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Long-term growth and policy
challenges in the large
emerging economies

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LONG-TERM GROWTH AND POLICY CHALLENGES IN THE LARGE EMERGING ECONOMIES

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by Paul Conway, Sean Dougherty and Artur Radziwill

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ABSTRACT / RÉSUMÉ

Long-term growth and policy challenges in the large emerging economies

Taken together, Brazil, China, India, Indonesia and South Africa – the “BIICS” – have been an important engine for world growth, and they account for a growing share of global output. However, further reforms will be needed to ensure catch-up to OECD GDP per capita levels over the long term. This paper uses the OECD’s Going for Growth framework, as well as other available evidence linking policies to economic performance, to identify key structural policy challenges in the BIICS for the years ahead. While such challenges vary from country to country, common areas for reform include strengthening policies in the areas of education, product market regulation and labour markets, as well as improving more basic market institutions.

This Working Paper relates to the OECD’s Economic Policy Reforms: Going for Growth 2010 (www.oecd.org/goingforgrowth) and the Economic Surveys of China, India, South Africa, Indonesia, and Brazil (www.oecd.org/eco/surveys)

JEL Codes: O4; P5

Keywords: Structural policies; indicators; education; regulation; reforms; institutions; income; poverty

Croissance de long terme et défis de politique économique dans les grandes économies émergentes.

Pris ensemble, l’Afrique du Sud, le Brésil, la Chine, l’Inde et l’Indonésie - les « BIICS » - ont largement contribué à la croissance mondiale et ils représentent une part croissante de la production mondiale. Cependant, de nouvelles réformes seront nécessaires pour leur permettre de rattraper, à terme, les niveaux de PIB par habitant des pays de l’OCDE. Le présent chapitre utilise le cadre d’analyse mis au point par l’OCDE pour les besoins du projet Objectif croissance, ainsi que d’autres données établissant un lien entre les politiques publiques et la performance économique, pour identifier les principaux enjeux de politique structurelle auxquels les BIICS vont être confrontés dans les années à venir. Ces enjeux diffèrent selon les pays, mais un certain nombre de réformes communes semblent nécessaires, notamment pour renforcer les politiques publiques dans les domaines de l’éducation, de la réglementation des marchés de produits et du marché du travail, ainsi que pour améliorer certaines institutions fondamentales de l’économie de marché.

Ce Document de travail se rapporte aux Réformes économiques: Objectif croissance 2010 (www.oecd.org/objectifcroissance) et aux Études économiques de l’OCDE de : la Chine, l’Inde, l’Afrique du Sud, l’Indonésie, et le Brésil (www.oecd.org/eco/etudes).

Codes JEL: O4; P5

Mots-clés: Politique structurelle; indicateurs; éducation; réglementation; réformes; institutions; revenu; pauvreté

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LONG-TERM GROWTH AND POLICY CHALLENGES IN THE LARGE EMERGING ECONOMIES

Paul Conway, Sean Dougherty and Artur Radziwill¹

1. Introduction

1. Brazil, China, India, Indonesia, and South Africa – collectively referred to as the “BIICS” in this Chapter – are the largest developing countries in their respective regions. As evidenced by the increasing role of the G20, these countries are also becoming increasingly important in the global economy.² The BIICS are a highly heterogeneous group of countries. In terms of size, the group ranges from China, which is the world’s second largest economy and most populous country, to South Africa, whose economy is currently 6% the size of China’s (or 4% in terms of population) and the 24th largest in the world. As well as being very different in size, the BIICS are also at different stages of development, with the variation among their incomes being similar to that among the 30 OECD countries. They also differ in terms of their long-term growth performance. While all the BIICS were enjoying periods of improved economic growth prior to the onset of the recent financial and economic crisis, only China and to a lesser extent India sustained a continuous and significant narrowing of the gap with high-income OECD countries in terms of GDP per capita levels. Relative growth performance has not fundamentally changed with the crisis, with all of the BIICS showing greater resilience than most OECD member countries.

2. While diverse, the BIICS also have a number of economic features in common. Analysis of shortfalls in GDP per capita reveal that, with the exception of South Africa and India, labour utilisation is broadly comparable to that in the upper half of OECD countries. Instead, relatively low GDP per capita in the BIICS can be primarily traced to shortfalls in labour productivity, which, in turn, reflect primarily technology but also human and physical capital gaps. Large income gaps, predominantly driven by productivity deficiencies, along with rapid convergence in China and India, point to the scope for catch-up as a driver of growth going forward. However, achieving and/or sustaining high economic growth rates will require the implementation of a broad range of growth-enhancing structural policy reforms.

3. This paper uses the OECD’s *Going for Growth* framework, as well as other available evidence linking policies to economic performance, to identify key structural policy challenges in the BIICS for the years ahead. *Going for Growth* was launched in 2005 as a new form of structural policy surveillance complementing the OECD’s long-standing country and sector-specific surveys. The surveillance is based on a systematic and in-depth analysis of structural policies and their outcomes across OECD countries,

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2. The BIICS are also of increasing importance to the OECD. In May 2007, the OECD began strengthening its co-operation with the BIICS through enhanced engagement programmes with a view to possible membership. This recognised the growing importance of these countries in the global economy and reflects the OECD’s principal goal of providing high-quality advice to enhance prosperity in member and non-member countries.

relying on a set of internationally comparable and regularly updated indicators with a well-established link to performance. Using these indicators, alongside the expertise of OECD committees and staff, a set of policy priorities and recommendations are derived for each participating country (see Annex).

