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Growth in major emerging countries: Convergence and tensions

Emerging countries now account for almost 40% of world GDP, over half of which comes from the four giants, China, India, Brazil, Russia, against only 20% ten years ago: strong and, for the first time in decades, relatively steady growth, has led to this impressive catch-up.

The convergence between poor and rich countries in terms of living standards is far from being purely mechanical. However, some of them, especially among the "major emerging countries" seem to have entered into an accelerated convergence path, marked by a structural transformation entailing a reallocation of production factors to the most productive sectors. So far they have primarily relied on the development of the manufacturing sector producing tradable goods, given that it converges upon the technology frontier defined by the most advanced countries.

An undervalued currency, especially in China, has been the basic policy instrument, but it has its limits. For business partners facing the most severe economic crisis since World War II, bearing the weight of global imbalances is proving increasingly difficult. Emerging countries are forced to respond to this tension by accelerating improvements in production to rely less on this weak currency strategy. They must also use any available lever to stimulate domestic consumption even if this means facing a number of institutional barriers (modernisation of the financial system, social security, shared growth etc.). Finally, the development of political regimes also conditions the integration of these countries into the globalization process.■

THE CHALLENGES

Growth in emerging countries is allowing them to catch up with living standards in developed countries. Such catching up involves meeting a number of conditions, some of which are not always clearly identified.

The major emerging countries have known strong and sustainable growth marked by a transformation of their economies which is profoundly changing international trade and affecting the economy of both developed countries and producers of raw materials or other developing countries.

The development strategies implemented, though they have common characteristics, are the result of the dynamic of each country. An analysis of the mechanisms at work highlights the tensions that will appear in the long run and are likely to be a source of worry to the leaders of these countries and to shape economic policy in the years to come.

THE OUTBREAK OF EMERGING COUNTRIES

Strong and sustained economic growth in the big four – originating the term "BRIC"

The rapid, often double-digit growth in such populated countries has been unprecedented in economic history and should transform the global economy over the long term. The share of developing countries in the global population has been growing steadily and is at 85% today, while their share in global GDP has increased significantly since the beginning of the century; less than 20% in the 1990s, 35 % in 2012 and 40% in 2015 according to IMF forecasts. Of the twenty countries set to dominate the world in 2015 (alone representing 80% of global GDP), ten will be emerging countries.

Among these emerging countries, the BRICs stand out. With over 40% of the world's population, these four alone represent almost 20% of global GDP in 2012, only slightly less than the U.S. GDP (which they should overtake in 2015), and alone produce 60% of the GDP of emerging markets. Among them, China initiated the takeoff in the second half of the 1990s, followed in the 2000s by the other three (Box 1).

Box 1

Emerging countries and BRICs: two finance–driven concepts

The world has, by convention, been divided into two distinct blocs since the fall of the Iron Curtain. On the one hand, some thirty countries are termed as "developed" or "industrialized": countries in Western Europe, North America and Australia, New Zealand and certain Asian countries. The rest of the world comprises over 150 countries (and 85% of the world population), once termed Third World countries in the words of Alfred Sauvy, then "developing" countries. Those among them which have experienced strong growth are now called "emerging" countries.

The term "emerging" gradually established, finding consensus at the intersection between multilateral and financial institutions. It was in fact the economists of the International Finance Corporation (IFC, a member of the World Bank Group), who in the early 1980s, first coined it. At the time, the IFC put up equity investment portfolios specialising in developing countries, and considered that "emergence", a positive term, would better convince private investors: from that point these countries were christened "emerging markets".

Today, the term refers to countries experiencing accelerated industrialisation, as opposed to developed countries. The semantic shift underscores the importance of finance in globalisation, but more importantly, the appearance of the word reflects the key role played by the public sector, particularly multilateral institutions in defining the concepts of development and globalisation.

BRIC, for its part, is, ultimately, a marketing concept that was successful. Conceived in 2001 by economists at Goldman Sachs to consolidate the big four (and acronym for Brazil, Russia, India and China), the concept was instantly adopted by the financial world following the publication of the article "Dreaming with the BRICs: the Path to 2050". At the same time, the media and academic circles embraced it. The political and institutional web worlds adopted it, to the extent that an informal intergovernmental institution of the same name, a "BRIC" summit, was set up in June 2009 and annually brings together the leaders of the four countries (joined in 2010 by South Africa, turning the group into "BRICS"). A concept from the private sector thus became an official intergovernmental authority.

In terms of global trade, BRIC countries also represent a high proportion of trade flows. They should, by 2015, achieve 20% of global trade, almost as much as the euro area and the United States. Growth in trade is even more spectacular than GDP: these countries accounted for only 4% of world trade in the early 1990s.

