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China's slowdown and global financial market volatility: Is world growth losing out?☆

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ABSTRACT

China's GDP growth slowdown and a surge in global financial market volatility could both adversely affect an already weak global economic recovery. To quantify the global macroeconomic consequences of these shocks, we employ a GVAR model estimated for 26 countries/regions over the period 1981Q1 to 2013Q1. Our results indicate that (i) a one percent permanent negative GDP shock in China (equivalent to a one-off one percent growth shock) could have significant global macroeconomic repercussions, with world growth reducing by 0.23 percentage points in the short-run; and (ii) a surge in global financial market volatility could translate into a fall in world economic growth of around 0.29 percentage points, but it could also have negative short-run impacts on global equity markets, oil prices and long-term interest rates.

1. Introduction

China's real GDP growth is slowing—from an average of about 10% over the period 1980–2013 to 7% between 2014 and 2016. The value of China's imports has also been contracting significantly since late 2014, weighing on economic growth in those exporting countries that cater to China's final demand (including Asian countries). This growth slowdown is largely driven by China's gradual "rebalancing" from exports to domestic demand, from manufacturing to services, and from investment to consumption (Fig. 1).[1] These developments, together with market concerns about the future performance of the Chinese economy,

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[1] See International Monetary Fund (2015) for details.

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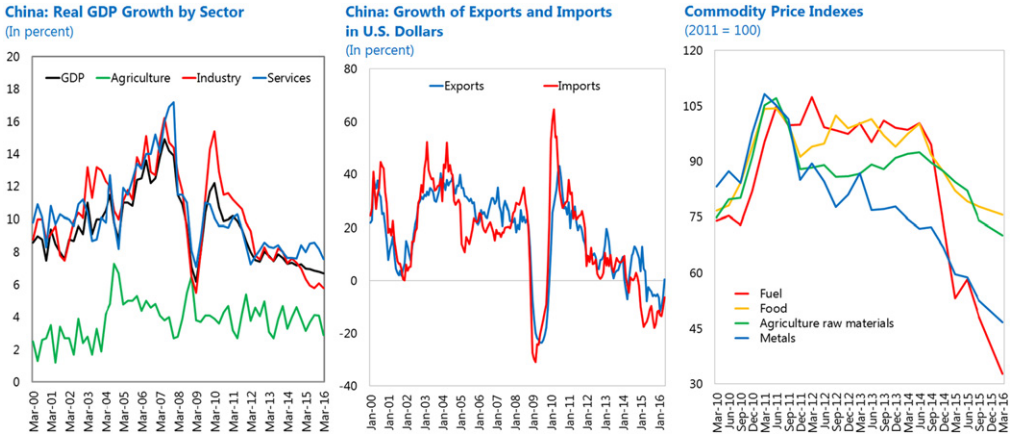

Fig. 1. China's real GDP growth and rebalancing.
Source: Dizioli et al. (2016).

are resulting in spillovers to other economies (especially to countries in the Asia and Pacific region) through trade links, weaker commodity prices, and financial linkages.

Given the emergence of China as a global force in the world economy in recent decades, any slowdown and change in the composition of its GDP growth can bring about significant spillovers to other systemic economies, and its trading partners, including those in the Asia and Pacific region, as well as emerging market commodity exporters. This paper investigates how shocks to GDP in China are transmitted internationally, conditional on alternative configurations of cross-country linkages in the global economy.[2] It also studies how changes in China's bilateral trade pattern, including that of trade in value added, may have affected the transmission of China's business cycles to other Asian countries over time.

Furthermore, if China's transition to the new growth model coincides with materialization of domestic financial sector risks, it has the potential to create even larger global spillovers. To account for such possibilities, we also separately examine the international spillover effects of surges in global financial market volatility and their dependence on the depth of financial linkages between countries (i.e., the size of their external balance sheets), in addition to trade and commodity price linkages. We note that excessive global financial market volatility could emanate from disorderly macro-financial developments in China[3] and/or if advanced countries' monetary policy tightening occurs at an accelerated pace, among other reasons (e.g. geopolitical tensions or sharp oil price fluctuations). This additional analysis is particularly important as indicated by the summer 2015 and January 2016 episodes of heightened global financial market volatility (Fig. 2). The VIX spiked in August 2015, when China's stock market prices fell sharply despite official support, and the renminbi fixing mechanism was adjusted, leading to renminbi depreciation vis-à-vis the U.S. dollar. Another flare-up occurred in January 2016 coinciding with another large price decline in China's stock market.

To investigate and quantify the global macroeconomic implications of China's slowdown, as well as the consequences of a surge in global financial market volatility, we employ a dynamic multi-country framework, first advanced by Pesaran et al. (2004), known as the Global VAR (GVAR). This compact model of the world economy enables one to analyze the international macroeconomic transmission of shocks (including that of China's growth slowdown), taking into account not only the direct exposure of countries to shocks but also the indirect effects through secondary or tertiary channels. The framework comprises 26 region-specific VARX* models (including a single Euro Area region comprising 8 of the 11 countries that adopted the euro in 1999). These individual (VARX*) models are solved in a global setting where core macroeconomic variables of each economy are related to corresponding foreign variables (constructed exclusively to capture each country's bilateral exposures to the other countries through trade and financial linkages). The model has both real and financial variables: real GDP, inflation, the real equity price, the real exchange rate, short and long-term interest rates, and the price of oil. Furthermore, we add an index of financial stress (FSI) as an observable common factor to the GVAR to analyze spillovers from surges in global financial market volatility, including from macro-financial developments in China.

Estimating the GVAR model over the period 1981Q1 to 2013Q1, we illustrate that a negative GDP shock in China could have significant global macroeconomic repercussions through trade links, weaker commodity prices, and financial linkages, especially for less-diversified commodity exporters and ASEAN-5 countries (except for the Philippines).[4] The effects on other Asia-Pacific

[2] While this paper focuses on negative spillovers from a GDP growth shock in China, it should be noted that the stimulus-induced growth in China after the global financial crisis significantly benefited the global economy during its recovery phase.

[3] Dizioli et al. (2016) argue that China's transition to a new growth model has already coincided with bouts of global financial volatility as the market reassessed the underlying strength of the Chinese economy.

[4] ASEAN-5 countries include: Indonesia, Malaysia, the Philippines, Singapore and Thailand.