4. The focus here is on how to catch-up to leading OECD GDP per capita levels over the long term. As a result, more immediate macroeconomic policy challenges – that at least in part have arisen in the context of the recent financial and economic crisis – are not addressed here. The analysis in the paper suggests a number of common areas for ongoing reform should be considered across the BIICS:

- Rapid improvements in access to education have resulted in secondary school attainment rates that are similar to OECD countries for younger cohorts. Although it will still take some time for the stock of human capital in the BIICS to catch up with OECD levels, this positive development bodes well for sustained productivity growth over the coming decades. However, R&D spending in the BIICS is low relative to OECD countries, reinforcing the impact of still relatively low human capital (especially as regards tertiary education attainment) and barriers to trade and foreign investment that limit the international diffusion of new technologies.
- Virtually all aspects of product market regulation are less conducive to competition in the BIICS compared with OECD countries. In particular, government intervention in markets that are inherently competitive is more pervasive, with state-owned enterprises (SOEs) often operating in sectors that are protected by implicit or explicit barriers to entry, especially in network sectors. Among the BIICS, government involvement in competitive markets is particularly pronounced in China and Indonesia. Barriers to entrepreneurship are also high and act as an obstacle to firm entry, while substantial barriers to international trade and investment impede capital accumulation and technological absorption.
- The persistence of large informal sectors in most of the BIICS and extremely low labour utilisation in South Africa justifies a multifaceted strategy with emphasis on facilitating formal sector employment. Key elements of such a strategy include giving informal workers the necessary means (legal, financial, educational) to shift to formal employment as well as to provide incentives for firms to become formal. The most important policies include enhancing human capital and labour market flexibility, simplifying the tax system, and reducing burdensome product market regulation.
- Property rights and contract enforcement could be strengthened in the BIICS, especially in China and Indonesia. In particular, rural land use rights in these two countries need to be strengthened to a standard similar to that in urban areas to improve the ability of small borrowers to use their property as collateral. In addition, proxy indicators of policy enforcement suggest considerable room for strengthening enforcement agencies and making them more efficient, in Indonesia, India, China and Brazil.
- Financial markets are typically much shallower in the BIICS than in OECD countries, implying low levels of financial inclusion and a more limited role for financial intermediation in capital allocation. Restricted access to financial services, particularly in the informal sector, increases financing costs, resulting in low capital accumulation and small scale, which contribute to low productivity. Hence, policies directed at financial deepening, including improved regulation, would have important effects on economic growth.
- While GDP per capita is the focus of this paper, other dimensions of well-being, such as the distribution of income, the quality of health and the environment also matter for all countries including the BIICS.³ Brazil and China have made dramatic gains in poverty reduction over the

3. The OECD is currently elaborating on a strategy to address “green growth” challenges.

past decade, halving the share of their population living at less than USD 2 dollars a day (at PPP). In contrast, India and Indonesia have made smaller gains, while the share of the poor population in South Africa has slightly increased. Though there has been a sharp fall in life expectancy and increase in child mortality in South Africa due to the AIDS epidemic, health indicators have improved in the other BIICS. However, significant gaps between the BIICS and the OECD persist, partly because access to healthcare in the BIICS remains a challenge.

5. Applying the *Going for Growth* framework to the BIICS is necessarily more difficult than for OECD countries since the full suite of policy and performance indicators are currently not available across all of these countries. In addition, with the extensive differences between some of them and most of the OECD economies, the BIICS's incorporation into *Going for Growth* vastly increases the heterogeneity of country coverage. Although the OECD countries are also unique in important ways and *Going for Growth* has been specifically designed to avoid a "one-size-fits-all" approach, the framework will still need to be made more flexible over time to successfully accommodate the BIICS (Box 1). Therefore, the policy priorities identified in this paper should be seen as preliminary, and will be refined as part of the full integration of the BIICS into *Going for Growth* in future years.

6. The paper is structured as follows. Section 2 gives a brief overview of economic performance among the BIICS and *vis-à-vis* OECD countries, including a discussion of recent convergence dynamics and a decomposition of current gaps in GDP per capita. Section 3 then uses a range of policy indicators that are routinely included in *Going for Growth* to assess broad regulatory settings in the BIICS. Section 4 goes on to evaluate policy areas not typically included in *Going for Growth* but known to influence productivity convergence in emerging markets, such as property rights, policy enforcement and financial sector development. This section also includes a discussion on the causes and consequences of informality.

Box 1. Adapting the *Going for Growth* framework for inclusion of the BIICS

In order to fully incorporate the BIICS into *Going for Growth*, a number of caveats apply that call for further analysis. In particular, empirical work on the impact of policies on performance that underlies *Going for Growth* will need to be broadened to include the BIICS. As well as assessing whether existing OECD-based evidence on the links between policies and economic performance extends to the BIICS, this will also involve addressing policy issues more specific to these countries. Empirical evidence will be needed to see if the policy-performance relationships vary across widely heterogeneous groups of countries, for example reflecting the influence of policies whose effects vary in relation to a country's distance to the efficiency frontier. Empirical work on the BIICS will also need to consider the implications of large informal sectors that typically operate outside the scope of many aspects of the regulatory framework. This can have a major impact on optimal policy design, as the effect of policies on the size of the informal sector can be of first-order importance. In addition, policy implementation and enforcement often faces relatively more difficulty in the BIICS, which may also have important implications for optimal policy design.