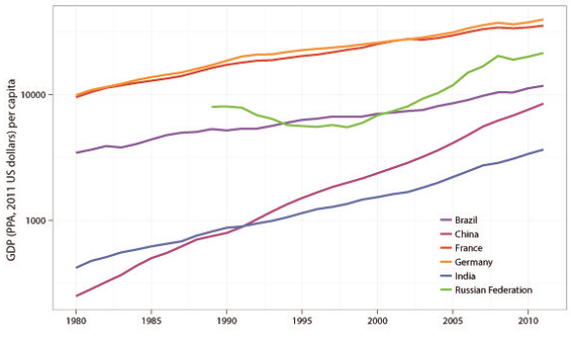
In terms of direct investment, given their growth prospects, their position in the global production chain, the BRIC countries are part of increasingly high flows of direct investment – 16% of the total, nearly half of which from China. This country is the world's second largest recipient of FDI, Brazil, Russia and India respectively fifth, eighth and fifteenth. In addition, and this new factor is significant, emerging countries are now able to invest a portion of their savings abroad, when they had been, for over a century, only recipients of capital from the rich countries.

What were the conditions allowing the BRICs to catch up?

The period following World War II saw optimistic scenarios of economic recovery feeding early reflections on modern economic growth(1), while today only BRICs, and in the past, only Japan and Korea, moved away from other poor countries. In an open world, with free movement of goods and services, ideas, flows of capital and labor, there is, in theory, no reason why certain countries should grow while others lag behind. Not only will all developing countries experience higher growth than developed countries, thus attaining the same standards of living(2) but this growth will be stable enough to diminish inequality(3) among countries. If all the above conditions are met, there will be no obstacle to poor countries catching up with rich countries: they follow a path of absolute convergence, regardless of the countries structural characteristics (saving rate, population growth rate or level of human capital).

The reality of economic development has, however, proved more complex than the model predicts. Rich countries tend to stay(4) so, and countries once considered almost developed declined(5), while poor countries tend to remain poor. Only some countries manage to sustainably lift themselves out of poverty. If economic development may be conceived as the strong and steady growth in GDP, then the BRIC countries fall into this latter category (Figure 1).

Figure 1
Evolution of gross domestic product *per capita*



Source: World Development Indicators, World Bank.

So why are these "convergence club" countries the only ones to catch up with developed countries? Poor countries could catch up but if they meet certain conditions – known as conditional convergence – allowing them to

(1) Solow, R.M. (1956). "A Contribution to the theory of economic growth", *The Quarterly Journal of Economics*, Vol. 70, No. 1, 65-94.

(2) This is referred to as convergence which defines the GDP/capita effect for the poorest countries wich catch up with the richest countries.

(3) β-*convergence* denotes the reduction of the dispersion of GDP/capita (income) across countries. Though the two concepts seem close, they reflect two different phenomena. If the absolute β-*convergence* shows the existence of a trend in the reduction of gaps, random shocks affecting national economies, however, can counteract this trend and increase the dispersion of the distribution of GDP/capita. σ-*convergence* occurs when β-*convergence* dominates the effects of random shocks. See Le Pen, Y. (1997). "Convergence internationale des revenus: un tour d'horizon", *Revue d'Économie Politique*, 715-756.

(4) Land of the Industrial Revolution, England has always managed to retain its place among developed nations even though it lost its position as the leading economic power in favour of the United States after World War II.

(5) At the end of the nineteenth century, Argentina was one of the major economic powers. It was once richer than a country like Italy, now a member of the G7.

adopt the production standards of developed countries. This presupposes the presence of institutions promoting the best possible allocation of production factors, such as labor and capital.[6] In a longer term, the total factor productivity must increase as the factors reach the technology frontier. This requires not only significant investment in human capital (education and training of skilled labor) but also in physical capital (investment through domestic savings or foreign capital) to initiate an endogenous growth mechanism.[7]

If we analyse statistics expressed as a share of GDP (Table 1) for comparison purposes, the BRICs save as much as Germany and France, and even more in the case of China. Regarding spending on education, their figures are close to those of Germany and France, except for China. Only R&D amounts are much lower. To what extent did a high saving rate (synonymous with investment), education spending and spending on research and development enable BRICs to catch up in part with developed countries such as Germany and France? As explained above, these investments in physical and human capital enable BRICs not to catch up with the growth rate, but with the total factor productivity (TFP) level of the leading countries.

