

Trends in Private Capital Flows to Low-Income Countries: Good and Not-So-Good News

Nancy Lee and Asad Sami

Abstract

Interest in mobilizing private finance for SDG investments is surging in a world of stagnating aid, limited fiscal space, and rising LIC debt. But is more reliance on private finance realistic for LICs? This paper explores the performance since the global financial crisis of one source of private finance for LICs: cross-border private capital inflows.

Much of the evidence is encouraging, and some of it flies in the face of conventional wisdom. For LICs, private capital inflows are an important and growing source of finance. For the median LIC, private capital inflows are now as large as ODA as a share of GDP. And the FDI component—most of LIC inflows—has been stable and resilient throughout the post-crisis period.

Importantly, inflows are not all captured by resource-rich LICs. In 2017, more than half of capital inflows to LICs went to non-resource-rich LICs. Increasingly, policies, not just resource endowments, shape LIC destinations for foreign capital. The relation between median capital inflows/GDP and median regulatory quality is significantly positive for non-resource-rich LICs. And sources of FDI are diversifying. In 2016, China's stock of FDI in Africa was almost as large as that of the traditional investors: the US, UK, and France.

But there is also not-so-good news. Median private capital inflow/GDP ratios are not positively correlated with median private domestic investment/GDP in LICs. Nor is there a significant relationship with median public investment/GDP. The apparent lack of complementarity between foreign and domestic investment may point to problems related to investment enclaves and/or the role of the state in LIC economies. As in other countries, non-FDI inflows to LICs are volatile and sensitive to global commodity prices and interest rates. We find no relation between median country per capita income levels and private inflows/GDP, highlighting the need for caution in IDA graduation policies.

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Acronyms and Abbreviations

B	Billion
BOPS	Balance of Payments Statistics
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
HICs	High-Income Countries
IDA	International Development Association
IFC	International Finance Corporation
IMF	International Monetary Fund
LICs	Low-Income Countries
LMICs	Lower-Middle-Income Countries
MICs	Middle-Income Countries
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
SDGs	Sustainable Development Goals
SMEs	Small and Medium-Sized Enterprises
UK	United Kingdom
UMICs	Upper-Middle-Income Countries
UNCTAD	United Nations Conference on Trade and Development
US	United States
USD	United States Dollar
WDI	World Development Indicators
WEO	World Economic Outlook
WGI	Worldwide Governance Indicators
WoRLD	World Revenue Longitudinal Data

Introduction

Interest in mobilizing private finance for development—including the SDGs—is surging in a world of stagnating public aid and limited fiscal space. But for LICs, the private finance solution may be as much of a challenge as the alternatives of increased public borrowing or greater domestic resource mobilization.¹ LICs still capture a minimal share of cross-border private capital inflows to developing countries—3.2 percent in 2017.² 40 percent of LICs are already in, or at risk of, debt distress.³ Tax revenue in many LICs accounts for less than 15 percent of GDP, the minimum ratio that the IMF reckons is consistent with healthy growth.⁴

Shareholders and leaders of the major multilateral and bilateral development finance institutions have shown interest in boosting blended finance for managing the risks of investing in LICs—creating, for example, the \$2.5B IDA Private Sector Window run by the IFC at the World Bank. Ambitious targets have been set for increasing private finance operations in LICs and fragile and conflict-affected states—IFC’s goal, for example, is 40 percent of its portfolio by 2030. Is this ambition realistic?

It would help to answer this question if we knew more about the actual performance of recent cross-border private capital inflows to LICs—their trends, their importance for different kinds of LICs, and the impact of the global financial crisis. This paper looks at patterns in external private capital inflows to LICs over the last dozen years.

Specifically, this paper addresses four questions:

1. Are cross-border private capital inflows a significant and growing source of finance for LICs? Which type of inflows are most important? Are such flows concentrated in resource-rich and non-fragile LICs? Do investment climate policies matter?
2. Do LIC inflows mirror patterns over time for LMICs and UMICs, or are there differences?
3. Are larger private inflows associated with more domestic investment in LICs, LMICs, and UMICs?

¹ Mark Plant, “SDG Arithmetic,” *Center for Global Development*, June 2018, <https://www.cgdev.org/blog/sdg-arithmetic>.

² See Figure 1 and the data description for a precise definition of private capital inflows.

³ “Macroeconomic Developments and Prospects in Low-Income Developing Countries,” *IMF*, March 2018, www.imf.org/en/Publications/Policy-Papers/Issues/2018/03/22/pp021518macroeconomic-developments-and-prospects-in-lidcs.

⁴ Nancy Lee, “Domestic Resource Mobilization in Low-Income Countries: Proposal for a Surge in Multilateral Support,” *Center for Global Development*, June 2018, <https://www.cgdev.org/publication/domestic-resource-mobilization-low-income-countries-proposal-surge-multilateral-support>.

4. Do private capital inflows as a share of GDP tend to rise with country per capita incomes? What does that say about policies for graduating from concessional finance?

To be sure, mobilizing more *domestic* private capital is also critical for increasing LIC investment. But, notwithstanding the challenges, tapping into the huge pools of private capital sitting in HICs must be part of the finance strategies of LICs—with an assist hopefully coming from the growing interest of institutional investors in SDG-related investments.

The evidence shown here points to the importance of private capital inflows in LIC economies, especially FDI. It reveals differences with respect to inflows into LICs versus MICs, raises concerns regarding the interaction between external and domestic investment, and challenges our assumptions with respect to country per capita incomes and capital inflows.

Data Description

This newly constructed panel dataset uses the IMF Balance of Payments Statistics (BOPS) as its source for private capital inflows—FDI, portfolio investment (equity and debt), and bank and other lending flows—covering 190 countries for the period 2000 to 2017.

The analysis in this paper covers 99 developing countries—27 LICs, 36 LMICs, and 36 UMICs—for the period 2005 to 2017. Appendix I contains a detailed description of the data. The selection of countries and time period was driven by data availability as well as the focus of this study on the period after the global financial crisis. Very small countries⁵ were removed as outliers which might distort the results. This data subset yields maximum coverage for both the time period and the number of developing countries with virtually no missing data.⁶

External private capital inflows are defined as the sum of FDI, portfolio investment, and bank and other lending flows. *Borrowing from official creditors* (e.g., the World Bank or the IMF) has been subtracted from bank and other lending flows so that it *includes only private lending* to public or private borrowers. Remittances have not been included because they are different in function and behavior.⁷

The IMF BOPS measures FDI, portfolio investment, and bank and other lending flows as *net incurrence of liabilities*—essentially inflows—defined as liabilities of residents of an economy (reporting country) to nonresidents. In other words, nonresident financial asset claims on

⁵ Countries with median GDP less than \$2B.

⁶ Portfolio investment has a few missing values.

⁷ Financial derivative and employee stock option flows have also not been included as private capital inflows because they are small in magnitude relative to the size of other types of flows and are missing data.

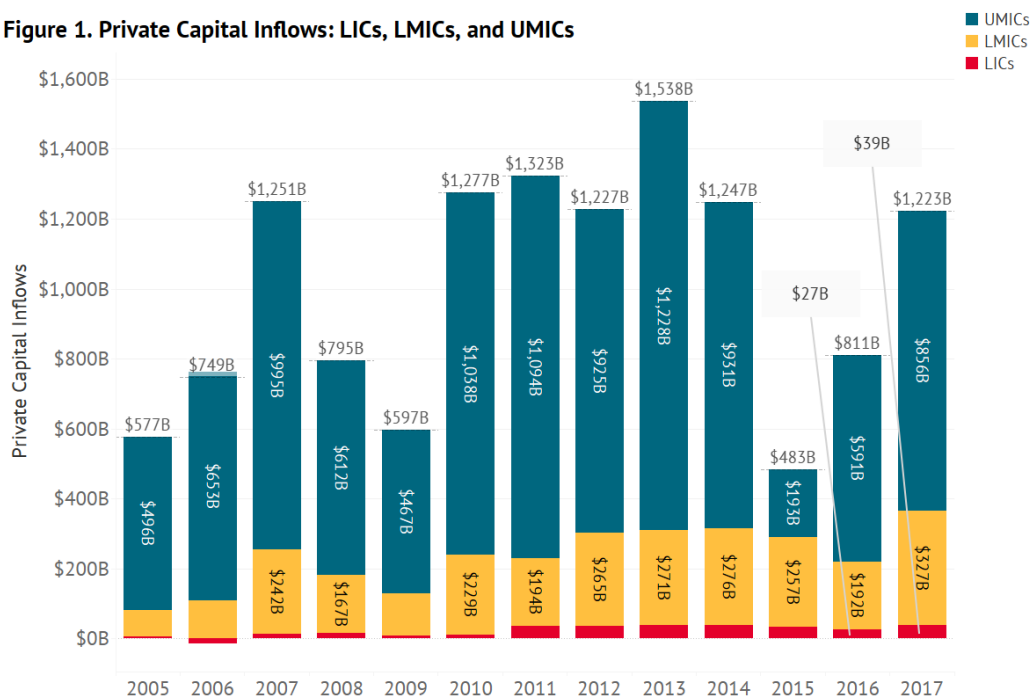
residents of the reporting economy. These incurrences of liabilities are *net* in that they show an increase in liabilities (positive) less decrease in liabilities (negative).

In much of the analysis, we use *median* ratios of capital inflows to GDP—across time or countries depending on the nature of the graph. We avoid *average* ratios so that outlier data points do not overly influence the analysis. The aim is to look at capital inflow patterns for the median or “typical” country within each country income group, normalized by the size of the country’s GDP. It is important to recognize, however, the limitations of this approach. Median ratios can vary substantially from year to year for cyclical as well as secular reasons, mostly driven by large changes in the numerator. Appendix II explores underlying patterns by showing frequency distributions of LIC private capital inflow ratios by country and by year.

An Important Source of Finance for LICs?

We know that private capital inflows to LICs are small in relation to the volume of inflows to other developing countries, as shown in Figure 1.