Recent literature, as summarised in *The Growth Report* of the Commission on Growth and Development (2008), suggests that the sequencing and idiosyncrasies of policy reforms may be important to understand the effects of successful growth episodes in countries such as the BIICS. At times, unorthodox or so-called "second-best" reforms can be appropriate, all the more-so given political economy constraints and the difficulty of building new institutions in economies undergoing large-scale transitions. Such reforms can be useful to overcome the most binding constraints to growth and pave the way for first-best reforms.

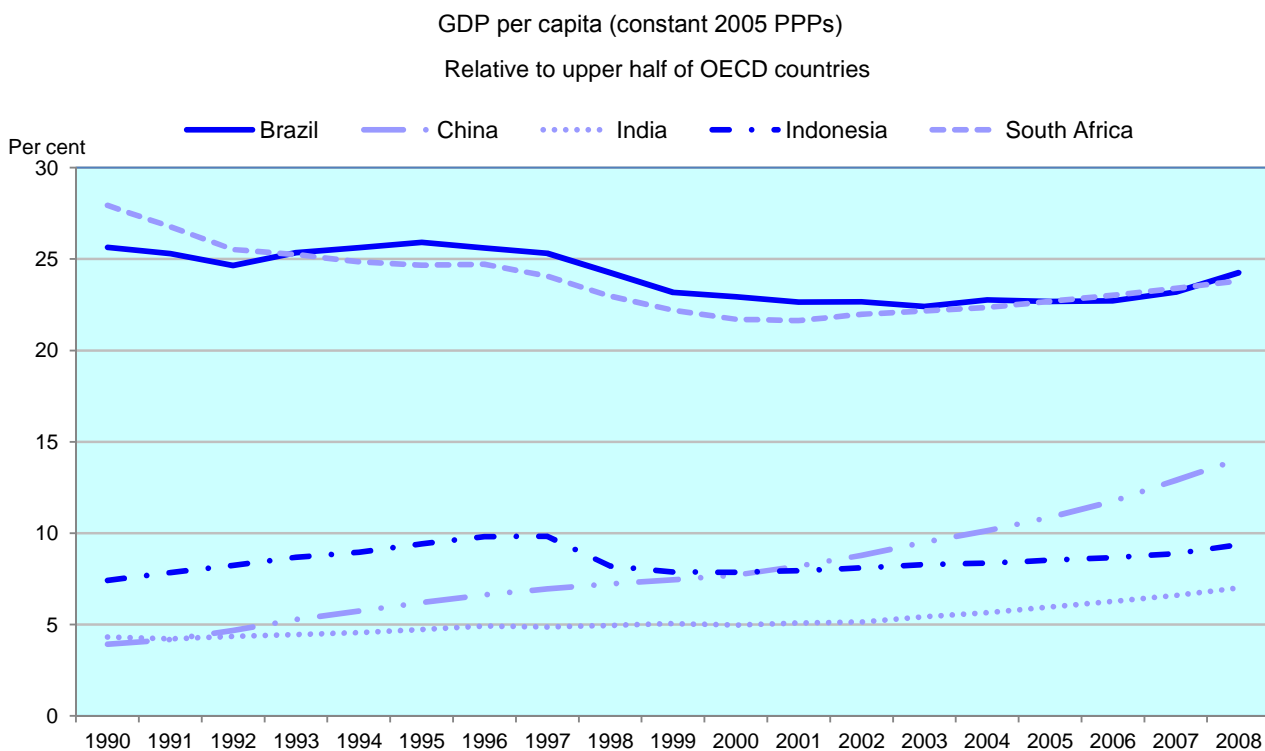
As well as developing a better understanding of the impact of policy on performance in the BIICS, the range of indicators used in *Going for Growth* will need to be tailored to suit these countries. One initial challenge for extending the exercise to the BIICS is that some of the indicators used for OECD countries are currently not available for the BIICS and it will take time to construct a comprehensive set of policy indicators. In addition, some of the key policy issues for OECD countries – such as the job-search incentives embedded in labour market policies – are currently less relevant in the BIICS where social insurance systems are just being implemented or considered, though Brazil has more experience. On the other hand, the set of policy and performance indicators used in *Going for Growth* may also need to be expanded to incorporate issues specific to the BIICS such as the quality of governance and the size of the informal sector.

2. Overview of performance differences among the BIICS and *vis-à-vis* OECD countries

2.1. Trend growth and convergence performance

7. Average GDP growth rates have varied considerably across the BIICS in recent decades, leading to very different convergence dynamics *vis-à-vis* countries in the upper half of the OECD income distribution.⁴ Most impressively, since the onset of economic reform around thirty years ago, the Chinese economy has enjoyed a sustained and rapid economic transformation, with swift catch-up in average incomes (Figure 1). India has also enjoyed a period of solid economic growth since liberalising extremely interventionist economic policies starting from the mid-1980s and has made good progress in reducing its large income gap with the countries in the upper half of the OECD. Rapid convergence in Indonesia during the early 1990s was interrupted by the Asian financial crisis and average income has yet to recoup its pre-crisis level relative to the upper half of the OECD, despite some recent progress. In the non-Asian BIICS, both South Africa and particularly Brazil had, until the early 2000s, suffered deteriorating per capita income levels *vis-à-vis* the countries in the upper half of the OECD.

