UNITED NATIONS ESCAP
Economic and Social Commission for Asia and the Pacific

MPFD POLICY BRIEFS
No. 62, April 2018

What explains divergent investment performances in Asia-Pacific?

Subdued investment explained for much of the weak global aggregate demand in the past decade; beyond the near-term impact, it has also contributed to a productivity slowdown and a decline in potential output.[1] While the Asia-Pacific region's investment performance has been relatively robust, there is considerable heterogeneity within the region. Excluding China, investment performance in the region has been rather weak across a wide range of countries. Attention is needed to long-term drivers of investment. Based on a panel regression of 29 Asia-Pacific economies over the period 1990-2016, macroeconomic stability, financial development and trade openness (but not financial openness) contribute significantly to investment.

Regional investment trends

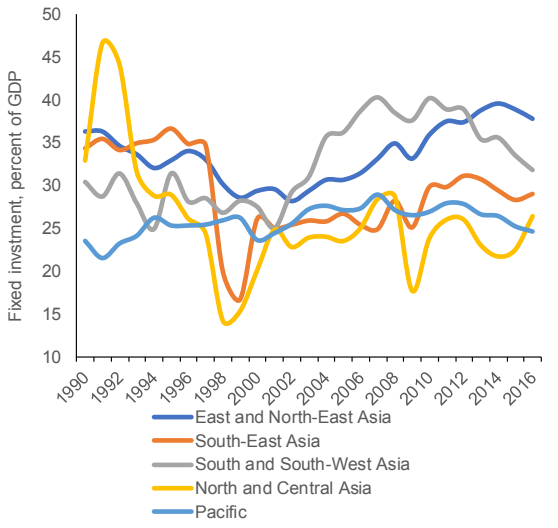
Globally, investment rate (gross fixed capital formation as percentage of GDP) was relatively steady at about 23 percent over the period 1990-2016. There was a mild decline in the late 1990s and early 2000s owing to financial crises in developing countries and the bursting of the 'dot-com bubble' in the United States. This was followed by an increase of about 2 percentage points between 2002 and 2008, followed by a decline of similar magnitude in the wake of the global financial crisis.

In the Asia-Pacific region, investment rate was higher at about 30 percent (32 percent for developing Asia-Pacific economies) over the period 1990-2016, reflecting the region's rapid convergence from a low base in capital stock. A decline in the 1990s owing to state-enterprise reforms in China and the 1998 Asian financial crisis was followed by a large and sustained increase of about 7 percentage points between 2002 and 2014, a period when the region's share in world manufacturing surged, mostly led by China. Notably, investment rates did not fall but rather increased further in the wake of the global financial crisis, as many countries in the region introduced investment-led fiscal stimulus to offset the collapse in external demand. Despite some easing in 2015 and 2016 when global trade was unusually weak, the region's investment rate was significantly higher than the world average.

However, the picture changes dramatically once China is excluded. Investment rate in China surged by some 20 percentage points since early 1990s. By 2016, China accounted for more than half of the total investment in the Asia-Pacific region, reflecting its increased share in the region's economy but also its higher investment rate. Excluding China, developing Asia-Pacific had an investment rate of 26 percent in 2016, only marginally higher than the world average.

An assessment by ESCAP subregions (figure 1) reveals that in South and South-West Asia, investment rate surged by a remarkable 13 percentage points between 2001 and 2008, but then fell sharply by 8 percentage points between 2010 and 2016, as countries such as India struggled with high corporate leverage and distressed bank loans. South-East Asia had the highest investment rate before the Asian financial crisis, but following the sharp decline investment rate was relatively flat in the 2000s. More recently, investment has picked up, supported by successful infrastructure programmes in countries such as Malaysia and the Philippines. The Pacific had a relatively stable investment rate underpinned by Australia and New Zealand, but there was considerable volatility in year-to-year investment performances among Pacific island developing States owing to their relatively small economic base and high vulnerability to terms of trade and natural disaster shocks. North and Central Asia, which includes former Soviet economies, underwent a marked decline in investment rate in the 1990s (of some 30 percentage points between 1991 and 1998); the partial recovery in the 2000s was largely driven by the resources sector which benefited from high commodity prices, but this was followed by further volatility.

Figure 1. Fixed investment, percent of GDP



Source: ESCAP Statistical Database.

What are the drivers of investment?

While the previous discussion has highlighted some historical context for the divergent investment performances, a more systematic assessment on the long-term determinants of investment could be considered using a panel regression approach.[2] The analysis based on 29 Asia-Pacific economies[3] over the period 1990-2016 finds that, in line with the literature, output level and growth positively affect investment, whereas the cost of capital (as proxied by the real interest rate) has a negative effect. Investment is positively linked to output growth, as an increase in aggregate demand causes firms to expand their output production, and this increases the demand for capital, thereby increasing investment. As real interest rates indicate the opportunity cost of making investments, a negative sign is expected.[4] Financial development is positive and significant when proxied by domestic credit extended to the private sector, but insignificant when proxied by stock market size, which likely reflects bank dominance and underdeveloped capital markets in the region.[5]

