



UNITED NATIONS
UNIVERSITY

Policy Brief

NUMBER 6, 2010

Overview

This Policy Brief focuses on links between the developing countries of Brazil, India, China and South Africa and the global economy, with a special emphasis on the implications of China's spectacular growth on developing economies and the rest of the world. The issues considered include changing patterns in trade, capital flows, and commodity prices. Both positive and negative impacts are identified and implications for international governance and foreign policies of various nations are explored.

Written by AMELIA U. SANTOS-PAULINO and GUANGHUA WAN

© United Nations University, 2010
ISBN 978-92-808-3087-3
ISSN 1814-8026

Licensed under the Creative Commons Deed "Attribution-NonCommercial-NoDerivs 2.5"

The views expressed in this publication are those of the authors and do not necessarily reflect the views of the United Nations University.



UNITED NATIONS
UNIVERSITY

UNU-WIDER

World Institute for Development
Economics Research

The Global Impact of the Southern Engines of Growth: China, India, Brazil and South Africa

THE EXCEPTIONAL ECONOMIC PERFORMANCES OF China, India, Brazil, South Africa (CIBS), and other southern economies has altered the socio-economic landscape of the world, with profound implications for international development and global governance. These economies' successes reflect, inter alia, their active roles in global markets, echoed in the rapidly growing flows of trade and capital. This has led to the evolution of the countries' comparative advantages, through technical upgrading and the diversification of production and trade capabilities, although with diverse degrees of success.

Trade between developing countries has increased by 10 per cent per year in the last decade and is expanding faster than any other trade flows. Commercial exchange is also increasingly more complementary and diversified, shifting from primary commodities to manufactured goods and high-end services. In addition, fast-growing developing countries have emerged as an important source of investment (e.g. South African investment in sub-Saharan Africa and Chinese investment in Latin America and Africa). Outflows of developing countries' foreign direct investment (FDI) have increased, from about US\$ 55 billion in the mid 1990s to near US\$ 300 billion in 2008. Considerable capital flows among countries of the South are on concessionary terms. For instance, China, India, and Brazil have significant assistance programmes, ranging from aid, export and investment opportunities to debt cancellation to Least Developed Countries (LDCs).

The developments in trade and public and private capital have prompted a surge in South-South political links. China, India, Brazil and South Africa are progressively altering global politics, and becoming increasingly active and vocal on the world stage. This will eventually have profound implications for international governance, particularly with regard to the functioning and impending reforms of the Bretton Woods institutions and the United Nations system.

The next section provides an overview of the sources, trends and consequences of the rise of China and India as global economic and political powers. The brief



then goes on to analyse the historical roots of the Southern Engines' development experiences, their growth outlook, and the impact of capital flows. The evolving global trade, technology

during their economic takeoff years. In particular, it is argued that (a) the segmentation of global manufacturing and services provided China and subsequently India with the opportunity

“The exceptional economic performances of China, India, Brazil, South Africa (CIBS), and other southern economies has altered the socio-economic landscape of the world, with profound implications for international development and global governance”

and innovation systems are also discussed. Finally, lessons for global development will be suggested.

The Rise of China and India: Impacts, Prospects and Implications

The spectacular economic success of China and India, project both countries as global economic powers. Current official figures report China as the second largest economy, overtaking Japan. China's trade and financial activities, India's emergence as a technology and innovation hub, and both countries' commerce and investment interactions with other developing nations have been covered extensively by international media. Not all media reports have been positive. For example, China has been criticised for the current account deficits and trade imbalances of USA and other European countries. Many also attribute increasing commodity prices, notably in oil and minerals, to China's growth. But these and other observations are not always backed by solid analytical research.

In assessing the recent economic developments in China and India a comparison is made to the growth experiences of other industrialized countries like Japan and South Korea

to make full use of their absolute advantage—low cost yet educated labour, and to integrate into the world economy; (b) the so-called export-led growth model may not apply to China and India as imports have undergone dramatic increases in recent years, particular for China; (c) FDI has played a pivotal role in China's economic growth and has a major presence in leading trade and investment sectors. It is suggested that both countries must redress sectoral imbalances, encourage technology upgrading and cope with future changes in demographic profiles which constituted a trigger to fast economic growth at the time of their respective economic reform.