Figure 1. Catch-up in GDP per capita varies across the BIICS



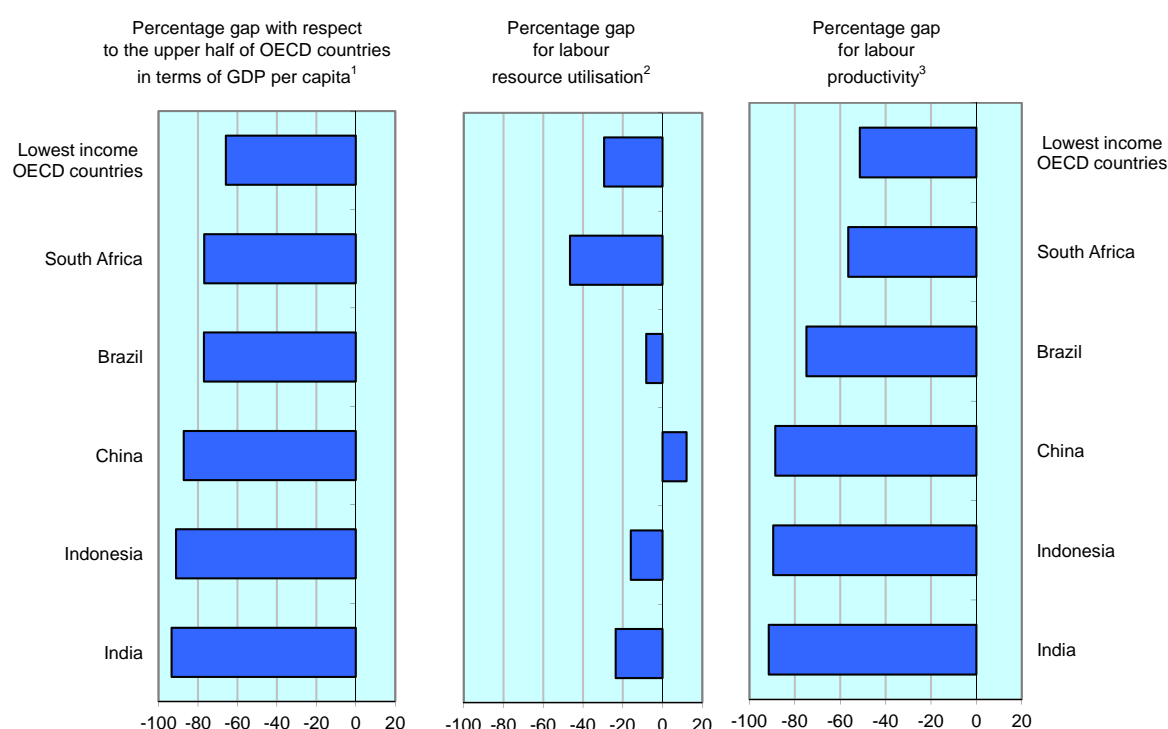
Source: World Bank (WDI).

4. As is the case with OECD countries in the *Going for Growth* framework, income convergence in the BIICS is assessed relative to average GDP per capita in countries in the upper half of the OECD income distribution through time.

2.2. GDP per capita gaps

8. Despite differences in convergence dynamics and high growth rates in some cases, gaps in GDP per capita *vis-à-vis* countries in the upper half of the OECD income distribution remain large, ranging from 75% in Brazil and South Africa to almost 95% in India. These gaps can be broken down into contributions from labour productivity and labour utilisation (Figure 2). With the exception of South Africa and, to a lesser extent, India, labour utilisation in the BIICS is not that dissimilar with the upper half of OECD countries (when the informal sector is included in total employment). In contrast, across all of the BIICS, labour productivity is estimated to be substantially below levels prevailing in the upper half of OECD countries and is the predominant source of shortfalls in GDP per capita.⁵ At the same time, the distribution of income in the BIICS is more unequal and poverty is higher than in most OECD countries, while health and environmental outcomes are weaker. This makes it even more important to consider broader measures of well-being (see Box 2).

Figure 2. The largest part of real income differences comes from labour productivity gaps



1. For 2007, relative to the simple average of the highest 15 OECD countries in terms of GDP per capita, based on revised 2007 purchasing power parities (PPPs) from the World Bank. The sum of the percentage gap in labour resource utilisation and labour productivity do not add up exactly to the GDP per capita gap since the decomposition is multiplicative. The lowest income OECD countries are Hungary, Mexico, Poland, the Slovak Republic and Turkey. See Blöndal and Dougherty (2009) for details.
2. Labour resource utilisation is measured as total employment as a share of total population, based on national labour force and household surveys.
3. Labour productivity is measured as GDP per person employed, including estimated informal employment.

Source: OECD estimates.

5. This pattern is similar to the ten lowest-income OECD countries, in which gaps in GDP per capita are also primarily accounted for by labour productivity gaps while shortfalls in labour utilisation play a much smaller role (OECD, 2009a).