Figure 1. Private Capital Inflows: LICs, LMICs, and UMICs

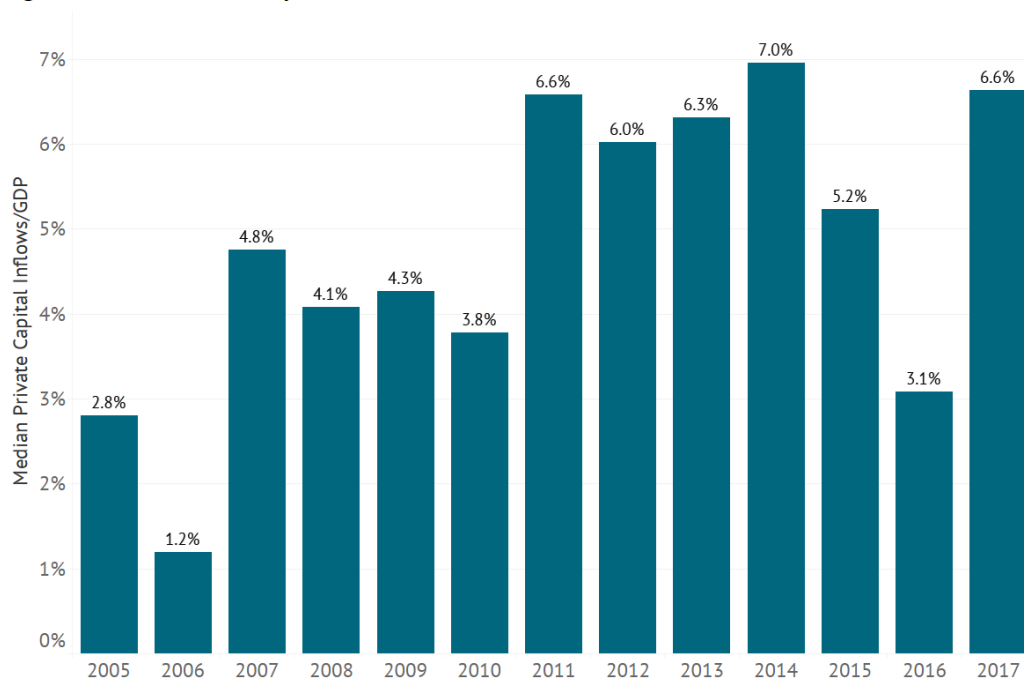


Source: IMF BOPS.

Note: In 2015, China experienced a sharp decline in private capital inflows causing UMIC inflows to fall.

But are they small in relation to the LIC economies themselves? What are the trends? Figure 2 shows the median ratio of private capital inflows/GDP for LICs.

Figure 2. Median Private Capital Inflows/GDP: LICs

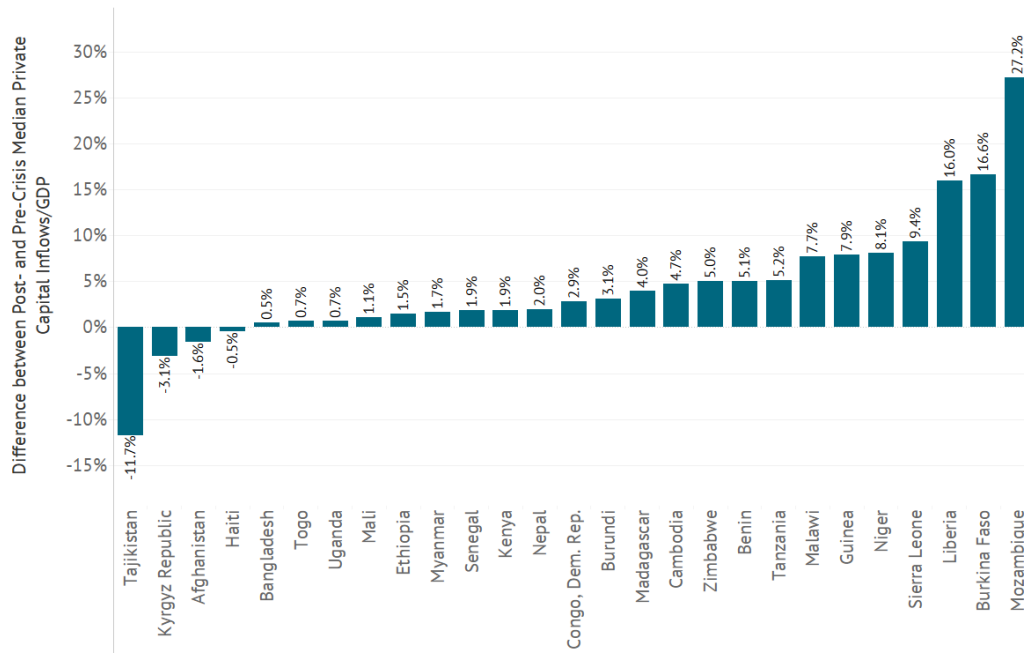


Source: IMF BOPS.

In fact, the global financial crisis has not had a lasting dampening effect on cross-border private capital flows to LICs—quite the opposite. The median ratio of inflows/GDP reached new highs, over 6 percent from 2011 on, with the exception of 2015 and 2016 when the downturn in global commodity prices and the advent of tightening US monetary policy pushed short-term capital inflows lower. As might be expected, the volatility in the ratio was mostly driven by large changes in the numerator. Such changes were experienced by most of the countries in the sample.

As shown in Figure 3, the upward shift pre- versus post-crisis in inflow ratios occurred in 23 out of 27 LICs in the sample, confirming its salience for a wide range of LICs by size, geography, and resource endowment. For 17 countries, the upward shift in the median ratio totaled about 2 percentage points or more of GDP.

Figure 3. Post-Crisis Change in Median Private Capital Inflows/GDP: LICs



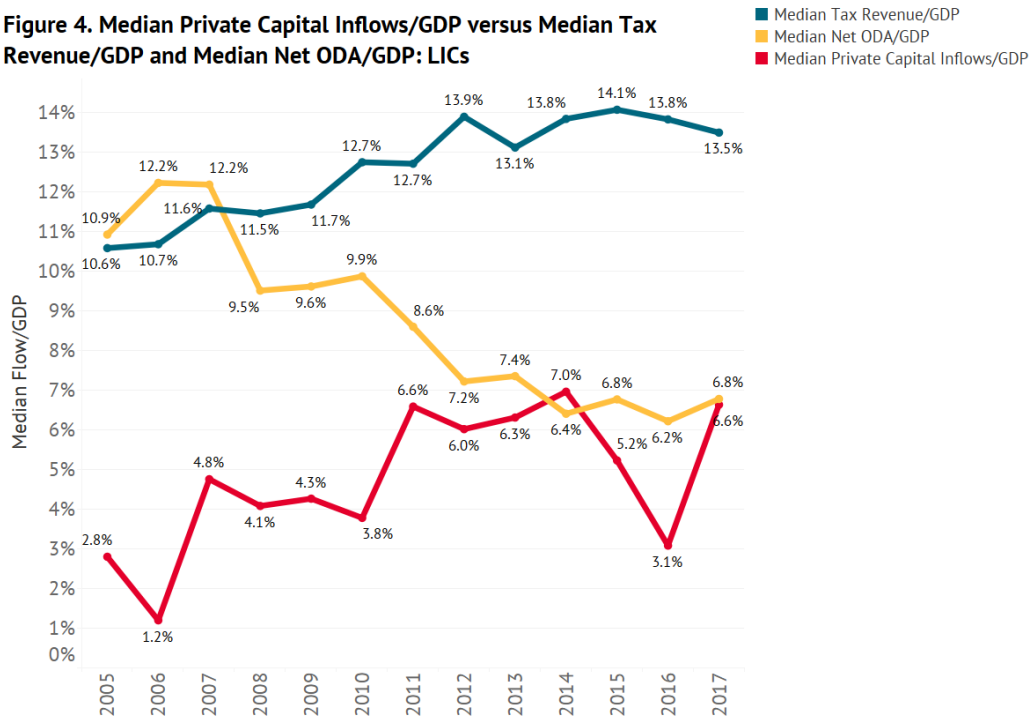
Source: IMF BOPS.

Note: 2005-2007 are pre-crisis years and 2010-2017 are post-crisis years.

This post-crisis evidence continues a longer-term trend highlighted by other researchers. Bhinda and Martin (2009) found, for example, that the ratio of the FDI stock to GDP in sub-Saharan Africa tripled from 1990 to 2007. Similarly, the IMF (2008) highlighted a tenfold increase in average FDI/GDP ratios for LICs from the 1980s to 2006. More recently, Tyson, Griffith-Jones, and te Velde (2014) found that FDI averaged 5.2 percent of GDP in 2012 for LICs, while the World Bank (2014) reported a 2012 average ratio of 6.5 percent for all capital inflows/GDP for LICs. And *Africa's Pulse* (World Bank, 2018) tested the hypothesis that average FDI/GDP ratios in LICs (in sub-Saharan Africa and in other regions) were greater post-crisis (2010-2017) than pre-crisis (2000-2007) and found that the data show a statistically significant increase. This upward trend has been durable, but it will be important to monitor developments going forward as global macroeconomic conditions change.