The economic structures of China and India: Impacts and challenges

The successes of China and India reinforce the role of industrialization in economic development, particularly through outward-oriented activities in manufacturing industries, services and energy. But the traditional elements of industrial policy have had to evolve along-with with global and internal economic dynamics.

The conventional mechanisms driving the industrial take-off include increasing internal returns, transfer of labour into higher value activities, and

pecuniary externalities—that is, changes in prices leading to a redistribution of wealth. India's experience demonstrates that rapid growth based primarily on the service sector is possible. Thus, more attention needs to be given to strategies for the expansion of the service and possibly agricultural sectors, and to how services in rural areas and higher rural output can combine to achieve rapid growth and better human welfare in less developed countries.

Following the economic liberalization in India, the service sector has gained considerable prominence and currently accounts for the largest share of GDP (over 50 per cent). The liberalization reforms of 1991, in particular the deregulation and privatization of banking, insurance and telecommunications, led an expansion of the service sector, both in terms of trade volumes as well as productivity. However, productivity growth rather than a quantitative increase in service trade explains the value added growth in the service sector.

China's increasing reliance on energy and its environmental consequences are a major economic policy and national security concern. A key characteristic of China's development path is the commitment to fostering an innovation system as part of a knowledge-based economy, like other newly industrialized countries (NIEs) in a similar developmental stage. Certainly, achieving the goals of energy security and ecological balance is challenging. Despite the potential conflicts, regional cooperation—particularly with other Asian economies like Indonesia, Vietnam and India—may be crucial in establishing an ecologically sustainable development path.

Despite their economic success, the unequal distribution of welfare is a challenge for both China and India.

Regional disparities tend to mingle with political and social tensions, leading to economic and political instability. For instance, in the case of India research has shown that, if regional governments invest in infrastructure and related industries the possibilities of growth may be enhanced. This has bearings on regional inequality, which has been increasing in both China and India during the period of rapid economic growth and liberalization. The increase in regional inequality reflects the enlarging gap between the coastal areas in the case of China and the technology-intensive metropolis in the case of India, in contrast with the backward hinterlands. That is, economic growth has not led to catch-up as postulated by theory. Regional development is also afflicted by unequal variations in infrastructure development and the level of urbanization. In China, the export sector, and in India, human capital development are shown to affect regional disparity.

Furthermore, there is unequal distribution of welfare between male and female labourers. A large share of women workers is involved in informal activities in India and no significant policies address their welfare explicitly. Gains from policy reform in India, foremost trade liberalization, are more favourable for regular workers in the presence of wage rigidity. Because women are usually casual workers, wage rigidity has a relatively adverse impact on the female labour force, and hence introduces gender disparities into the production process.

China and India's development strategies: Lessons for developing countries

The Asian engines of growth are leading to a more globalized world. China and India affect global economic and political dynamics, and can provide

About the Authors



Amelia U. Santos-Paulino is Research Fellow at UNU-WIDER. Previously, she was a Research Fellow at the University of Sussex's Institute of Development Studies and has been a visiting scholar at the University of California, Davis.



Guanghua Wan is Principal Economist at the Asian Development Bank and a well-known China specialist and applied economist. He is also Honorary Professor of several leading universities in China including Fudan and Zhejiang Universities.



alternative sources of development assistance for developing countries.

China is regarded as an economic and political driver of the international economy, particularly in the trade arena and global governance. The economic engagement of China with developing countries and regions entails interactions in the areas of labour, human rights, international relations, security, and environmental sustainability. The potential threats are mostly associated with trade and financial flows, and with the social and political implications of China's financial outflows. Nevertheless, in the midst of the recent global economic crises, emerging countries proved to be a cushion to the declining flows of resources from advanced nations.

Another set of lessons for developing countries emanates from the countries' internal dynamics. The labour market peculiarities, particularly in post-reform China, are key in understanding how economic growth has led to labour surplus absorption. In China and South Africa, labour and migration dynamics have shaped each stage of the country's development. Consistent with the classical Lewis Model, surplus labour from traditional agricultural sector has shifted to the progressive industrial sector, whose growth over time should absorb the labour, promote industrialization and stimulate sustainable development.

China and South Africa share various binding characteristics related to the labour markets. These include an extensive rural-urban inequity, rapid rural-urban migration despite various restrictions, and high and rising real wages in the formal sector. China and South Africa differ, however, in the dynamism of their formal sector growth of output and employment, and in the growth of their labour forces.