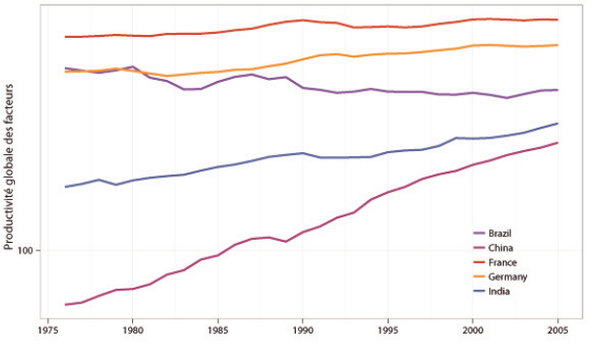
Table 1
Structural parameters of the economy (% of GDP)

	CHINA	BRAZIL	RUSSIA	INDIA	FRANCE	GERMANY
Saving	44	17	28.5	28	20	22
Education	1.9	4.5	3.6	3.7	5.7	4.5
R & D	1.0	1.0	1.1	0.7	2.8	2.5

Source: World Development Indicators, World Bank.

The notion of technological[8] frontier is illustrated in Figure 2, which shows the evolution of the total factor productivity for these countries. If there still are significant differences in terms of technology frontiers, catch-up is also undeniable.

Figure 2
Total factor productivity



Sources: Ayhan Kose, Prasad and Terrones[9] and Centre d'analyse stratégique for calculations.

The evidence presented here is still only theoretical. Conditions enabling this catch-up, which, let us recall, have not been fulfilled by all countries in the developing world should be further detailed. The paradox of differentiated convergence can then be partially elucidated in that productivity convergence is absolute only in the sectors exposed to international competition.

EXPORT-BASED GROWTH STRATEGIES SINCE THE EARLY 1990S

A purely liberal policy is inappropriate

According to the neoclassical theory, strong growth can be expected if entrepreneurs invest in new high-potential activities and if the production factors, capital and labor are prioritized for these sectors. This process can take place naturally and lead to an optimal allocation of resources in the sense of economic efficiency, if the markets are functioning properly and send the various actors the appropriate price signals as incentive. Efficient markets and effective institutions are therefore required to enable the development of technologically advanced

(6) Barro, R.J. (2012). Convergence and modernization revisited, NBER Working Paper No.18295.
(7) See Aghion, P., Howitt, P. (1997). *Endogenous Growth Theory*, The MIT Press.
(8) The technological frontier is the set of the most efficient existing technologies.
(9) Ayhan Kose, M., Prasad, E.S. & Terrones, M.E. (2009). "Does openness to international financial flows raise productivity growth?", *Journal of International Money and Finance*, vol. 28(4), 554-580, June.

industries, which more than others use a marked division of labor and for which compliance with contractual commitments (private property, intellectual property, credit relationship, etc.) is crucial. The orthodox policies of liberalization and opening up of the world market often prove insufficient if these conditions are not met.

To achieve such a first-best optimum is not manageable by developing or emerging countries. Indeed, it requires the emergence of new institutions which comprises more than mere regulatory or legislative reforms. A real institutional change alters the rules of the game, so to speak, in its broadest sense, as the cognitive constructs that shape expectations by the various actors of the actions of others.(10) Except in times of major crises, institutions change only very gradually and reforms may be hindered by various interest groups if they are to affect their positions. Large-scale institutional reforms are clearly closely linked to political changes. It is therefore not surprising that calls for structural reforms and the strengthening of the rule of law, still vague in their recommendations, should remain at the theoretical level as long as the political change they require keeps being generally unrealistic.

Reform that is accomplished is thus the result of a complex process. This entails identifying the drivers of development that can be activated, in ways that may seem unorthodox. This means improving production incentives in sectors with high potential for catching up while factoring in the interests of those actors capable of hampering reform.

The significant role of tradable manufactured goods

While convergence at the macroeconomic level is mainly conditional, a type of absolute convergence(11) seems to have been empirically established at sectoral level. Dani Rodrik(12) shows that since 1990, labor productivity in the formal manufacturing sector converges unconditionally. Moreover, this convergence is much stronger than in the countries that show a low initial level of productivity. In addition, this convergence is higher in industries far from the technology frontier. Finally, these results are not inconsistent with the absence of convergence of the economy as a whole. Indeed, the productivity level of the economy may stagnate if the share of employment increases in "bad" sectors where potential productivity gains are low, at the expense of those with high productivity gains. These areas consist mainly of manufacturing industries wherein it is easier to stimulate the technological catch-up mechanism and which are easier to position to face international competition.