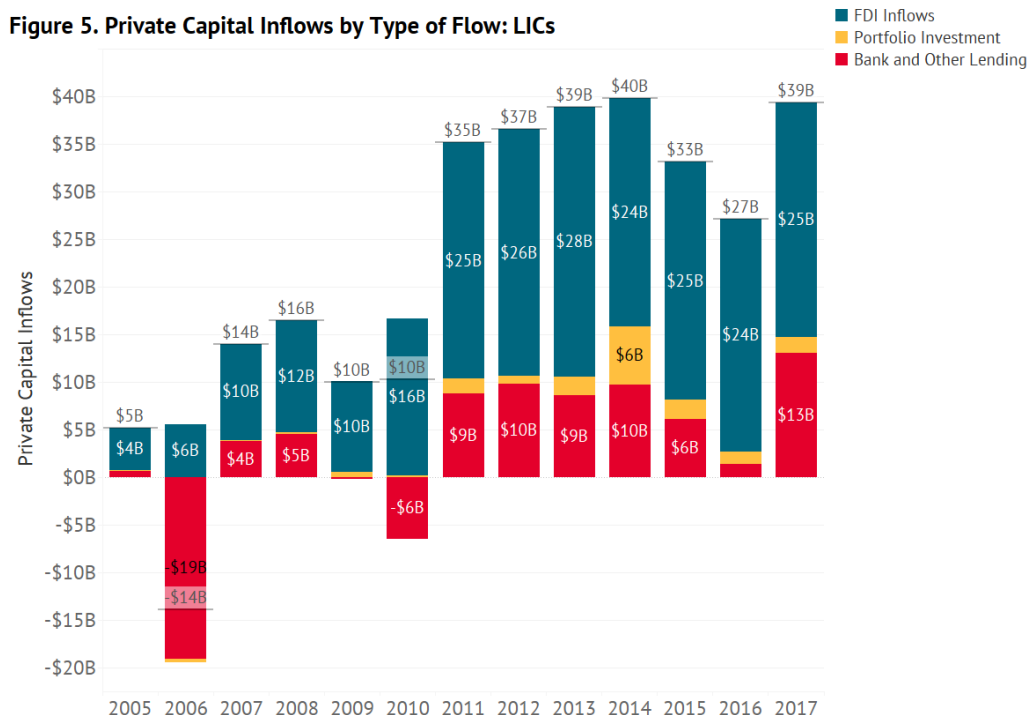
The evidence, therefore, supports the conclusion that external private capital is an important and growing source of finance for individual LICs, despite the low aggregate LIC share of total inflows to LICs and MICs. In fact, as Figure 4 shows, it is now as large a source of finance for LICs as development aid, which has dropped by almost half as a share of GDP since 2006.

Figure 4. Median Private Capital Inflows/GDP versus Median Tax Revenue/GDP and Median Net ODA/GDP: LICs



Source: IMF BOPS, IMF WoRLD for Tax Revenue, OECD for Net ODA (all donors).

We can disaggregate total private flows into three categories: FDI, portfolio investment (debt and equity), and bank and other lending. Figure 5 shows their relative importance.



FDI continues to dominate private capital inflows. It has also been remarkably resilient after the crisis—stable throughout most of the period at \$24–28B for all LICs.

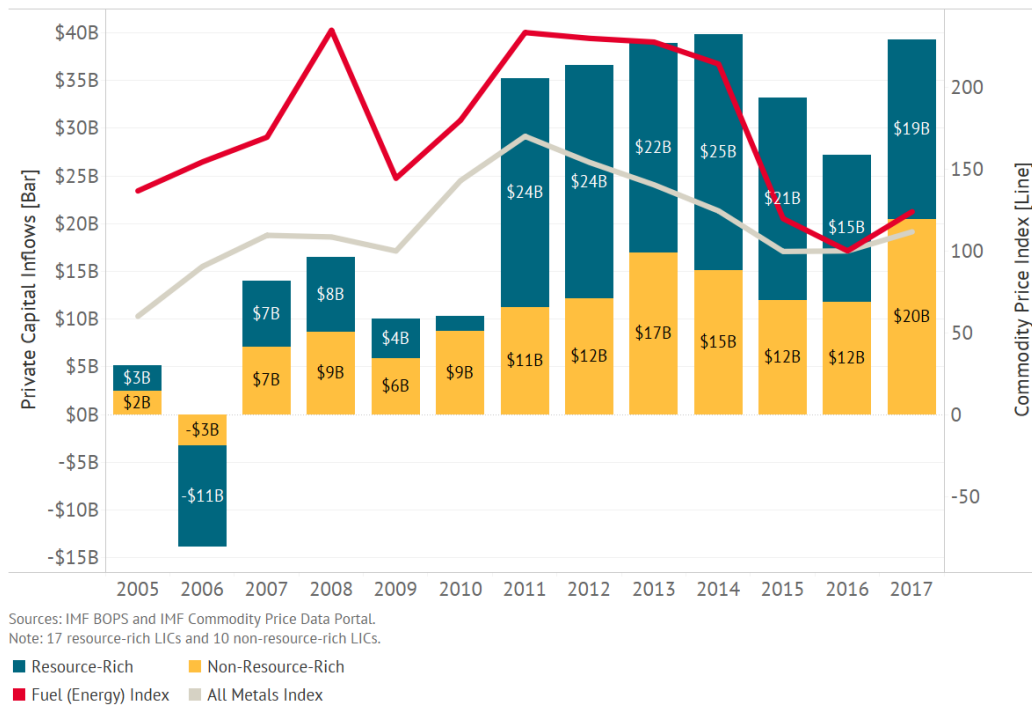
In contrast, non-FDI flows were more vulnerable to global conditions—global commodity prices and global interest rates. *The drop in non-FDI inflows accounted for all of the decline in total inflows in 2015 and 2016.* Federal Reserve monetary tightening beginning in December 2015 was quickly reflected in the steep drop in bank and other lending inflows in 2016. The recovery in 2017 suggests, however, that the post-crisis bump-up in these flows should not be discounted as a short-lived anomaly.

Portfolio inflows have remained quite small, however, peaking at \$6B in 2014 and retrenching thereafter. The total volume of private purchases of LIC government debt remains quite limited.

Do resource-rich and non-fragile LICs attract more capital?

Many assume that private capital flowing into LICs, particularly FDI, is concentrated in resource-rich economies, driven by investment opportunities in extractive industries. Figure 6 shows a more complicated picture.

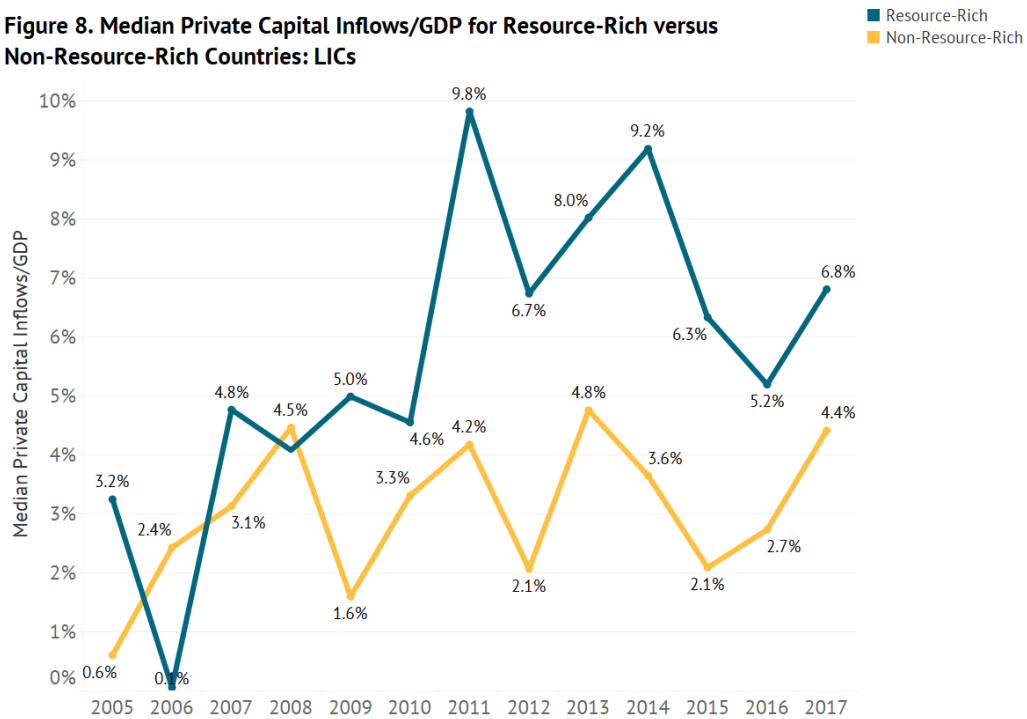
Figure 6. Private Capital Inflows to Resource-Rich versus Non-Resource-Rich Countries: LICs



The share of non-resource-rich LICs was large in the crisis years, then fell to less than half of total inflows in 2011 to 2016, and exceeded half of total inflows in 2017. Interestingly, commodity prices appear to have influenced inflows into both sets of countries.

At the same time, resource endowments in LICs matter in determining the level of total capital inflow *ratios*. Figure 8 shows that the median resource-rich LIC consistently experienced inflow ratios higher than those of non-resource-rich countries. That may change over time as inflows to non-resource-rich countries rise, but we do not see convergence yet with respect to total capital inflow ratios.

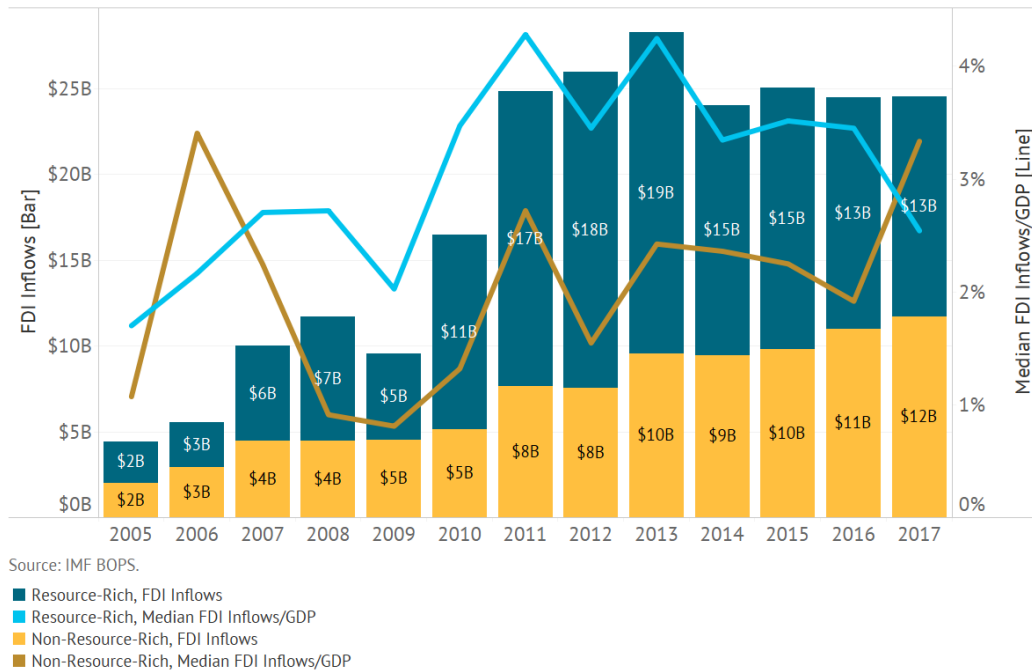
Figure 8. Median Private Capital Inflows/GDP for Resource-Rich versus Non-Resource-Rich Countries: LICs



Source: IMF BOPS.