China, a labour-surplus economy, is rapidly experiencing a scarcity of labour, whereas South Africa—which historically has featured worker shortages—is increasingly suffering from a labour surplus in the form of open unemployment. South Africa's labour market structure is affected both by the rural-urban migration as well as from inflows of foreign workers. But the standard Lewis model does not respond to the outlined cases: in neither China nor South Africa does the relative price mechanism operate. That is, changes in agricultural prices have been determined by government interventions and by other political economy influences, such as trade liberalization. In both countries there is a strong urban bias in terms of economic policies, and in the behaviour of formal sector wages, which are determined well above the market-clearing level.

Furthermore, China's comparative advantage in unskilled labour-intensive activities—alongside the scaling up of its production and export baskets—has iterated with an improvement in the investment climate. This is in step with a continuous, virtuous circle of growth. In contrast, South Africa's relatively slow growth rate is associated with its relatively mature economy, with resources other than unskilled labour being fully employed, and low investor confidence—on account, perhaps, of the social instability and crime that stem from high unemployment and concern about the extent of labour protection. Its comparative advantage in natural-resource-intensive activities, such as gold, diamonds and minerals, has not provided scope for the rapid expansion of exports, and therefore the process of cumulative causation has not unfolded into higher growth. Despite competent macroeconomic policies, a strong entrepreneurial sector, sound

infrastructure, and buoyant prospects for world mineral markets, South Africa's labour market trends, with their implication of rising numbers in poverty, pose a risk to the success of the economy as a whole.

Besides growth, international trade has affected employment in the manufacturing sector in India vis-à-vis developing countries in Africa and Asia. The ratio of unskilled labour-intensive goods in India's export basket has increased over time, defying the standard predictions of the classical theory of international trade. Also, the employment coefficients of exports and imports in India have consistently fallen over time, and the employment impacts of trade have declined in the post-reform period. Most of the rise in employment rates is attributed to increases in domestic demand and less to international trade.

India's experience reveals an unparalleled paradigm of the role of technological progress, and the transmission channels through which macroeconomic fundamentals can explain the country's economic success, primarily by inducing changes in productivity. Changes in labour market antagonisms and investment market frictions (such as taxing labour income) did not play a significant role. The Indian experience in targeting productivity evokes that of other successful Asian economies such as Japan in a similar stage of development, or during the take-off process.

Investment, Trade and Growth

Domestic and foreign investment

The role of FDI in the Chinese economy is well-known. Emerging empirical evidence shows that FDI complements rather than crowds out domestic investment. Thus, foreign investment has not only helped in overcoming the



shortage of capital, but also in stimulating economic growth through complementing domestic investment. Nevertheless, FDI may have brought some unwanted consequences such as increasing income and regional inequality, social stratification, little or declining capacity of labour absorption.

The impact of FDI on inequality can be examined by assessing whether and how it has contributed to convergence or divergence of income across China's regions. It is found that China's regions can converge to their own steady states, but only after controlling for the differences in saving rates, population growth, human capital endowment, transportation, FDI inflows and exports. And, FDI seems to have the same impact at the national and sub-national (regional) levels on economic growth. Consequently, it is the unequal distribution of FDI across regions, rather than FDI inflows per se, that has contributed to income inequality.

Accompanying FDI is the expansion of the private firms and multinational corporations (MNCs). Particularly, capital cities are attractive for firms to locate to. In India and China, labour-intensive firms tend not to locate in mid-sized or large cities as compared to smaller ones, due to higher wages, training and attrition costs. Although labour regulations in China and India deter firms from locating in the larger cities, firms in the export sector prefer to be in large cities. Proximity to inputs within the city has a positive impact on firm location. These findings have important policy implications for urban governance, infrastructure, labour and environmental policies, which are key issues for growth and development.

Domestic investment relies heavily on the proper functioning of the bank-

ing system, which has been considered the "weakest link" in China. A key issue is whether the Chinese state commercial banks have reacted positively and successfully to ownership reforms and other challenges ahead of the entry of foreign financial institutions. It is discovered that ownership reform and foreign competition have forced Chinese commercial banks to improve their performance, as their total factor productivity rose by 5.6 per cent per annum during 1998–2005. However, much of the productivity gain was due to efficiency gains and not so much due to technological progress.

Trade interactions with developing countries: Complementary or competitive?