The ability to allocate production factors in sectors with high catch-up and growth potential is a key element for the development of emerging countries. It provides, in the initial phase, a non-negligible economic catch-up, although it can also reveal its limitations in the long term. By analyzing industry data over the period 1990-2005, MacMillan and Rodrik(13) show that China and India have managed to develop manufacturing sectors with strong productivity growth, at the expense of agriculture, while enjoying a significant intra-sectoral catch-up effect (Table 2). In contrast, Argentina and Brazil have suffered from the change in the composition of employment which is moving towards more services, including in the public sector; unlike Turkey(14) for example, which, without the benefit of a intra-sectorial productivity catch-up as marked as in Asian countries, nevertheless reaps the benefits of better employment distribution in sectors with increasingly high productivity. So even if intra-sectoral productivity growth (1.74%) is not as strong in comparison with China (7.79%), India (3.24%) or Argentina (2.94%), this reallocation (1.42%) accounts for almost half of the average growth in labor productivity (3.16%). Developed countries, meanwhile, at the technology frontier, must settle for merely benefiting from intra-sectoral productivity gains.

Table 2

Annual growth rates of labor productivity, 1990-2005 (%)

	Due to changes in sector allocation of labor	Due to changes in intra-sectoral levels of productivity	Total
China	0.99	7.79	8.78
India	0.99	3.24	4.23
Turkey	1.42	1.74	3.16
France	0.00	1.20	1.20
United States	– 0.29	2.09	1.80
Brazil	– 0.25	0.70	0.44
Argentina	– 0.59	2.94	2.35

Note: The average growth rate of labor productivity can be broken down into a share that is attributed to the reallocation of workforce among sectors showing constant productivity, and a share attributed to changes, usually increases, in productivity in each sector for a given allocation of labor.
Source: McMillan and Rodrik (2011).

(10) North, D.C. (1990). *Institutions, Institutional Change and Economic Performance*, Cambridge University Press.
(11) β-*convergence.*
(12) Rodrik, D. (2011). Unconditional convergence, CEPR discussion paper No.8631, November.
(13) McMillan, M. S., Rodrik, D. (2011), "Globalization, Structural Change and Productivity Growth", *NBER Working Paper,* n° 17143.
(14) India, China and Turkey are among the rare countries including Thailand and Indonesia, where the share of the composition effect in labor productivity growth is greater than or close to 1%. McMillan, M.S., Rodrik, D. (2011), *op.cit.*

The development of high productivity industries often happens in a context comprising a number of market imperfections. Positive learning and coordination externalities could justify government intervention. This means ensuring the dissemination of practices that require the accumulation of skills and knowledge common to an entire sector and coordinating investment to raise enough capital to start new industries. Information asymmetries in the credit or labor market can also limit the emergence of new industries without government intervention. Thus the limited liability of entrepreneurs (and therefore faltering investor confidence) may force them to abandon profitable projects due to lack of funding. Finally, the existence of a wage premium to stymie turnover increases labor costs and can limit reallocation to areas requiring scarce skilled labor.

In all the post-war "success stories", governments have played a central role in promoting infant industries. Various instruments of industrial policy were mobilized from subsidies to exports, to the establishment of special zones dedicated to exporting companies (China), the protection of national companies (Brazil), credit grants and support for investment (Korea, India).

Emerging countries have nevertheless used a common ingredient, as did Japan or South Korea, for example: currency undervaluation[15], a very safe way to subsidize industrial exporters and therefore growth. So China, while acceding to the WTO, has substituted a cost advantage induced by the undervaluation of the RMB to its direct subsidies to export industries. An undervalued currency has another advantage; it reduces the pay gap between export sectors and traditional industries, which, if completely determined by the market, would create tensions as they undermine both the legitimacy of reforms and those instigating them.

The "awakening giants" – China and India

China

Original and progressive actions were implemented by successive politicians to deal with specific economic and institutional constraints. This way, China could encourage investment and employment[16] in the 1980s by developing "township and village enterprises" (TVEs), involving local political leaders and private contractors. To clearly mark support for these enterprises (TVE) the government granted them privileged access to credit.

In the 1990s, China's economic transition entered a new phase with the opening of the economy to foreign investment and the rehabilitation of private entrepreneurship in the Constitution (amendment recognizing that the private sector is an important component of the changing economy) state support of TVEs ended, causing bankruptcies and privatizations but the surviving collective companies gave birth to industrial clusters. In addition, new decentralization laws introduced in the eighties linked careers, and the means available to local leaders, to tax revenues beyond a certain contract threshold. As residual beneficiaries, these officials thus had incentive to encourage the local economy. Later, the 1994 tax reform established a separation between local and national tax administrations.

The price signal as incentive was restored without a general liberalization of the economy but by adopting a "dual-track" approach to liberalization.[17] Quota systems and regulated prices, inherited from planned production continued for existing players (rentier producers and rationed consumers) but in allowing trade at market prices at the margin, new production was thus effectively engineered and allocated.