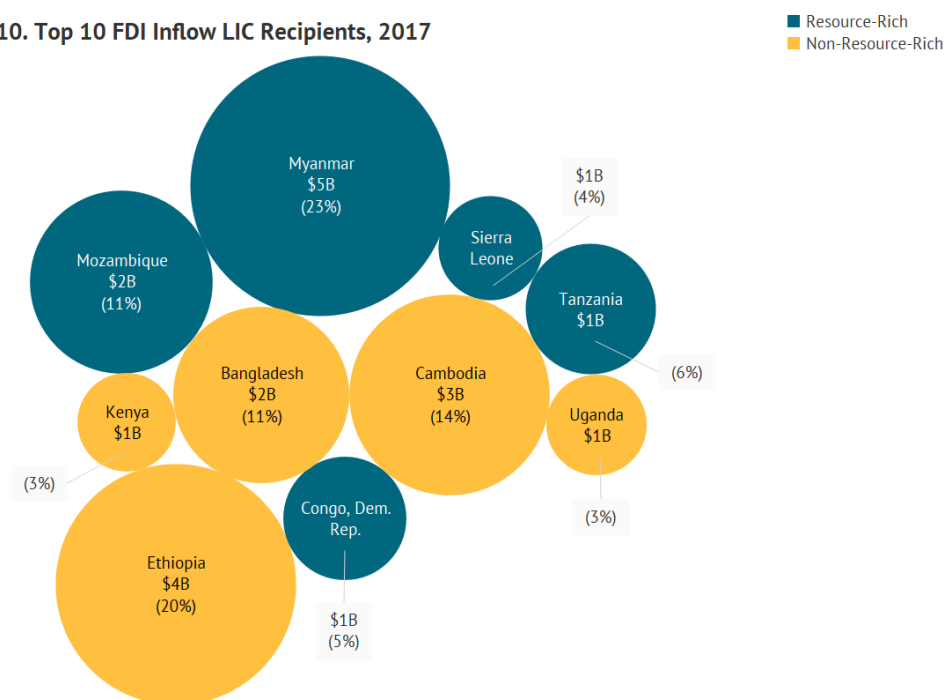
If we look at FDI *alone*, Figure 9 shows the shift in flows from resource-rich to non-resource-rich LICs even more clearly, along with a rise in the ratio of FDI/GDP for non-resource-rich countries. For most of the period, resource-rich LICs had higher FDI ratios than non-resource-rich countries. By 2017, the ratio lines had crossed and non-resource-rich countries had the higher median ratio. Moreover, FDI to non-resource-rich countries shows a steady upward march throughout the period, in contrast to some shrinkage in FDI to resource-rich LICs.

Figure 9. FDI Inflows and Median FDI Inflows/GDP in Resource-Rich versus Non-Resource-Rich Countries: LICs



The evolution in the importance of non-resource-rich LICs as a destination for FDI is confirmed if we look at the top 10 LIC recipients of FDI in 2017. Figure 10 shows that they are equally divided between resource-rich and non-resource-rich countries.

Figure 10. Top 10 FDI Inflow LIC Recipients, 2017

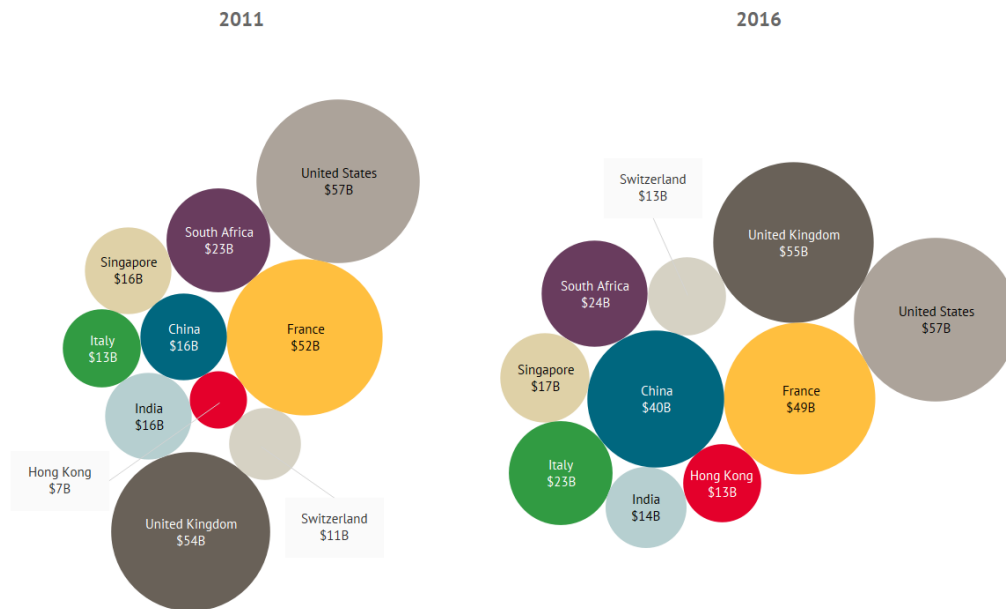


Source: IMF BOPS.

Note: Percentages in paranthesis are percent shares of total FDI Inflows to the top 10 LIC recipients.

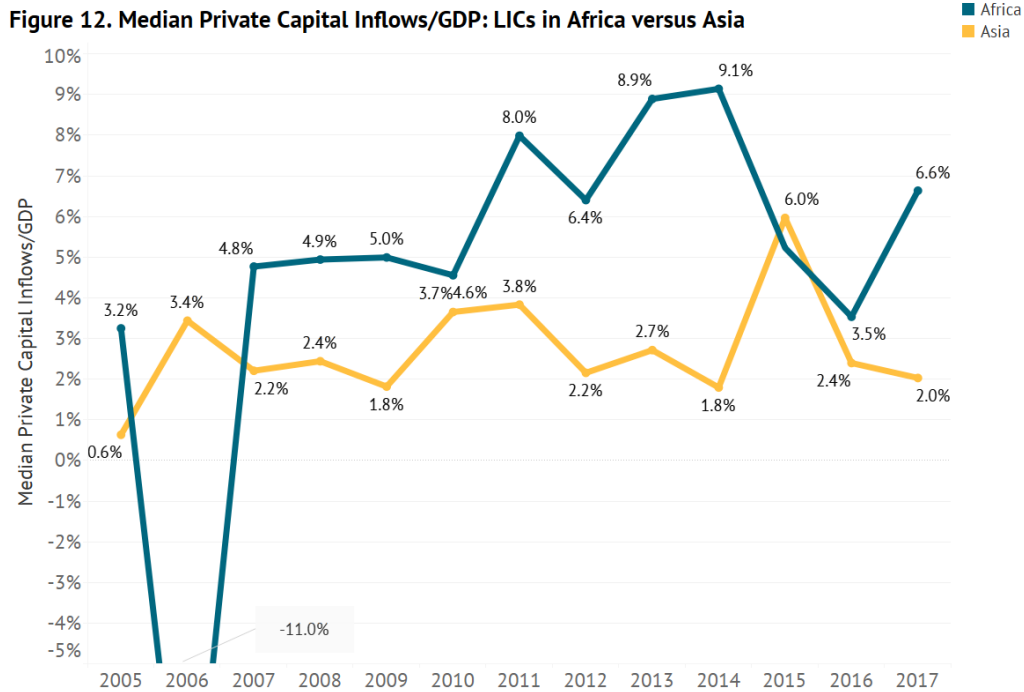
Viewed from the perspective of sources of FDI, we also see an interesting shift over a relatively short period of time. Data for Africa (Figure 11) show that in 2011, the US, UK, France, and South Africa dominated direct investors. By 2016, China had displaced South Africa as the fourth largest investor by FDI stock. Much attention has been paid to China's role as a creditor to Africa; its role as a rapidly growing direct investor has received less attention.

Figure 11. Top 10 Investor Economies in Africa by FDI Stock, 2011 and 2016



Source: World Investment Report 2018, United Nations Conference on Trade And Development.

If we compare median capital inflow ratios in LICs by region, we observe considerably higher ratios in Africa than in Asia.⁸ This is likely associated with the greater preponderance of resource-rich LICs in Africa (Figure 12).



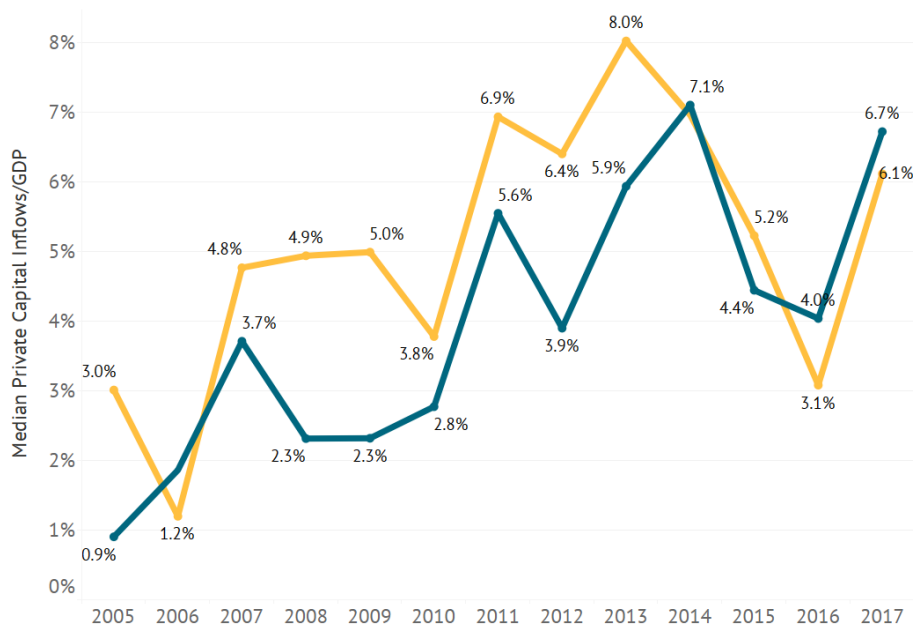
Source: IMF BOPS.

