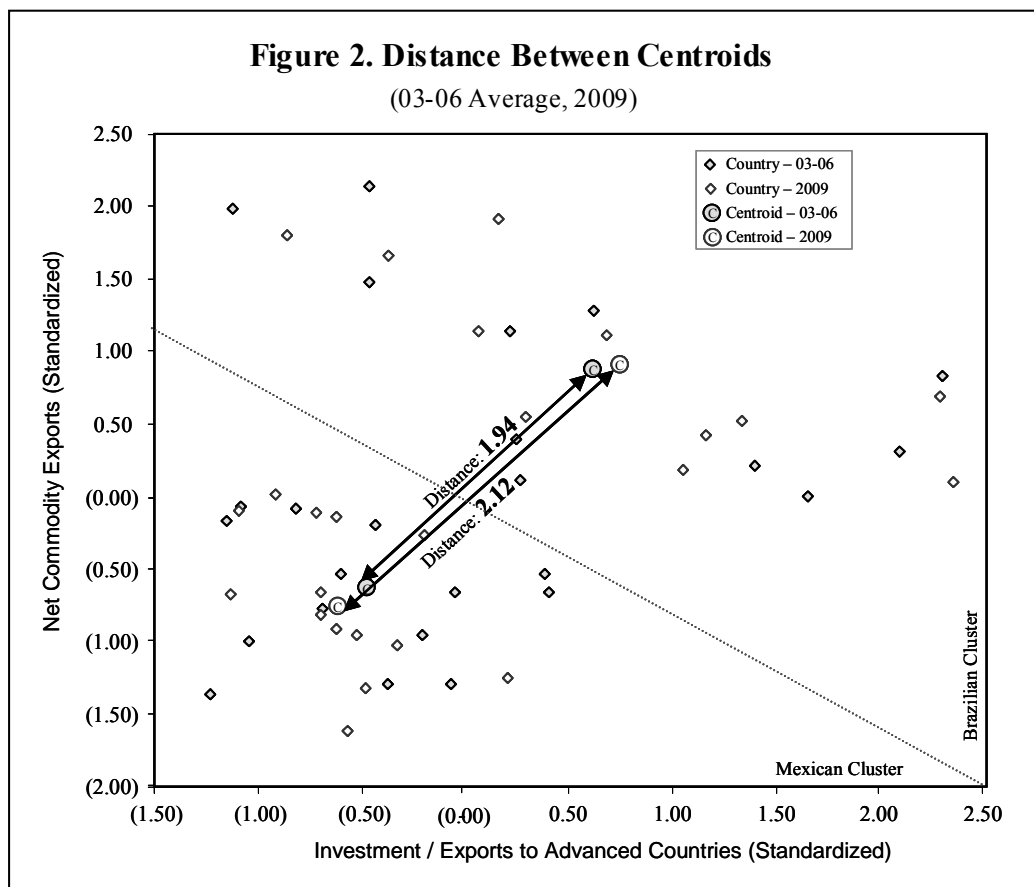
<sup>31</sup> The centroid of each cluster (k) is calculated as  $c_k = \frac{1}{n} \sum_{x \in n} x$ , being n the number of members of the cluster, and x the value of the variable used to clusterize.

results remain unchanged (if anything, the distance between the two clusters increases).

### Clusters Before and After the Global Crisis

The clustering analysis above presents two contrasting groups of Latin American and Caribbean economies based on underlying characteristics before the global crisis (2003-06). Graphical analysis suggests that the distance between both clusters has widened during the global crisis and, while the Brazilian Cluster is relatively better, the Mexican Cluster is relatively worse. This widening is confirmed by the fact that the Euclidean distance between the centroid of the Mexican cluster and that of the Brazilian cluster in 2009, if anything, has increased relative to that corresponding to 2003-2006 (see Figure 2).

Moreover, both clusters became even more compact after the global financial crisis. To measure the compactness of each cluster the mean squared error (MSE) was calculated.<sup>32</sup> The MSE of the Mexican Cluster fell from 6.5 in 2003-06 to 5.1 in 2009 while the MSE of Brazilian Cluster also decreased from 18.3 in 2003-06 to 15.1 in 2009.



<sup>32</sup>  $MSE_k = \sum_{x_i \in k} (x_i - c_k)^2$ .



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