In addition, economic openness was limited to special economic zones aiming to accommodate foreign investment that supports production of export goods at world market conditions, while maintaining restrictions on imports to protect the domestic market.

India

India's growth has often been attributed to the liberalization of the economy illustrated by the dismantling in 1991 of the License Raj, a set of regulations introduced by Nehru, inspired by Soviet planning. In fact, the real take-off of the Indian economy came about in 1980, and growth was stronger during the eighties than in the years following the dismantling of the Licence Raj.

(15) An undervaluation of 20% would correspond to a 1.7 percentage-point increase in Chinese growth according to Rodrik, D. (2008). "The real exchange rate and economic growth", *Brookings Papers on Economic Activity* (Fall), 365-412.

(16) Employment in TVEs went from 28 million in 1978 to a peak of 135 million in 1996. Production in TVEs concurrently reached 1800 billion Yuan in 1992 from only 49 billion Yuan in 1978. Naughton, B. (2007). *The Chinese Economy: Transitions and Growth*. Cambridge: MIT Press. Vogel, E.F. (2011). *Deng Xiaoping and the Transformation of China*. Cambridge: Belknap Press of Harvard University Press.

(17) Qian, Y. (2003). "How Reform Worked in China", In Rodrik, D. (Ed), *Search of Prosperity: Analytic Narratives on Economic Growth*, Princeton University Press, 297-333.

Growth or productivity per head was about 3 percentage points in the early eighties, while a slight decrease from 0.3 to 0.6 was recorded between trends in 1980-1990 and 1990-2000. It is attributed to a change in mindset of Congress Party leaders after they regained power in 1980. The government under Indira Gandhi adopted a "pro-business" policy benefiting, in part, from an established manufacturing industry and, secondly, from the nascent IT and telecommunications sectors.(18) This attitude should not be confused with a "pro-market" bent which would have benefited consumers and new entrants. It constituted, at best, an internal liberalization, the broader one that addressed the economy as a whole coming into play only in the 1990s. Substantial investments enabled further development in the service industry based on information and communication technologies with strong export potential. While growth has been strong in all states of the federation, there is no convergence among them. Fixed capital formation in manufacturing, which had been sluggish since 1960, has picked up since the 1990s reforms. Better budgetary discipline has helped generate resources to finance infrastructure which still remains one of the country's weak points.

Since the early 1980s, these two giants have thus experienced a phenomenon of absolute convergence in specific labor-intense manufacturing sectors. Achieving convergence, however, requires the development of other more technology, capital and skilled-labor-intensive sectors that are less likely to experience absolute convergence.

THE SUSTAINABILITY OF GROWTH IN EMERGING MARKETS

Convergence, exacerbation of tensions and risks of decline

Long-term growth and risk scenarios for major emerging countries are essential.(19) Forward-looking by definition, they combine economic theory and knowledge of the real economy.(20) Risk scenarios focus on situations of precarious balance, sometimes revealed during an economic shock (dependence on raw materials, profit-sharing between different social and ethnic groups, international financing of local debt), situations that are inherently fragile (poorly controlled banking systems, unbalanced public finances).(21) However, upstream of these exercises, the question of tensions arising from the mechanical sequences of events should be asked.

Eichengreen *et al.*(22) have attempted to identify macroeconomic factors affecting the probability of a slowdown in growth, understood as a permanent loss of two points of growth.(23) The slowdown is all the more likely as the purchasing power parity exceeds U.S. $ 17,000(24), the reduction in the share of manufacturing employment is close to the threshold of 23%(25) and the *per capita* income of the country is approaching 58%, not far behind the lead country, in this case the United States. The slowdown is also all the more likely when these countries have an undervalued currency. This strategy can both prove gainful when it comes to redirecting labor from agriculture to export-oriented production of manufactured goods in the early stages of development, and a hindrance when innovation becomes more crucial. However, countries with undervalued currencies generally have difficulty letting it appreciate particularly because this penalizes the export sectors that resist this evolution.(26)

An undervalued currency does not always mean happy trading partners

An avowed policy of undervaluation has allowed China to accumulate huge foreign reserves while the U.S. racked in a trade deficit, and to finance household and federal government debt. Though the United States has traditionally condemned the undervaluation of the yuan, the situation benefited from the tacit acceptance of both parties – "It takes two to tango". The current economic crisis, however, could create new tensions. Indeed, the rise of mass unemployment in the United States and Europe makes distortions of competition caused by undervalued currencies less bearable which could then lead to trade disputes.(27)