Note: 19 LICs in Africa of which 14 are resource-rich and 7 LICs in Asia of which 3 are resource-rich.

⁸ The only LIC in our sample outside Africa and Asia is Haiti in Latin America.

We can also distinguish fragile LICs from non-fragile LICs⁹ to test the assumption that fragility systematically lowers ratios of capital inflows/GDP. Until recently, fragility did seem to influence inflow ratios. The ratio for non-fragile states generally exceeded that for fragile states for most of the period, though the gap between the ratios largely closed from 2014 onward (Figure 13).

Figure 13. Median Private Capital Inflows/GDP to Fragile versus Non-Fragile Countries: LICs



Source: IMF BOPS.

Note: 10 fragile and 17 non-fragile countries.

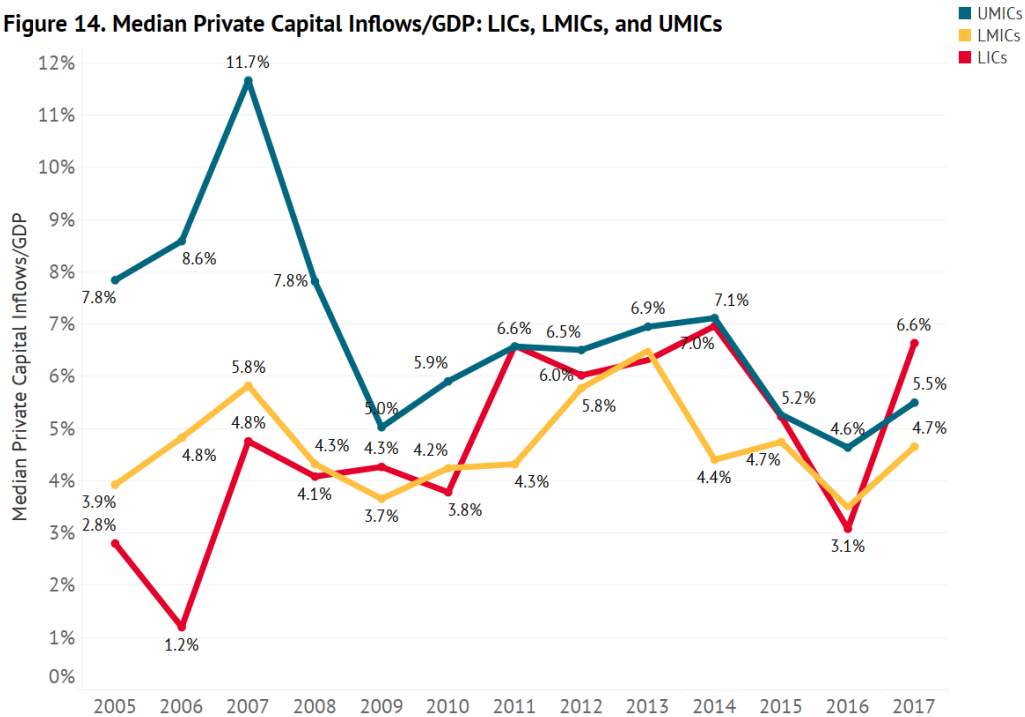
⁹ As per the most recent classification by the World Bank.

Trends: LICs versus LMICs and UMICs

One might have expected, in a more risk-averse post-crisis world, that capital inflow ratios in higher-income countries would have recovered more quickly to their pre-crisis levels.

Alternatively, one could argue that, in the post-crisis global search for yield, given exceptionally loose monetary policy in high-income countries, capital would be pulled more in the direction of frontier markets with the highest returns. The data in Figure 14 show that, in terms of inflow ratios, LICs broadly fared better than LMICs or UMICs.

Figure 14. Median Private Capital Inflows/GDP: LICs, LMICs, and UMICs

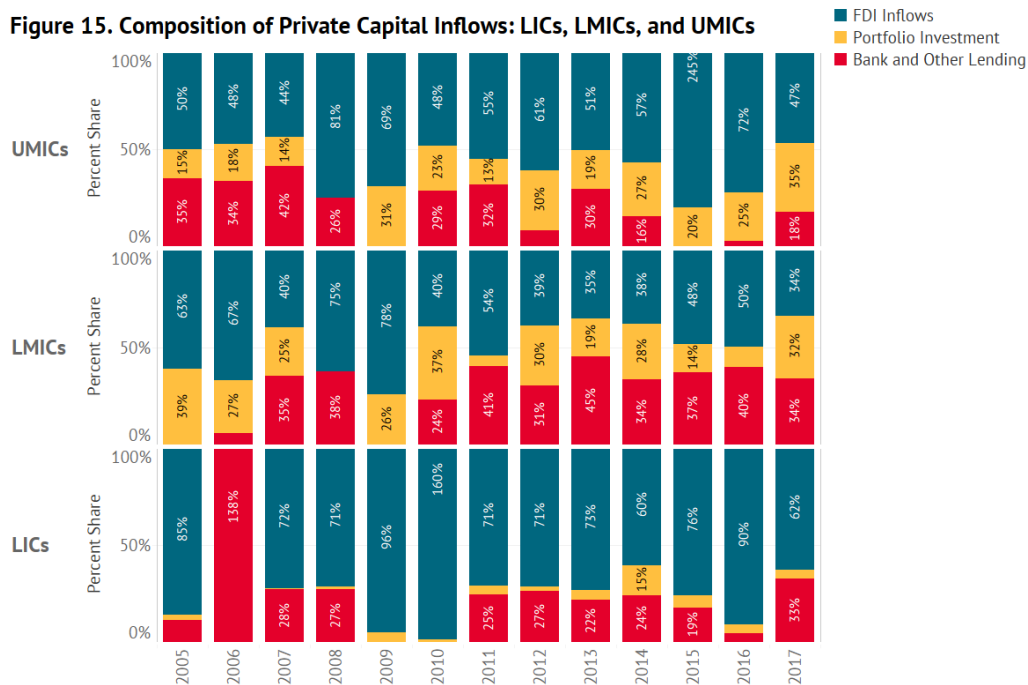


Source: IMF BOPS.

Except for 2015-2016 volatility in non-FDI inflows, the median ratios for LICs were above their 2008 level for six of the next nine years. In contrast, UMICs experienced a drop in their median ratios post-crisis, with no indication to date of a bounce-back: the ratio seems to have settled into a new normal of roughly half its peak in 2007. LMIC ratios generally showed no trend. In general, the post-crisis period shows greater convergence in inflow ratios across the three country income groups.

We also see differences (Figure 15) in the composition of capital flows across the three groups which help explain the different inflow ratio patterns across country income groups.

Figure 15. Composition of Private Capital Inflows: LICs, LMICs, and UMICs



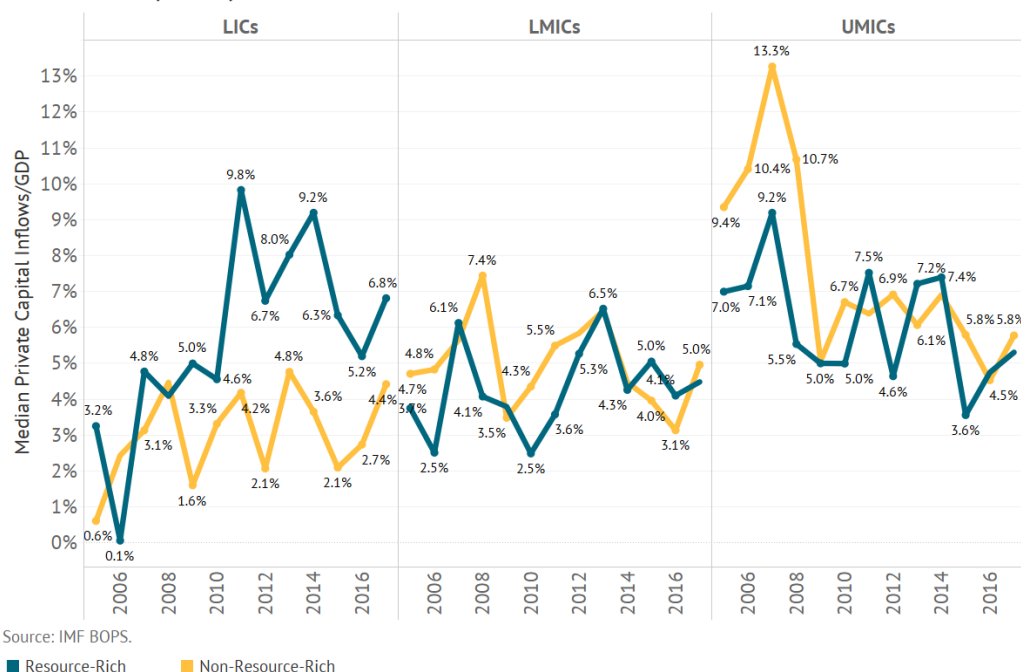
Source: IMF BOPS.

* Percent shares greater than 100 percent occur due to negative values for some constituent inflows.

The share of FDI is higher for LICs, with a median of 72 percent over the period and LMIC and UMIC medians at 48 percent and 55 percent respectively. We know that the bulk of the collapse in global cross-border capital flows post-crisis was in non-FDI flows, particularly bank lending. The higher share of non-FDI flows in LMIC and UMIC inflows therefore exerted downward pressure on their total inflow ratios post-crisis.

The different country groups also do not show the same patterns with respect to resource-rich versus non-resource-rich inflow ratios, as shown in Figure 16.