China's performance and trade expansion have led to concerns about the competition pressure on other developing countries, especially in economies that share similar specialization patterns in medium technology and labour-intensive manufactures. China has had a significant impact on the exports of a number of Latin American countries and this influence has increased since China joined the WTO in 2001 with the phasing out of the Agreement on Textiles and Clothing. This impact is more acute on middle-income economies such as Central America and the Dominican Republic, and also some South American countries (for example, Bolivia, Brazil and Paraguay). Similarly, Latin American countries have lost a significant market share in USA to China since 2001, particularly for manufactured goods. This is a challenge for some middle-income economies, which feature a high concentration of production and exports.

Regarding trade dynamics in Asia, there is evidence that India faces competition from China in third markets,

especially in clothing, textile and leather products. There is moderate potential for expanding trade between the two countries. China poses a challenge for the East Asian economies, USA, and most European countries especially in medium technology industries. India appears to be a competitor mainly for its neighbours in South Asia; Chinese and Indian imports complement exports from the US, some European nations and East Asian countries, especially Japan, Korea, Malaysia, Singapore and Thailand, implying opportunities for trade expansion. Also, China's export structure is changing with the export of skill intensive and high technology products increasing and those of labour intensive products decreasing gradually. This suggests that the challenges to other labour intensive exporting countries, triggered by China's exports, might decrease in the long run.

Southern Growth Engines and Technology Giants: The Evolving Global Trade and Innovation Systems

The structure of production and the specialization of trade have evolved in recent years, notably in China, Brazil and India. Research further shows that developing countries have become increasingly engaged in sophisticated and technology-intensive production and trade, shifting from labour to capital-intensive commodities, and enjoying rapid productivity gains across all manufacturing activities. A key finding from the literature is that countries with higher share of technology-intensive sectors benefit more from technological learning and innovation. In addition, they are more able to respond to changes in the international markets and to enter new and more dynamic productive sectors.



The performance of Brazil with China, India and South Africa can be evaluated by analyzing the direction and intensity of structural change (i.e. those in which technologically intensive sectors increase their participation in the economy). Structural change has been relatively weak in Brazil, contributing to a less dynamic growth

personnel. In this regard, the government has played a key role in promoting innovation capacity in both countries, and in transforming the national innovation systems. Particularly worth noting are the government initiatives, in tandem with global drivers, which foster linkages of the science sector with the business sector, provid-

The exports of information, communication and technology (ICT) have been key in driving the Southern Engines' economic success, mostly in China and India. Empirical analysis shows that Chinese exports have experienced rapid growth since the early 1990s; the country's market share in both Japan and the US has risen

“The unparalleled performance of China and India, and their influence on the world economy, has been larger and faster than implied in earlier research”

performance since the 1980s. Furthermore, Brazil, India and South Africa structurally diverged with respect to the benchmark of the United States, but structural divergence was modest in China's case. This can partly be attributed to high growth rates in sectors such as electric machinery, which have a larger participation in China than in the USA. Also, the share of high and medium technology exports is higher in China than in the other countries.

Technical efficiency in Brazil, which represents an important source of growth, has improved substantially since the mid-1990s. But Brazil is less efficient than China and India. Changes in production efficiency over time are related to three structural factors: reduced government consumption, increased openness to trade, and more competitive exchange rates. Related to efficiency is innovation capacity, which is often measured through patents and high-tech and service exports. Innovation capacity has contributed significantly to the economic growth of China and India, due to the high investment in research and development (R&D) expenditure and R&D

ing incentives for innovation activities, and balancing import of technology and indigenous R&D effort. Importantly, innovation capacity has become essential for domestic firms' market success.

Regarding export productivity and specialization patterns, the Southern Engines are in line with those of wealthier and more advanced economies. This empirical finding challenges the traditional assumption that knowledge creation is exclusively the domain of advanced economies. Drivers of such change include investment in knowledge and innovation activities and the growing link between high-technology companies and local research. FDI and multinational enterprises' investment in knowledge creating activities such as R&D, is concentrated in a few emerging countries. China, India, and Brazil are considered three of the top ten destinations for foreign R&D expansion. China has experienced the strongest growth in scientific research, surpassing any country, whether developed or developing. Brazil and India have also built up prominent research records, with an extraordinary expansion of peer-reviewed studies in material sciences.

sharply; most of the Chinese ICT exports are attributed to foreign firms; and the shrinking market shares on third markets (i.e. other Asian developing countries) may be the result of the multinationals' relocation process rather than intensified competition from Chinese exports.