(18) Rodrik, D., Subramanian, A. (2004). From "Hindu Growth" to productivity surge: The mystery of the Indian growth transition, IMF Working Paper 04/77.
(19) See Kousnetzoff, N. (2001). Croissance économique mondiale : un scénario de référence à horizon 2030, CEPII, Document de travail 2001-21.
(20) See Chauvin, S., Lemoine, F. (2005). L'économie indienne: changements structurels et perspectives à long terme, CEPII Document de travail 2005-04.
(21) See Goldstein, M. (2005). What might the next emerging markets financial crisis look like?, IIE Working paper, 05, July.
(22) Eichengreen, B., Park, K., Shin, K. (2011), When fast growing economies slow down: International evidence and implications for China, NBER Working Paper No.16919.
(23) In particular, it concerns a loss of two points of growth that persists seven years after a seven-year period during which production grew by more than 3.5% per year.
(24) China and India are far ahead in terms of purchasing power parity (PPP) respectively at $ 8,500 and $ 3,800. However, China could reach this level by 2015 if it grows at an average of 9.3% per year, as it did during the period 1998-2007 or in 2017 if growth is only 7%.
(25) The share of employment in manufacturing was 11.3% in 2002 (latest available data). The current share should approach this critical value.
(26) Calvo, G.A., Reinhart, C.M. (2002). "Fear of floating", *Quarterly Journal of Economics*, 107 (2), 379-408, May.
(27) Began in fall 2010 and termed "currency wars".

Although China has revalued its currency several times, the currency remains largely undervalued even though observers differ on its importance. The convertibility of the yuan and the opening of China's capital account would minimize these global imbalances. However this does not seem to be on the agenda at present since countries with open capital accounts have experienced severe crises. Moreover, maintaining a fixed exchange rate requires the imposition of controls on capital movements. If capital flows are free, the pressure they exert on the exchange rate makes nominal anchoring difficult. Therefore, it is not surprising that countries with nominal anchor exchange rates are also those with controls on capital movements.[28] This policy was reinforced by the 1997 financial crisis. China has, indeed, been the Asian country that has best resisted. The resilience of the Chinese economy is due, among other things, to the effectiveness of its controls on the movement of capital inflows. These uncertain times of financial crisis can only dampen the willingness of China to internationalize its currency.

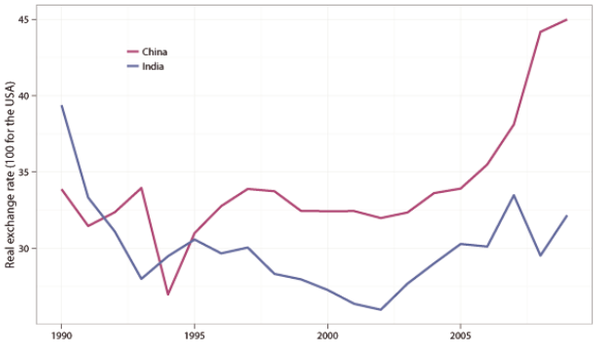
China now allows exchange reserves with countries producing raw materials (Argentina), it develops financial instruments for its Asian trading partners and allows tightly controlled companies some trade in offshore RMB on the Hong Kong exchange market. It does not seem to be looking to float its currency in the near future. The weakness of the Chinese financial sector is one of the reasons explaining the use of the policy of undervaluing the yuan to promote a long saving cycle: a part of Chinese savings is invested in U.S. treasury bills while a significant portion of the funding of the Chinese economy comes from foreign investment directed to the most productive sectors. The dysfunctions of the financial system, whose institutions are closely linked to the Chinese Communist Party, also contribute to very high saving rate in China because it allows local entrepreneurs unwilling to depend on the system to fund them selves.

The upgrading issue

Seen from the outside, while this exports-based growth strategy backed upon an undervalued currency creates tension with trading partners, it also creates internal tensions. Sharing the fruits of growth between labor and capital leads to a rebalancing of the share of value-added in favor of labor.[29] Unit labor costs rose by about 25% between 1995 and 2005 deteriorating China's price competitiveness (see Figure 3[30]) regardless of the strength of its nominal anchor in relation to the dollar. A growth strategy based on an undervalued currency can only be a temporary solution.

Figure 3

The appreciation of China's and India's real exchange rate



Source: Penn World Graph, Version 7.0.[31]

Therefore, in the medium- and long term, only the development of trade patterns will ensure the sustainability of BRICs exports, and therefore their growth. Currently, trade in intermediate goods prevails as an important vector of international division of labor and FDI. This transformation of trade is already at work in the case of China. Thus, in recent years, the country has diversified from just selling cheaper products; it is now both selling and importing products, which corresponds to a specific level of development, as can be deduced from changes in the composition of Chinese exports in terms of use (Figure 4). Fragmentation of the value chains resulting from the international division of labor has lead to a downward trend in exports of consumer goods in favor of exports of capital goods, parts and components.