Figure 16. Median Private Capital Inflows/GDP for Resource-Rich versus Non-Resource Rich Countries: LICs, LMICs, and UMICs



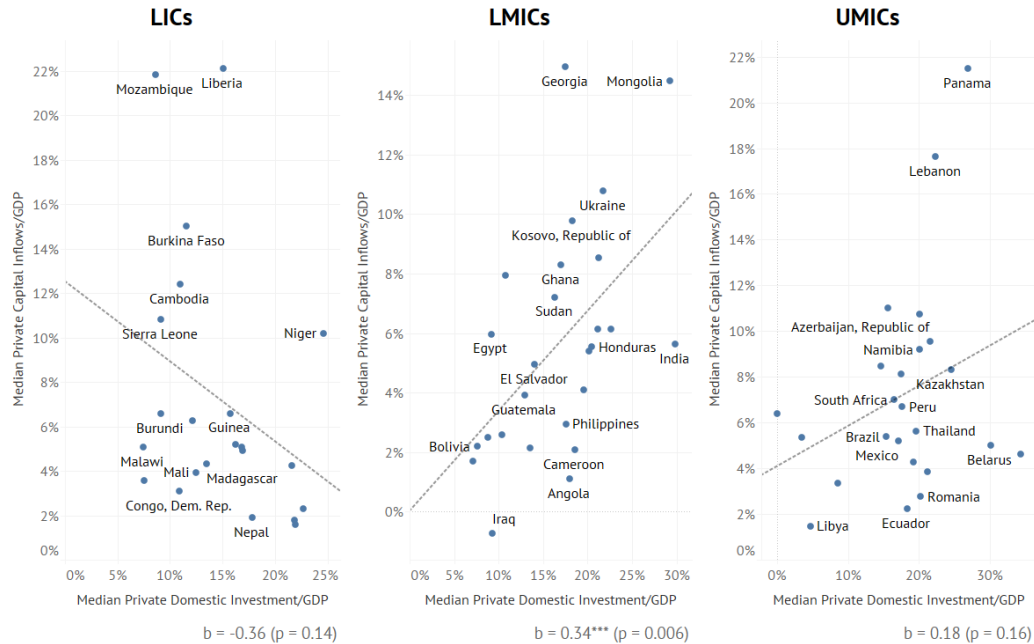
For LICs, despite recent growth in inflows to non-resource-rich countries, resource endowments still boost overall inflow ratios higher than those in non-resource-rich LICs. This is not the case for LMICs and UMICs, where foreign investment opportunities are not as dominated by extractive industries.

More Private Capital Inflows, More Domestic Investment?

The importance of private capital inflows in LIC economies suggests that it is worth examining whether higher inflows are positively related to domestic spending, especially investment spending. Private inflows might spur complementary domestic private investment, as in the example of FDI by a foreign auto company catalyzing the growth of domestic parts manufacturers and auto sales companies. Or the impetus might come in the other direction from public investment in infrastructure—ports, airports, roads, power—opening up new opportunities for foreign investors.

Figure 17 shows the correlation for different country income groups between median private capital inflows/GDP and median private domestic investment/GDP.

Figure 17. Relationship between Median Private Capital Inflows/GDP and Median Private Domestic Investment/GDP: LICs, LMICs, and UMICs



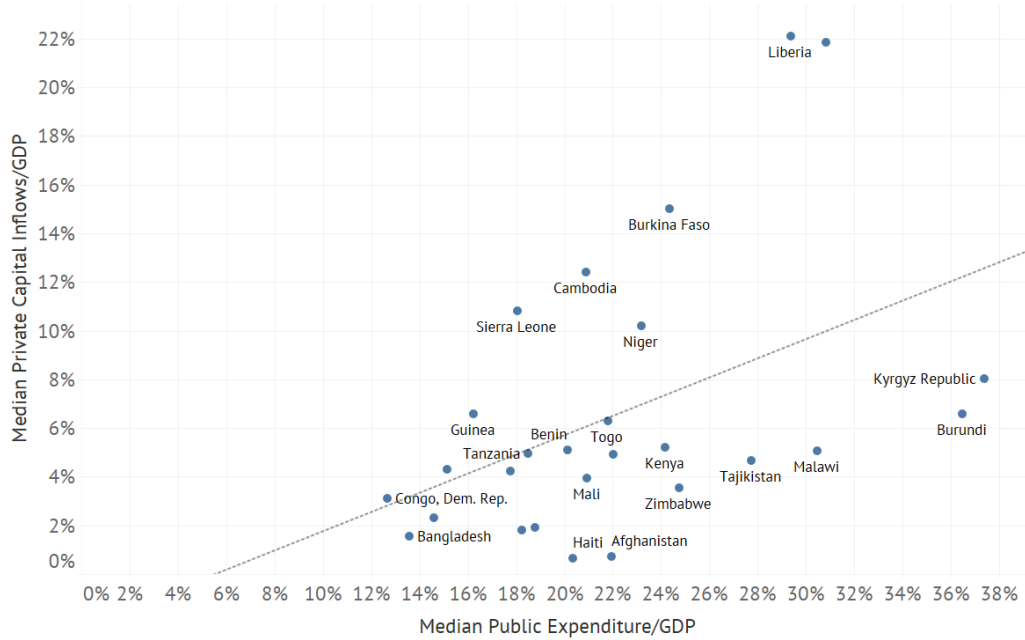
Sources: IMF BOPS and WDI for Private Domestic Investment.

For LMICs, we find a very significant positive relationship between private capital inflows and private domestic investment. Private capital from external sources is apparently helping to catalyze or perhaps finance domestic private investment. LMICs may have local financial actors that are more effective in intermediating external finance for domestic investment than do LICs. Further along on the capital market development spectrum, there is no significant correlation for UMICs, where local capital probably has a greater role in financing private domestic investment.

For LICs, the result is puzzling—a negative relationship (though significant only at the 15 percent level). Higher median private inflow/GDP ratios are weakly associated with lower median domestic private investment ratios. Are capital inflows instead associated with more public current spending or public investment?

Figure 18 suggests that countries with larger public sectors tend to have higher inflow/GDP ratios.

Figure 18. Relationship between Median Private Capital Inflows/GDP and Median Public Expenditure/GDP: LICs

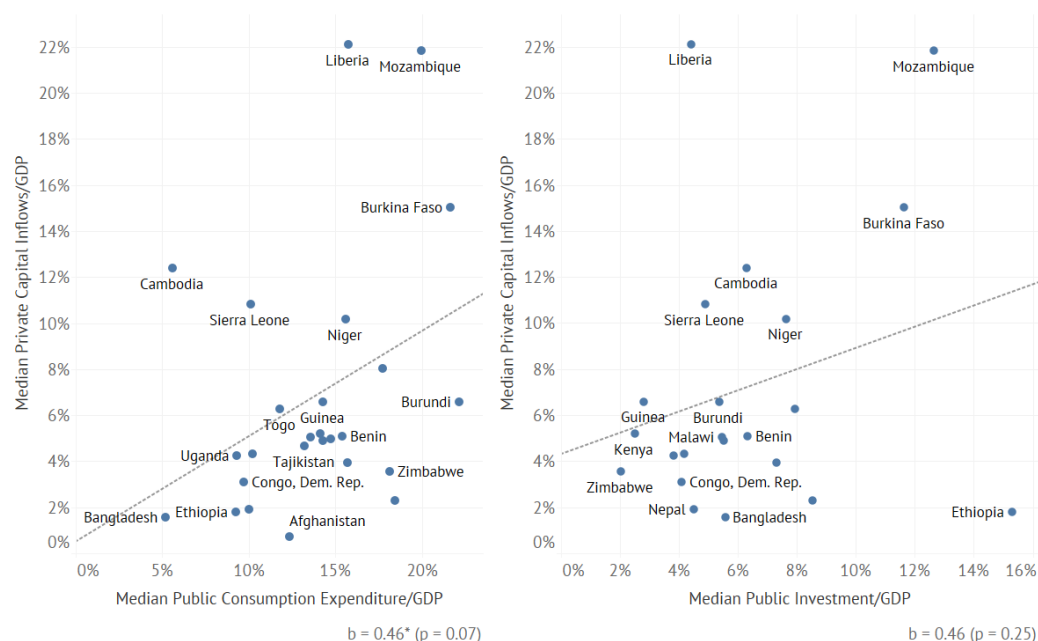


Sources: IMF BOPS and IMF WEO for Public Expenditure.

$b = 0.39^{**}$ ($p = 0.018$)

But Figure 19 points to more public consumption/GDP rather than public investment.

Figure 19. Relationship between Median Private Capital Flows/GDP, Median Public Consumption Expenditure/GDP, and Median Public Investment/GDP: LICs



Sources: IMF BOPS. WDI for Public Consumption Expenditure and Public Investment.

Figure 19 shows a positive relationship between inflows/GDP and government current spending. But there is no significant relationship between private capital inflows/GDP and public investment/GDP for LICs, which would suggest that public infrastructure spending is not a major driver of private capital inflows in LICs.

Several pathways might explain the positive association between inflow ratios and current government spending ratios. The first is direct: LIC governments are borrowing abroad to boost their current expenditures—government services, transfers, security, etc. Another is indirect: if the state is a dominant presence in the LIC economy, foreign investors could be investing in joint ventures with state-owned companies that expand production, boost government revenues, and in turn current expenditures. A third is also indirect: higher inflow ratios are associated with higher ratios of tax revenue to GDP because foreign direct investors tend to have good tax compliance habits or are subject to natural resource taxes. Or higher inflow ratios could be associated with higher growth and therefore higher revenues. Tests of the last two show no correlation of inflow ratios with GDP growth and an insignificant positive relation with tax revenue ratios.