Box 2. Measures of well-being in the BIICS

While GDP per capita is the focus of the *Going for Growth* exercise – and this paper – other dimensions of well-being are also important to assess the qualitative nature of income gains (see Box 2.1 in OECD, 2010b). These include particularly the distribution of income, as well as broader well-being concepts such as health and environmental outcomes. The extent of inequality varies widely across the BIICS – with Brazil and South Africa's inequality (based on Gini indices) the highest, and India's the lowest (table below, first column). These measures are higher than in most OECD countries, reflecting in part the lack of income transfer programmes that are prevalent throughout the OECD (Förster and Mira d'Ercole, 2005). While rapid economic growth is generally associated with declining poverty (Kraay, 2006), for some countries poverty rates have fallen much more rapidly than for others (table below). In particular, assessed at the \$2-a-day threshold, Brazil and China have made dramatic gains in poverty reduction over the past decade, halving the share of their population living at this level. In contrast, India and Indonesia have made smaller gains, while the share of the poor population in South Africa has actually increased.

Poverty reduction gains are rapid despite high income inequality

	Gini Index	Poverty headcount ratio ¹	
	Mid-2000s	Mid-1990s	Mid-2000s
Brazil	55.0	27.8	12.7
China	41.5	84.6	36.3
India	36.8	81.7	75.6
Indonesia	39.4	55.0	50.0
South Africa	57.8	41.1	42.9
Chile	52.0	13.6	2.4
Estonia	36.0	2.8	2.0
Israel	39.2
Russian Federation	37.5	7.6	2.0
Slovenia	31.2	2.0	2.0
Upper half of OECD countries	27.0		
Lower half of OECD countries	35.6		

1. Poverty headcount ratio at \$2 a day (PPP) (per cent of population)

Source: OECD income distribution questionnaire and World Bank (WDI).

Health outcomes are another important measure of well-being that generally improves with, and is also a driver of income. However, their rate of improvement can depart from income growth for long periods. In particular, the sharp fall in life expectancy and the increase in child mortality in South Africa are due to the AIDS epidemic. In other countries, life expectancy has been converging, but remains significantly lower than in the OECD. Infant mortality rates have similarly fallen rapidly, but gaps remain large: mortality in India is three times higher when compared to Brazil and China, and ten times higher than the OECD average. Despite some important progress, access to healthcare in the BIICS remains a challenge, as evidenced by relatively low numbers of doctors and hospital beds and the limited overall size of health care spending. Spending on health care is close to that in OECD countries (as a per cent of GDP) for Brazil and South Africa, though India and Indonesia spend much less.

Despite strong progress, the gap in health indicators remains substantial

	Health expenditure (% of GDP)	Life expectancy at birth, total (years)		Infant mortality rate ¹ (per 1,000)		Hospital beds (per 1,000 people)		Physicians (per 1,000 people)	
		2006	1990	2007	1990	2007	mid-90's	Latest year	mid-90's
Brazil	7.5	66.5	72.3	57.9	21.7	3.3	2.4	1.4	1.2
China	4.6	68.3	73.0	45.4	21.9	2.6	2.2	1.5	1.5
India	3.6	59.7	64.7	116.6	71.8	0.8	0.9	0.5	0.6
Indonesia	2.5	61.7	70.6	91.0	31.2	0.7	0.6	0.1	0.1
South Africa	8.0	61.6	50.5	63.6	59.0	..	2.8	0.6	0.8
Chile	5.3	73.7	78.4	21.0	9.0	3.2	2.3	1.1	1.1
Estonia	5.2	69.5	72.9	17.5	5.6	11.6	5.7	3.5	3.3
Israel	8.0	76.6	80.6	11.5	5.0	6.2	6.0	3.2	3.7
Russian Federation	5.3	68.9	67.6	27.0	14.5	13.1	9.7	4.1	4.3
Slovenia	8.4	73.3	77.7	10.5	3.9	6.0	4.8	2.0	2.4
Upper half of OECD countries	9.5	76.8	80.8	9.2	3.7	10.4	7.3	2.8	3.7
Lower half of OECD countries	8.2	72.6	77.1	18.6	8.9	5.6	3.7	1.9	2.3

1. Mortality rate under the age of 5.

Source: World Health Report (2004) and World Bank (WDI).

Environmental outcomes are also important determinants of health status and well-being more generally. Unfortunately, economic growth can result not only in rising incomes but also in increased energy consumption and pollution. While per capita greenhouse gas emissions are still low in the BIICS, their carbon intensity (per unit of GDP) is usually higher than for most OECD countries. Air pollution, in particular exposure to particulate matter, are also much higher in the BIICS than across the OECD countries (OECD, 2008f). In addition, a larger share of the population lives under medium to severe water stress, while low levels of wastewater treatment and pollution contribute to the incidence of waterborne and preventable diseases. In addition, particular economic and health challenges are expected in the BIICS if global warming continues, including the fall of agriculture yields, increased water stress, and loss of biodiversity. As the greenhouse gas emission trends in these countries as a whole will have a considerable impact on global climate, these challenges make "green growth" a high priority in the BIICS.