In addition, China is increasingly importing intermediate goods, parts and components in particular, which are integrated into the production process (Figure 4). These two developments, the connection between the type of exported and imported goods are in fact related.[32] By

(28) Milesi-Ferretti, G.M. (1998). "Why capital controls? Theory and evidence," In Eijffinger, S., Huizinga, H., (Eds) *Positive Political Economy: Theory and Evidence*, Cambridge: Cambridge University Press, 217-247.

(29) Dullien, S. (2004). "China's changing competitive position: Lessons from a unit-labor-cost-based REER", UNCTAD Background Paper.

(30) India partly floats its currency so labor costs are not sufficient to explain the loss of competitiveness.

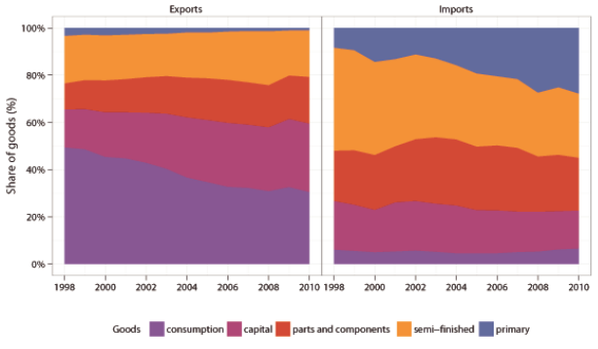
(31) Heston, A., Summers, R., Aten, B. (2011). Penn World Table Version 7.0, Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania, June.

(32) Feng, L., Swenson, D., Li, Z. (2012). The connection between imported intermediate inputs and exports: Evidence from Chinese firms, NBER Working Paper No18260.

importing more intermediate goods, firms improve their productivity given the technology-intensive goods used. This upgrade, in turn, augments their export ability.

This quantitative but mostly qualitative development in Chinese trade opens new perspective on the future of global imbalances. As the country exports more sophisticated products, China may less rely on the exchange rate to ensure its growth.

Figure 4
China's imports and exports, in terms of use



Source: BACI database, Centre d'analyse stratégique for caulculations.

The show case *par excellence*, for developed countries, is Germany. Given its specialization in products with high added value and a sector distribution of its market share that is highly diversified internationally(33), the country can sell its products at very high prices abroad while generating a trade surplus despite an overvalued currency.

This strategy will have a differentiated impact on China's trading partners in Europe. Though France and Germany have roughly the same structure of Chinese imports (Figure 5), the nature of their exports is different, with France showing a preponderance of consumer goods exports. France, therefore, runs the risk of suffering from this upgrade if it does not increase the sophistication of its production.

Figure 5
France's and Germany's trade with China

Source: BACI database, Centre d'analyse stratégique for caulculations.

Domestic consumption as a driver of growth

In the short term, flexibility of the nominal exchange rate cannot be a solution, given the sluggish development of the Chinese financial market. In addition, upgrading is a structuring but gradual process. Most of the emerging countries can only rely on domestic consumption to boost growth. This trend is consistent with convergence: the more a country develops, the more its consumption structure is similar to that of developed countries.

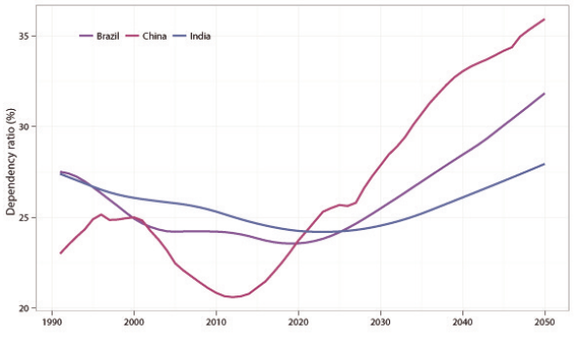
Therefore, economic growth, in the case of China, will depend more on domestic demand and less on exports. This mechanism is already at work. Since the 2007 financial crisis, global demand has contracted, reducing Chinese exports. China's trade surpluses have dropped from 7% of GDP in 2007 to 2% in 2011. Today, it is mainly domestic demand that drives economic growth.(34) Moreover, as a growing share of consumption in GDP reduces the probability of a slowdown, as defined above(35), China is not expected to slow down this process and could then capitalise on renewed domestic demand to significantly contribute to the reduction of global imbalances.