Trade openness (the ratio of sum of exports and imports to GDP) turns out to be a significant factor, but financial openness (proxied by the Chinn-Ito index) is insignificant. This situation likely reflects the region's high trade integration and relatively low levels of capital account liberalization, including in major economies such as China and India. In general, trade liberalization boosts exports, easy access to external credit, and makes it easier for countries to import intermediate goods and capital which improves investment. Economies of scale either in the production or investment technologies are a key contributor to the gains from trade and economic integration, although trade openness may also lead to boom-bust cycles of investment supported by self-fulfilling expectations.[6]

Macroeconomic instability (proxied by inflation) shows a negative sign as expected. Poor macro-economic management and instability increase the uncertainty about the returns to investment, thereby discouraging investment or resulting in delays in certain projects. Specifically, high rates of inflation could increase information costs and add to currency risks for foreign investors. The literature also finds that macroeconomic instability not only lowers investment rates but also reduces the efficiency of investment.[7] While not included in this regression, the general business environment and regulatory quality of the economy are also considered important for robust investment, as highlighted in recent ESCAP analysis.[8]

Prospects and policy considerations

Going forward, investment rates in China are expected to steadily decline in line with the ongoing rebalancing towards consumption- and services-based growth as well as deleveraging efforts in the corporate sector. Many other countries, including India, have set targets to broaden the manufacturing base and improve infrastructure, which would require increased investments. In many countries, urbanization will also require additional investments, including in transport, energy, housing, water and sanitation.

To support these priorities with increased investment, countries could pay attention to some of the long-term drivers highlighted in the above qualitative and quantitative analysis. The region's historical experience suggests that avoiding boom-bust cycles in investment will be important, as recovery usually takes a long time, especially if associated with weak balance sheets in the corporate and banking sectors. For countries that are vulnerable to terms-of-trade shocks, accelerating economic diversification remains a priority. For countries trying to expand their manufacturing base, attracting necessary investment will also require appropriate skills and infrastructure, which will determine the returns to investment.

As highlighted by the panel regression analysis, countries could further develop their financial sectors and improve access to finance for firms. At the same time, adequate financial supervision and regulation will be needed to avoid boom-bust cycles and ensure efficient allocation of resources. For countries with limited domestic resources, external financing, including foreign direct investment and official development assistance, could play an important role. Particularly when it comes to infrastructure related investments, countries could benefit from increased use of public-private partnerships. At the regional level, China's Belt and Road initiative and increased commitments from Japan, among others, could provide a boost to investment, including in cross-border infrastructure. Finally, trade liberalization and economic integration could offer greater opportunities for investment.

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[1] United Nations, Department of Economic and Social Affairs, *World Economic Situation and Prospects 2018* (New York); and World Bank, *Global Economic Prospects 2018* (Washington, D.C.).

[2] A dynamic panel regression technique, known as General Method of Moments (GMM), is used to account for both within and between data variation. GMM is suitable as investment, the dependent variable, is dynamic, meaning it depends on its past values. Specifically, the difference GMM is used, to remove the inherent endogeneity by transforming the data to remove fixed effects thus, producing estimates that are more efficient and consistent. More details on the regression specification and results will be explained in a forthcoming working paper.

[3] The 29 economies are: Armenia, Australia, Azerbaijan, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Hong Kong SAR, India, Indonesia, Iran, Japan, Kazakhstan, Kyrgyzstan, Malaysia, Mongolia, Nepal, New Zealand, Pakistan, Philippines, Republic of Korea, Russian Federation, Singapore, Sri Lanka, Tajikistan, Thailand, Turkey and Viet Nam.

[4] Factors such as cost of debt and cost of equity play a role in making investment decisions due to their impact on cost of capital. Changes in interest rates, tax rates, investment and dividend policies lead to changes in cost of debt and equity. See, for instance, Simon Gilchrist, Egon Zakrajsek, Investment and the cost of capital: new evidence from the corporate bond market. NBER working paper (2007). Available from http://www.nber.org/papers/w13174

[5] Alper Aras, The state of finance in Asia and the Pacific. MPFD Working Paper (Bangkok, ESCAP, 2017).

[6] Assaf Razin, Efraim Sadka and Tarek Coury, Trade openness and investment instability. NBER working paper no. 8827 (March 2002). Available from http://www.nber.org/papers/w8827.

[7] Corbo and Rojas, Investment, macroeconomic stability and growth: the Latin American experience. *Economic Analysis Review*, 8(1), 1993.

[8] United Nations, Economic and Social Commission for Asia and the Pacific (ESCAP), *Economic and Social Survey of Asia and the Pacific: Governance and Fiscal Management*. Sales No. E.17.II.F.8. Available from www.unescap.org/publications/economic-and-social-survey-asia-and-pacific-2017.

The MPFD Policy Briefs aim at generating a forward-looking discussion among policymakers, researchers and other stakeholders to help forge political will and build a regional consensus on needed policy actions and pressing reforms. Policy Briefs are issued without formal editing. This issue was prepared by Daniel Jeongdae Lee and Noormah Rizwan, benefitting from inputs by Yong Yoon (Assistant Professor, Faculty of Economics, Chulalongkorn University, Thailand), under the guidance of Hamza Ali Malik. For further information on this issue, please contact Hamza Ali Malik, Director, Macroeconomic Policy and Financing for Development Division, ESCAP (escap-mpdd@un.org).

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