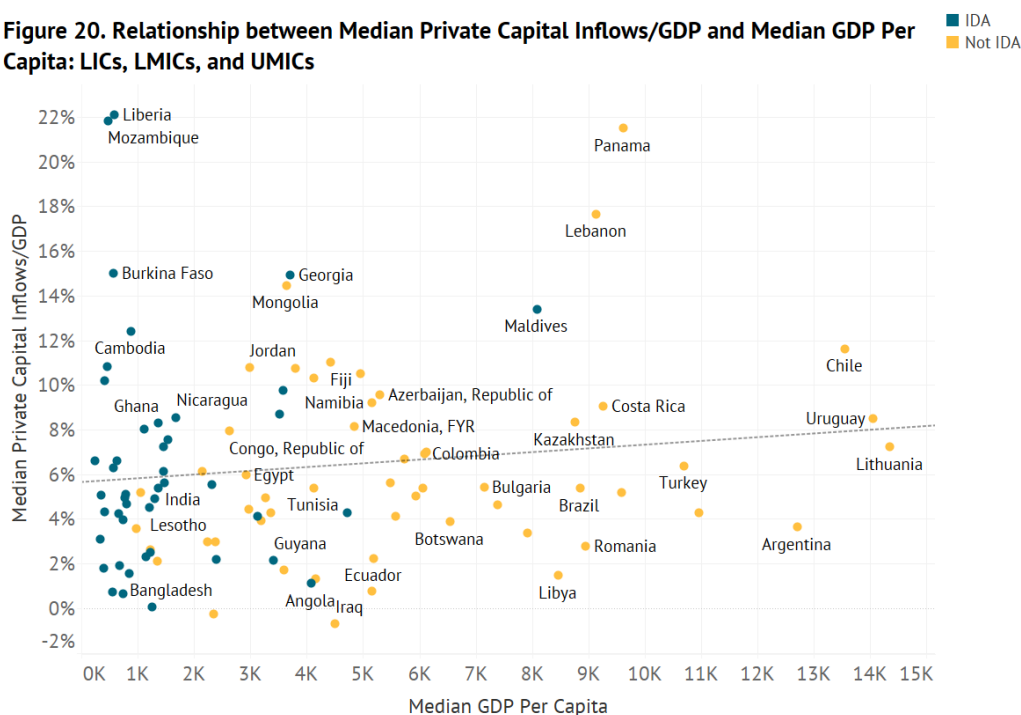
Related research from Bationo et al. examines the effect of private capital flows on income

growth in Africa.¹⁰ Their paper finds a negative relationship overall (with some variation by sector)—not inconsistent with our finding of a weak inverse relationship between median private capital inflow ratios and domestic private investment ratios. Possible reasons are discussed in the concluding section.

Higher Income Per Capita, Higher Inflows/GDP?

It is often assumed that access to cross-border private capital flows improves as country income levels rise. We can look at median (over time) private inflows/GDP ratios plotted against median country per capita income to see whether we find a positive relationship.

Figure 20. Relationship between Median Private Capital Inflows/GDP and Median GDP Per Capita: LICs, LMICs, and UMICs



Sources: IMF BOPS and IMF WEO for GDP Per Capita (current USD).

$b = 0.0000016$ ($p = 0.21$)

Figure 20 shows no significant relationship. IDA countries have a very wide range of median inflow to GDP ratios. Some higher-income countries—large and small—have inflow/GDP ratios below those of some IDA countries and vice versa. These results cast doubt on the assumption that countries graduating from IDA are especially likely to experience increasing inflows of international private capital.

¹⁰ Francois A. B. Bationo, Stephany Griffith-Jones, Victor Murinde, Issouf Soumare and Judith Tyson, “Capital Flows and Productivity in Africa: The Angel Is in the Details,” *Center for Global Finance, SOAS University of London*, 2018, https://static1.squarespace.com/static/5aeb20ab297114b0c238a685/t/5b7cda5140ec9a4b734405d0/1534909016645/WP+2_2018.pdf.

We find in short that a country's median per capita income level is not a robust predictor of its median private capital inflow/GDP ratio.

Conclusions

Much of the news for LICs is encouraging, and some of it flies in the face of conventional wisdom. For LICs, private inflows are an important and growing source of finance. For the median LIC, private capital inflows now supply as much finance to the economy as official development assistance, which has declined sharply relative to GDP. And the FDI component, which constitutes most of LIC inflows, has been stable and resilient throughout the post-financial-crisis period.

LICs have, in fact, fared better than LMICs and UMICs in the post-global-financial-crisis environment for capital flows. Their median inflow/GDP ratios have, with some volatility, trended upwards, while those of LMICs and UMICs have stagnated or dropped.

The inflows are not all captured by resource-rich LICs. In fact, in 2017 more than half of total capital inflows to LICs and almost half of FDI went to non-resource-rich LICs. The median FDI/GDP ratio in non-resource-rich LICs now exceeds that of resource-rich countries. Increasingly, policies, not just resource endowments, shape LIC destinations for foreign capital. The relation between median capital inflows/GDP and median regulatory quality (broadly defined, including policies for taxes, trade, starting a business, price controls, competition, labor markets) is significantly positive for non-resource-rich LICs.

While many have focused on China's role as a LIC creditor, China is also playing a key role in diversifying sources of FDI in Africa. By 2016, its stock of FDI in Africa was almost as large as that of the traditional Western investors: the US, UK, and France.

But there is also not-so-good news. As in other countries, non-FDI inflows to LICs are volatile and sensitive to global commodity prices and interest rates.

Median private capital inflow/GDP ratios are not positively correlated with private domestic investment/GDP in LICs (in contrast to the strong positive correlation for LMICs). Nor is there a significant relation with median public investment/GDP. The apparent lack of complementarity between foreign and domestic investment may point to problems related to investment enclaves and/or the role of the state in LIC economies.

We find no relation between median country per capita income levels and private inflows/GDP.

It should, therefore, not be assumed that countries losing IDA access as their income levels increase will be able to replace concessional finance with private inflows.

Several implications can be drawn from this analysis. First, foreign investors in non-resource-rich LICs care about domestic investment climate policies. Reforms therefore not only benefit domestic firms, including SMEs, but also influence foreign investor choices.

But the findings raise some concerns with respect to domestic investment in LICs. Although it is important not to read too much into simple correlations, we might have expected to see some positive relationship between private capital inflows/GDP and private domestic investment/GDP, rather than a negative correlation. We do, in fact, see a strong positive correlation for LMICs.

The findings could be signaling that for LICs, FDI is unusually concentrated in enclaves (e.g., extractive industries, enterprise zones, or industrial parks) that have limited positive spillovers for the rest of the economy. This would suggest that governments should be thinking about policies and allocation of public investment resources in ways that boost those spillover effects and catalyze more local private investment. Indeed, for LICs where the state dominates the economy, it could be crowding out private local investment by absorbing a disproportionate share of local savings and/or raising barriers to the entry of private firms in key sectors. In this case, foreign private investment may be acting as a substitute for, rather than a complement to, domestic private investment—hence the negative correlation.

Non-FDI inflows in the form of debt to external private creditors on market terms, while a relatively small share of inflows for LICs, come with debt sustainability risks, not just because they are volatile, but also because they do not appear to be associated with the higher domestic investment that would boost growth paths and repayment capacity.

Finally, the international community needs to be careful about its assumptions regarding private capital flows when formulating graduation policies from IDA and other concessional lending. Access to private capital inflows is not a function of country income levels. It cannot be assumed that countries losing IDA access as their per capita incomes grow will be able to substitute external private capital.

Appendix I. Data Description

Variable	Description	Source
FDI Inflows	Foreign direct investment, net incurrence of liabilities	IMF BOPS, ¹¹ International Debt Statistics ¹²
Portfolio Investment	Portfolio investment, net incurrence of liabilities	IMF BOPS
Bank and Other Lending Flows	Bank and other lending flows (other investment), net incurrence of liabilities <i>Borrowing from official creditors</i> has been subtracted from this variable so that it includes only private lending (to public or private borrowers of a country)	IMF BOPS, International Debt Statistics ¹³
Private Capital Inflows	Sum of FDI inflows, portfolio investment, and bank and other lending flows	
Low-Income Countries	Countries classified as LICs by the World Bank for more than half as many years (seven) from 2005 to 2017 27 LICs: Afghanistan, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Democratic Republic of Congo, Ethiopia, Guinea, Haiti, Kenya, Kyrgyz Republic, Liberia, Madagascar, Malawi, Mali, Mozambique, Myanmar, Nepal, Niger, Sierra Leone, South Sudan, Tajikistan, Tanzania, Togo, Uganda, Zimbabwe	World Bank Country and Lending Groups ¹⁴
Lower-Middle-Income Countries	Countries classified as LMICs by the World Bank for more than half as many years (seven) from 2005 to 2017 36 LMICs: Angola, Armenia, Bolivia, Cameroon, Congo, Côte d'Ivoire, Egypt, El Salvador, Eswatini, Georgia, Ghana, Guatemala, Guyana, Honduras, India, Indonesia, Iraq, Kosovo, Lao People's Democratic Republic, Lesotho, Moldova, Mongolia, Morocco, Nicaragua, Nigeria, Pakistan,	World Bank Country and Lending Groups

¹¹ IMF BOPS dataset downloaded from <http://data.imf.org/?sk=7A51304B-6426-40C0-83DD-CA473CA1FD52> as of March 5, 2019. See the IMF BOPS Manual for an extensive definition of FDI inflows, portfolio investment, and bank and other lending flows (other investment) at <http://data.imf.org/?sk=7A51304B-6426-40C0-83DD-CA473CA1FD52&sId=1542634751698>.

¹² Used to fill in just a few missing values for Afghanistan and Zimbabwe. International debt statistics can be found at <https://data.worldbank.org/products/ids>.

¹³ For *borrowing from official creditors*. The exact indicator name of the variable used is “PPG, official creditors (NFL, current US\$) (DT.NFL.OFFT.CD).”