2.2.1. Labour utilisation

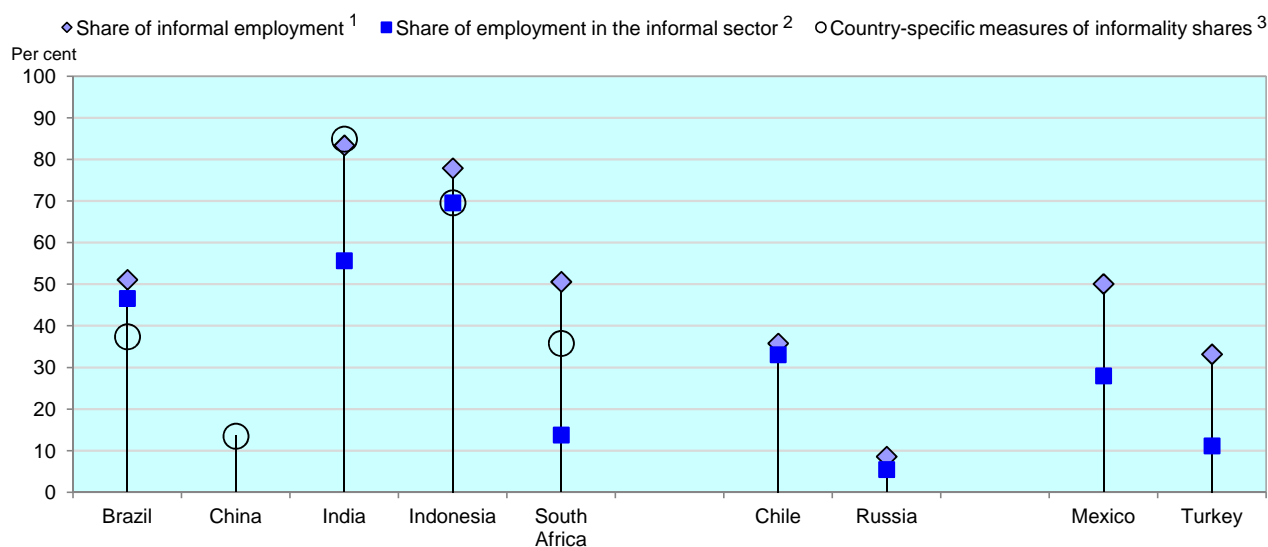
9. Generally good levels of labour utilisation do not imply that labour markets in the BIICS are without major challenges. In addition to strong gender differences in labour market access in several countries, a distinguishing feature of BIICS labour markets is the high degree of informality, which means that many workers remain outside the scope of labour market and social protection regulations.⁶ Although the extent of informality is difficult to measure and is thus highly uncertain (see Box 3), various measures suggest that informality is particularly high in India and Indonesia, and more moderate in Brazil, China and South Africa (Figure 3). Informality generally affects the less privileged, such as youth and the low-skilled, which constitute a relatively large share of labour supply in the BIICS given their demographics and levels

6. Informality is also an issue in several OECD countries (see OECD, 2008d, 2008e).

of educational attainment (as discussed below). In Brazil, informal jobs are mainly concentrated in low-skill intensive sectors such as agriculture, construction, hotels and restaurants, domestic services, wholesale and retail trade. In China, undeclared rural migrants and workers laid off from urban state and collective enterprises constitute the largest part of informal employment. In India and Indonesia, informal employment includes a disproportionate number of women, home-based workers, street sellers and workers sub-contracted by firms in the formal sector. In South Africa, the relatively small informal sector is partly a result of legacy restrictions and municipal rules, while its growth has been associated with the emerging entrepreneurialism among the majority black population.

10. While there might be a voluntary upper tier of informal employment, the large majority of employment in the informal sector is involuntary. Systems of unemployment insurance are generally much less developed in the BIICS, such that informal sector employment provides an alternative to overt unemployment. However, informal sector workers are generally self-employed with low levels of physical capital per worker, which is reflected in low productivity and subsistence wages; this highlights the strong interaction between employment structure and productivity performance in less developed countries (OECD, 2009b). Informal jobs tend to be more unstable than formal jobs with limited opportunities for human capital accumulation. Employment in the informal sector can also be detrimental to a worker's subsequent prospects for formal employment and thereby act as a trap for the low-skilled, contributing to the persistence of income inequality.

Figure 3. Informality is substantial in some of the BIICS



1. The share of informal employment is based on a standardized definition, and excludes agriculture. Latest available estimate shown: 2000-2007 (Brazil and South Africa); 1995-1999 (India and Indonesia); unavailable for China. See *Is informal normal?* (OECD, 2009b) for more details and Box 7.3 for a further discussion.
2. The share of employment in the informal sector is based on the ILO KLIM database. Definition for Brazil: unincorporated urban enterprises employing five or less employees and producing for sale, excluding agriculture. India (2000): all unincorporated proprietary and partnership enterprises producing all or some of their goods or services for sale, excluding agriculture and utilities. Indonesia (2004): all own-account and unpaid family workers and employees in agriculture, and own-account workers (unless professional, administrative or clerical workers) not assisted by other persons. South Africa (2004): business activities which are not registered for taxation, for professional groups' regulatory requirements or similar acts.
3. Country-specific measures of informality shares based on OECD Economic Surveys (OECD, 2007, 2008a, 2008b, 2009c) and the OECD Employment Outlook (2007b). Definition for Brazil (2009): own-account workers and employees without social contributions. China (2008): self-employed. India (2004): workers not covered by the employee's provident fund. Indonesia (2004): own account workers and unpaid workers. South Africa (2008): workers without pension and medical plans.

Source: OECD analysis.

Box 3. Informality and employment measures in the BIICS

The concept of informal employment has become widely accepted in the analysis of labour markets in developing countries, yet there are large differences in definitions and measurement, making cross-country analysis difficult. *Employment in the informal sector* and *informal employment* are two distinct measures related to different aspects of informality recommended by the International Conference of Labour Statisticians. *Employment in the informal-sector* refers to the legal registration status of the enterprise unit and covers employment in unregistered enterprises which are private unincorporated (or household) units that produce and sell legal goods and services, with paid employment up to a certain threshold (usually five employees). *Informal “unprotected” employment* refers to jobs that do not comply with national labour legislation, income taxation, social protection or entitlement to certain employment benefits like advance notice, severance pay, paid annual or sick leave. Informal jobs can thus be performed in units of any status, including both formal and informal-sector enterprises as well as in households producing exclusively for own use.