Lessons and Implications for Global Development

The Southern Engines' economic success, notably that of China and India, has been largely interpreted as the result of thriving economic and political reforms. The unparalleled performance of China and India, and their influence on the world economy, has been larger and faster than implied in earlier research.

However, the political economy view of such phenomena cannot be overlooked, particularly in the case of China. Therefore, it is pertinent to emphasize the role of the government in designing and implementing successful development policies and structural reforms.

First, a key lesson from China's experience is the adoption of a pragmatic approach to economic reforms



(which was the turning point in China's economic development), and the adaptive capacity of the countries' economic agents to this process. Second, industrial policy has been at the heart of development policies and strategies in developing countries, although not par-

tutional arrangements needed for reforms to succeed and to achieve desirable ends. Many generations of reforms have led an international agenda, but the lessons provided by *sui generis* experiences such as the Asian giants—China and India—and other

“Rapid growth has been a key driver behind poverty reduction and the expected convergence of per capita incomes at the national and international levels”

ticularly so in India. As in the case of other strategies and economic reforms, this policy's implementation produced varied outcomes, and with different levels of success. Third, trade and the liberalization of commercial policies have played a primary role in the southern engines' growth success.

The interface of trade liberalization and domestic reforms has contributed to their success, akin to developing and transition countries. The substantial restructuring of state-owned enterprises is another area of policy accomplishment. Also, the formulation of economy-wide development strategies should be a balanced outcome of the government and private agent decisions and choices, reflecting at the same time the country's evolving and comparative advantages. These policies and processes should also adjust to the continually changing global economy.

Needless to say, growth and development strategies are challenged by the multiplicity or non-uniqueness of insti-

successful emerging economies such as Brazil and South Africa might prove to be more inspiring and generate more positive spillovers for other developing countries due to their autonomous and uncompromised nature.

The development approaches and growth paths of the Southern Engines, and other emerging countries, highlight the impact on the global distribution of wealth. Rapid growth has been a key driver behind poverty reduction and the expected convergence of per capita incomes at the national and international levels. This has prompted the growth of a rapidly emerging “global middle class”—especially in China and India, defined as a group of people who can afford, and demand access to, the standards of living previously only accessible to higher income groups or more advanced countries. Notwithstanding these positive developments, fast growth may well widen income distribution within countries, and this should not be overlooked.

This Policy Brief is published within the UNU-WIDER research project “Southern Engines of Global Growth” directed by Amelia U. Santos-Paulino and Guanghua Wan. More detailed findings are set out in a series of Working Papers and Journal Special Issues (available to download free at: http://www.wider.unu.edu/research/projects-by-theme/globalization/en_GB/southern-engines-of-global-growth/). For further details, please also see Amelia U. Santos-Paulino and Guanghua Wan (eds), *Southern Engines of Global Growth* (Oxford University Press, 2010) and Amelia U. Santos-Paulino and Guanghua Wan (eds), *The Rise of China and India: Impacts, Prospects and Implications* (Palgrave Macmillan, 2010).



UNITED NATIONS
UNIVERSITY

UNU-WIDER

World Institute for Development
Economics Research

UNU World Institute for Development Economics Research (UNU-WIDER) is a research and training centre of the United Nations University. UNU-WIDER was established by the United Nations University (UNU) as its first research and training centre and started work in Helsinki, Finland in 1985. The Institute undertakes applied research and policy analysis on structural changes affecting the developing and transitional economies, provides a forum for the advocacy of policies leading to robust, equitable and environmentally sustainable growth, and promotes capacity strengthening and training in the field of economic and social policy making. Work is carried out by staff researchers and visiting scholars in Helsinki and through networks of collaborating scholars and institutions around the world.

INSIDE:

Policy Brief

The Global Impact of the Southern Engines of Growth: China, India, Brazil and South Africa

The economic performances of the Southern Engines has altered the socio-economic landscape of the world, and global development.

www.wider.unu.edu

Finland

Helsinki

Karajankalliokatu 6 B FIN-00160

Economics Research

World Institute for Development

United Nations University

World Institute for Development
Economics Research

UNU-WIDER

UNITED NATIONS
UNIVERSITY

