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Capturing the effects of changing capital-intensity on Long-term growth in the major emerging economies

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1. Introduction

While the world-wide recession of 2008/2009 brought a sharp decline in GDP growth to most countries, especially to the OECD group, the *Emerging Market Economies* (EMEs) were less affected. When we compare their growth rates (Table 1 and Fig. 1) over the two periods: the first from 2000 to 2008 and the second from 2009 to 2014, we see that most of them suffered a decline in the second period as compared to the first period, but growth in the second period was usually still positive and above 2%. The OECD had lower second-period growth rates, which leads to the question why did the EMEs do better than the more developed countries in the OECD? The short answer to this question is that the EMEs are at a lower stage of industrialization and hence they have lower *incremental capital–output ratios* (ICORs). As economies become more developed they tend to become more capital-intensive, that is, their capital-labor ratios increase as the capital stock accumulates. The EMEs have been quite successful attracting capital but as they become more developed their ICORs also rise making it more difficult to grow at the same pace as they had when their dependency on capital was less. They may compensate for this by raising the investment share in GDP as China and India have done (Table 1), but that depends on their capacity to raise investment, which for most EMEs, usually means additional foreign investment

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Table 1
Emerging Market Economies growth rates of GDP, investment shares in GDP and ICORs.

	2000–2008			2009–2014		
	Growth rate	Investment share in GDP	ICOR	Growth rate	Investment share in GDP	ICOR
China	10.7%	39.1%	3.65	8.1%	47.2%	5.83
India	7.8%	33.7%	4.32	6.5%	39.6%	6.09
Russia	6.8%	22.3%	3.28	2.6%	25.2%	9.68
Brazil	3.4%	17.0%	4.99	2.9%	21.0%	7.24
So. Africa	4.3%	19.7%	4.58	2.3%	20.3%	8.84
Korea (Rep.)	4.7%	32.3%	6.86	3.2%	28.9%	9.02
Indonesia	5.0%	24.0%	4.80	5.5%	25.6%	4.65
Mexico	2.7%	23.1%	8.55	3.2%	22.7%	7.10
Argentina	4.6%	18.5%	4.03	3.9%	20.8%	5.34
Turkey	5.9%	18.56%	3.15	4.9%	19.9%	4.06

Source: Derived from the National Accounts Estimates of GDP by expenditure (2005 prices US$) of the United Nations Statistical Division.
Note: ICOR is the incremental capital–output ratio.

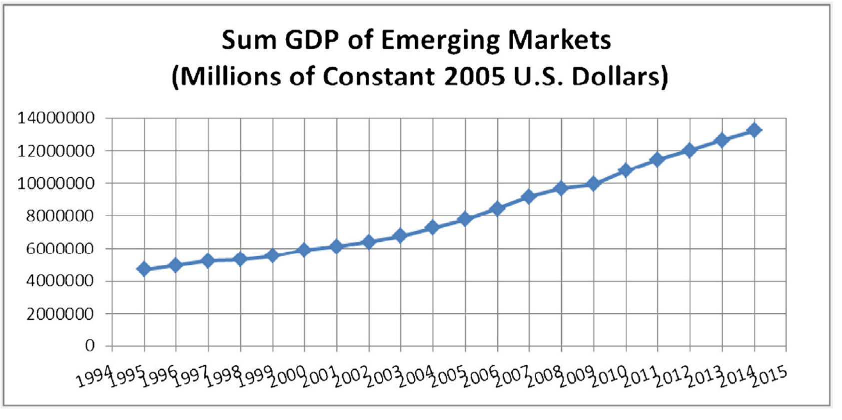

Fig. 1. The sum of the GDPs of China, India, Russia, Brazil, South Africa, Republic of Korea, Indonesia, Mexico, Argentina and Turkey.

as well as domestic investment. When world interest rates are low, as they have been since 2009, money for investment flows to those economies where the returns on investment are the highest.

Hence projecting these countries entails taking into account that they will become more capital intensive which in turn will provide an automatic deceleration of the growth rate, and making reasonable assumptions about their ability to continue attracting both domestic and foreign investment. Assumptions about attracting investment will depend upon their ability to continue to yield a higher return on investment than alternatives elsewhere. A surge of economic and/or political instability in any one country can cause it to be less attractive and might initiate a reverse flow of foreign investment out of the country. These kinds of shocks are the most difficult to project. In this exercise we will assume the absence of severe shocks to the economy and assume they will be able to maintain their attractiveness for investment.

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