(33) Fontagné L., Toubal F. (2011). Commerce de biens intermédiaires et compétitivité. Prospective du couple franco-allemand, Rapport du Sénat, 663, Paris.
(34) Lemoine F., Ünal D. (2012). Scanning the ups and downs of China's trade imbalances, CEPII Working Paper, 2012-14, June.
(35) Eichengreen *et al.*, *op.cit.*

However, the contrasting demographic trends within emerging countries could slow the growth of domestic consumption. Thus, the dynamic of the Chinese population should lead to a decrease of the share of labor and to a strong growth in the dependency ratio[36] over the next decade, increasing the households' propensity to save. This stems from structural reasons, such as lack of social security, encouraging precautionary and retirement savings of a rapidly aging population. Moreover the one-child policy has led to a shortage of young women and young men are therefore forced to over-save in order to marry.[37]

In contrast, India's growth has been accompanied by a growing middle class and should benefit fully from the demographic dividend, that is to say the reduction in the share of its dependent population, until 2025 (Figure 6), and the increase in the share of its labor force.

Figure 6
Evolution of age dependency ratios



Source: US Census Bureau, International Database.

The share of income spent on consumption is also essential to ensure an endogenous source of growth, once a certain level of development has been reached. It involves the development of a middle class with enough income to consume. While the consumption of Indian households reached 54% (as a share of GDP), a level similar to other countries at this stage of development, it is only 37% for China.

Constraints on the dynamics of institutional change

Institutional dynamics that have accompanied growth in India and China need to renew themselves inevitably, otherwise the catch-up process would interrupt. Responses to market and government failures, which greatly hinder the ability of these economies to direct production factors to the most productive sectors, may be more difficult to implement for structural reasons and for domestic and international economic policy constraints. The accelerated de-industrialization of the global economy, in terms of decline in the share of labor in manufacturing sectors which in turn have become increasingly capital- and technology-intensive should limit the possibility to rely on the manufacturing sector. As neither the traditional sectors such as agriculture, nor services, nor the informal sector show untapped sources of productivity, new institutional solutions must be devised. These should allow for increased productivity in public services, including education and health, and service industries, and facilitate the mobilization of significant financial capacities. This however, requires politically viable reconfigurations that can bypass or rally economic agents that derive benefits from the current situation (privileges, rents, etc.).

Moreover, as these reconfigurations are taking place in a largely globalized economy, national ambitions asserted in specific political contexts will come up against the pressures of globalization. Between China, where the central role played by the Communist Party should remain the status quo, and democratic India and Brazil, things are quite different across these countries. China could easily accommodate an ever widening openness to globalization especially if it manages to reduce its trade surplus by stimulating its domestic demand, while engaging in wide-ranging reforms including in the financial sector but also in initiating a real social security system. Its key role on the foreign exchange market could be reduced, as a number of other trading partners or competitors cannot afford a misalignment of their currency with the yuan, and thus

(36) The dependency ratio measures the dependent population: individuals under 14 years to those over 65. A low dependency ratio reduces the likelihood of slower growth according to Eichengreen *et al.*, *op. cit.*

(37) Wei S.-J., Zhang X. (2009). The competitive saving motive: Evidence from rising sex ratios and savings rates in China, NBER Working Paper No.15093.

be less subject to criticism. India, meanwhile, will be torn between mistrust in multilateral agreements on issues such as climate change, and its commitment to promoting trade liberalization in the service sector. Brazil, meanwhile, has managed to stabilize its currency and liberalize its economy while supporting key sectors. It has, more efficiently than India, succeeded to proportionately reduce poverty and ensure the development of a middle class which is a growth driver. Prospects in terms of productivity gains are still low however, in comparison with the two Asian giants. Finally, though the Russian economy has fully benefited from globalization, as long as it maintains the price of raw materials, including oil, at a high level, this dependence remains its primary weakness.

CONCLUSION

Large emerging countries have caught up considerably, undertaking thorough structural reforms that have enabled the development of an export industry helped by an undervalued currency. New challenges nevertheless abound.

This means continuing to benefit from the globalization of trade by producing more high-technology-intensive goods. This entails innovation and investment in human capital, and enabling R&D financing to switch from one mode of production involving more "inspiration" and less "perspiration", in the words of Paul Krugman. Upgrading should allow them to anticipate competition that is already strong from low-cost countries (Vietnam) and to rely less on an exchange rate that boots their exports.

These countries will also activate internal additional sources of growth, relying on their domestic consumption: from this point of view, each country faces its own specific features in terms of demographics, infrastructure, institutional reform and redistribution of the benefits of growth.

Although it is likely that large emerging economies will still experience strong growth during the decades to come, the forthcoming challenges will be significantly different from those that they so successfully tackled in the past years.

Keywords: BRICs; growth; convergence; institutions; global imbalances.

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