While the two concepts of informality are complementary, the *informal employment* definition tends to be broader. Compared to informal-sector employment, informal employment adds two important groups, namely informal employees in the formal sector and paid employees in households producing exclusively for their own use, while it subtracts a group that tends to be small in most developing countries, namely formal employees in informal enterprises.

According to the ILO conventions (from the 17th ICLS), the exact criteria for measurement are to be determined “in accordance with national circumstances and data availability”. In practice, OECD Economic Surveys apply the most commonly used definition for a given country, which approximates the informal employment concept. Difficulties in measuring employment in the informal sector and informal employment add to broader challenges in measuring labour market outcomes in the BIICS, and complicate assessments of the size of the total labour force, employment and unemployment. However, as most activities related to labour market informality are neither illegal nor underground, they are – in principle – included in regularly published employment figures derived from household surveys, such as those used in this paper.

Sources: *OECD Employment Outlook* (OECD, 2008e) and *Is Informal Normal?* (OECD, 2009b).

11. Aside from the issue of informality, some key country-specific characteristics of BIICS labour markets are as follows:

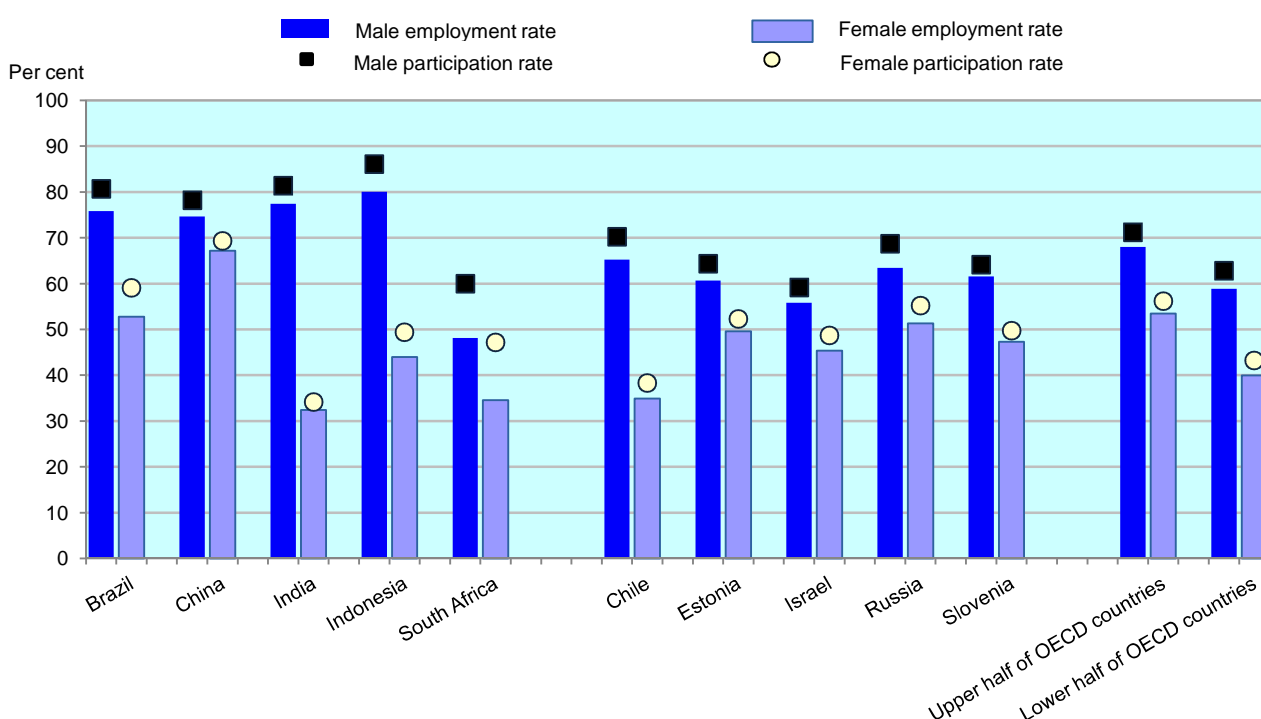
- Labour utilisation in South Africa is the lowest among the BIICS and, being almost half that of the upper half of OECD countries, it explains a large part of the gap in GDP per capita. This severe underperformance reflects both low labour force participation and high unemployment, which currently stands at around 25% (Figure 4).⁷ Unemployment is not only high on average but also very unevenly distributed among age groups, gender, skill categories and ethnic groups (OECD, 2008a). This partly reflects the legacy of apartheid, but is also a function of the inability of labour demand to keep pace with a rapidly growing labour force owing to shortcomings in product market competition, labour market institutions and some aspects of macroeconomic policy.
- India’s labour utilisation gap *vis-à-vis* the upper half of OECD countries is also comparatively large at just under 25%. Although employment growth has picked up since the beginning of

7. Throughout this chapter, wherever data permit, the OECD accession candidate countries – that is Chile, Estonia, Israel, the Russian Federation and Slovenia – are included as an additional point of reference in the figures. Upper and lower half of OECD country groupings are based on the value of the respective indicator.

economic reforms, the labour utilisation gap has remained broadly constant with participation rates for women still very low in international comparison.