¹⁴ <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>

	Papua New Guinea, Paraguay, Philippines, Sri Lanka, Sudan, Tunisia, Ukraine, Vietnam, Yemen, Zambia.	
Upper-Middle-Income Countries	Countries classified as UMICs by the World Bank for more than half as many years (seven) from 2005 to 2017 36 UMICs: Albania, Algeria, Argentina, Azerbaijan, Belarus, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Chile, China, Colombia, Costa Rica, Dominican Republic, Ecuador, Fiji, Jamaica, Jordan, Kazakhstan, Lebanon, Libya, Lithuania, Macedonia, Maldives, Mexico, Namibia, Panama, Peru, Romania, Russian Federation, South Africa, Suriname, Thailand, Turkey, Uruguay, Venezuela	World Bank Country and Lending Groups
IDA Countries	Countries having had IDA status at any year in the last 5 years of the time period. 45 IDA countries: Afghanistan, Angola, Armenia, Bangladesh, Benin, Bolivia, Bosnia and Herzegovina, Burkina Faso, Burundi, Cambodia, Democratic Republic of Congo, Côte d'Ivoire, Ethiopia, Georgia, Ghana, Guinea, Guyana, Haiti, Honduras, India, Kosovo, Kyrgyz Republic, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Mali, Maldives, Mozambique, Myanmar, Nepal, Nicaragua, Niger, Sierra Leone, Sri Lanka, South Sudan, Sudan, Tajikistan, Tanzania, Togo, Uganda, Vietnam, Yemen, Zambia	World Bank Country and Lending Groups
Fragile and Conflict Affected Countries	Countries classified as “fragile and conflict-affected situations” by the World Bank 19 fragile countries: Afghanistan, Burundi, Democratic Republic of Congo, Congo, Côte d'Ivoire, Haiti, Iraq, Kosovo, Lebanon, Liberia, Libya, Mali, Mozambique, Myanmar, Papua New Guinea, Sudan, Togo, Yemen, Zimbabwe	World Bank Country and Lending Groups
Resource-Rich Countries	Countries with median exports in fuels, mining products, precious stones, and gold at 25 percent or more of total merchandise exports 53 resource-rich countries: Algeria, Angola, Armenia, Azerbaijan, Belarus, Benin, Bolivia, Botswana, Bulgaria, Burkina Faso, Burundi, Cameroon, Chile, Colombia, Democratic Republic	UNCTAD ¹⁵

¹⁵ <http://unctadstat.unctad.org/EN/Index.html>.

of Congo, Congo, Côte d'Ivoire, Ecuador, Egypt, Ghana, Guinea, Guyana, India, Indonesia, Iraq, Jamaica, Kazakhstan, Kyrgyz Republic, Lao People's Democratic Republic, Liberia, Libya, Mali, Mongolia, Mozambique, Myanmar, Namibia, Niger, Nigeria, Papua New Guinea, Peru, Russian Federation, Senegal, Sierra Leone, South Africa, Sudan, Suriname, Tajikistan, Tanzania, Togo, Venezuela, Yemen, Zambia, Zimbabwe

GDP	GDP in current USD	IMF WEO
GDP per Capita	GDP per capita in current USD	IMF WEO
Private Domestic Investment/GDP	Gross private fixed capital formation as a percentage of GDP. Data missing for some countries and years	WDI
Public Investment/GDP	Gross public fixed capital formation as a percentage of GDP. Calculated by subtracting private gross fixed capital formation/GDP from gross fixed capital formation/GDP. Data missing for just a few countries	WDI
Government Consumption Expenditure/GDP	General government final consumption expenditure as a percentage of GDP. Contains only a few missing values	WDI
Government Expenditure/GDP	General government expenditure as a percentage of GDP	IMF WEO
Tax Revenue/GDP	Tax revenue as a percentage of GDP	IMF WoRLD
Net ODA/GDP	Net ODA as a percentage of GDP	OECD
All Metals Price Index	All Metals Price Index, 2016 = 100: includes Metal Price Index (Base Metals) and Precious Metals Index	IMF Commodity Data Portal ¹⁶
Fuel (Energy) Price Index	Fuel (Energy) Index, 2016 = 100, includes Crude oil (petroleum), Natural Gas, Coal Price and Propane Indices	IMF Commodity Data Portal
Regulatory Quality	Regulatory quality reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. It is measured in percentile rank among all countries (ranges from 0 (lowest) to 100 (highest) rank)	WGI ¹⁷

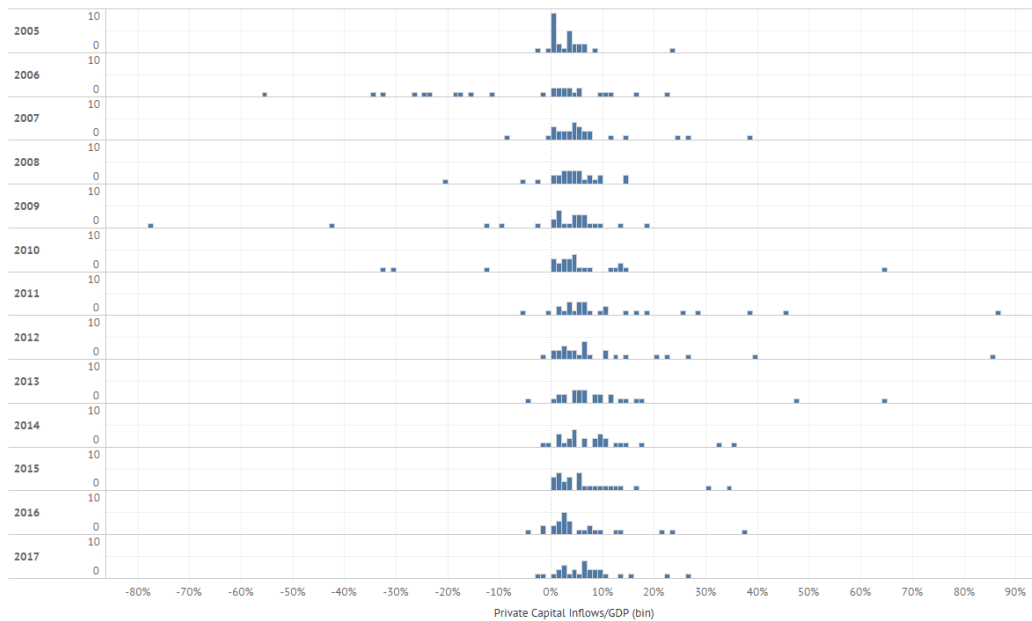
¹⁶ <https://www.imf.org/en/Research/commodity-prices>.

¹⁷ <https://info.worldbank.org/governance/wgi/#home>

Appendix II. Distribution of Private Capital Inflows/GDP For LICs

This section explores factors underlying changes in the median private capital inflows to GDP ratio for LICs over time.

Figure 21. Distribution of Private Capital Inflows/GDP: LICs
Frequency Distributions



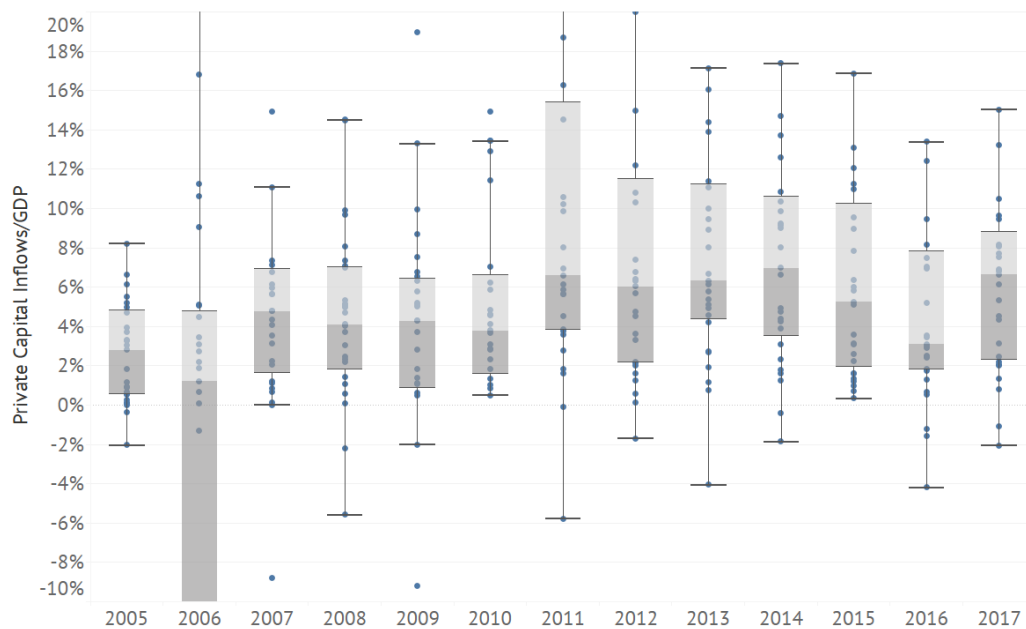
Source: IMF BOPS.

Noe: 2005-2007 are pre-crisis years and 2010-2017 are post-crisis years.

Figure 21 shows the frequency distribution of capital inflows/GDP by country over time. The tails show a distinct shift from large negative values in pre-crisis years to large positive values in post-crisis years. This displays a shift in the “skewness” of the distribution over time. *Median* ratios rather than *average* ratios, therefore, provide a more accurate picture of the “typical” LIC.

In addition, Figure 22 looks closely at the distribution of capital inflows/GDP around the median for each year. A boxplot is a standardized way of displaying the distribution: the box represents the middle 50 percent of countries or data points for each year—from the 25th percentile value to the 75th percentile value for inflows/GDP. The box is divided into two parts by the median. The dark grey area represents countries below the median and above the 25th percentile value, and the light grey area represents countries above the median and below the 75th percentile value. The whiskers then stretch out to the furthest inflows/GDP ratios with one-and-a-half times the range of the box from the “hinges,” or the bottom and top edges of the box.

Figure 22. Distribution of Private Capital Inflows/GDP: LICs
Box-And-Whisker Plots



Source: IMF BOPS.

Noe: 2005-2007 are pre-crisis years and 2010-2017 are post-crisis years.

We see that most LICs have seen an increase in capital inflows to GDP ratios over time. The boxes indicate an upward shift in post-crisis years both in values and range. For the post-crisis period, except for 2010 and 2016, more than 50 percent of LICs had inflow/GDP ratios greater than 5 percent, whereas more than 50 percent of LICs had inflow/GDP ratios *less* than 5 percent for the pre-crisis years.

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