- In Indonesia, the labour utilisation gap is around 15%. Despite an abundance of low-cost labour, the growth of labour-intensive sectors has been relatively sluggish since the Asian financial crisis in 1997-98, contributing to low job creation and high unemployment, particularly among young adults. This has resulted in the labour utilisation gap widening since the crisis.
- Labour utilisation in Brazil is now close to levels in the upper half of OECD countries, reflecting in part the positive impact of solid economic growth on job creation during 2003-08. Labour force participation has risen, while unemployment and the share of employment in the informal sector have both been trending downwards, notwithstanding the recent recession (OECD, 2009c).
- Labour utilisation in China compares very favourably with countries in the upper half of the OECD income distribution. Increasing employment in small and medium-sized private companies has mostly offset large declines in employment in state-owned enterprises (OECD, 2010a). Against this trend, the participation rate for young people has been falling recently, though mainly as a result of increasing enrolments in tertiary education (discussed below).

Figure 4. Employment rates are relatively high in the BIICS¹



1. Employment and participation rates as a share of the total population aged 15 and above, for 2008.

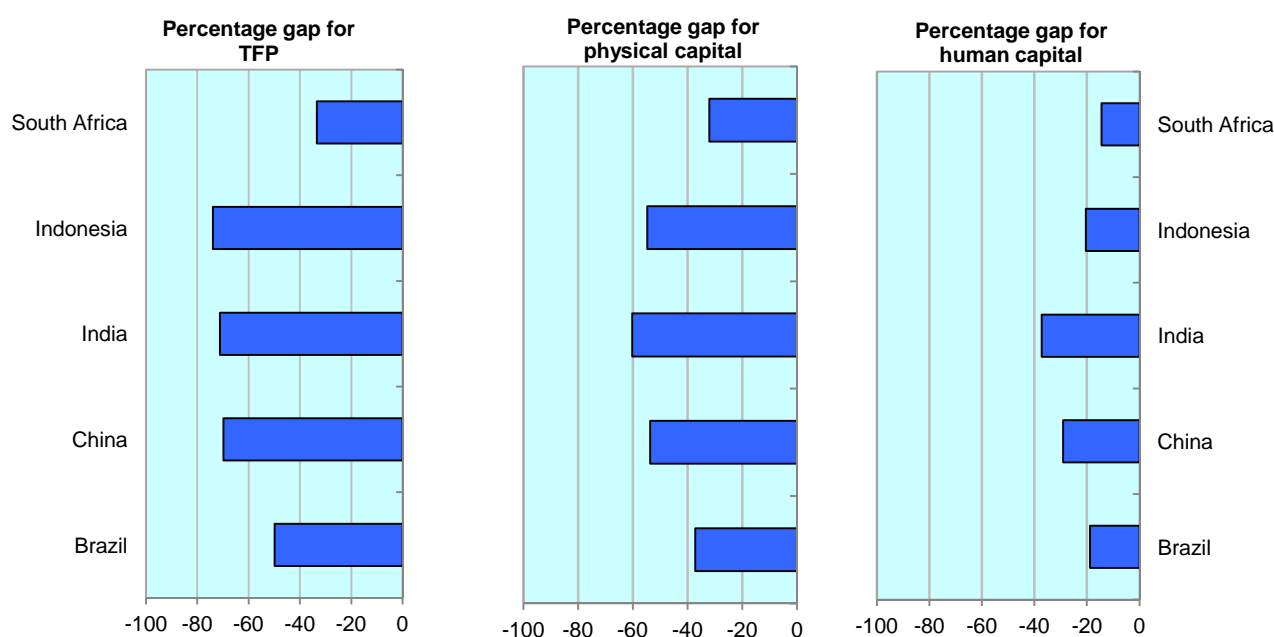
Source: ILO KILM Database.

2.2.2. Labour productivity

12. The breakdown of GDP per capita above (Figure 2) indicates that labour productivity in the BIICS is between 55% (South Africa) and 90% (India) lower than that of countries in the upper half of the

OECD income distribution, and it is the predominant source of large income gaps. To better identify the driving factors behind these differences in output per worker, labour productivity gaps in the BIICS are decomposed into the contributions from total factor productivity (TFP) and physical and human capital per worker, based on strong but reasonable assumptions regarding the production process and returns from education at the country level (Figure 5).⁸ This illustrative decomposition suggests that differences in physical and human capital accumulation are a significant source of labour productivity shortfalls. Nonetheless, TFP gaps between the BIICS and countries in the upper half of the OECD income distribution are extremely large and represent the major source of labour productivity gaps.⁹

Figure 5. Gaps in total factor productivity, physical capital and human capital are wide in the BIICS¹



1. Decomposition of labour productivity gaps for 2005, as a per cent of the upper half of the OECD countries, based on a Cobb-Douglas production function that is assumed to be invariant across countries and time. Data on physical capital stocks across countries are derived from investment series using the perpetual inventory method. The physical capital stock is expressed relative to employment. Human capital stocks are constructed based on average years of schooling in the population and assumptions regarding the returns to education. TFP is measured as a residual and acts as a proxy for the level of technology. Due to data limitations and assumptions underlying the decomposition, the results reported in this figure should be viewed as indicative. See Duval and de la Maisonneuve (2010) for details.

Source: OECD analysis.

TFP gaps

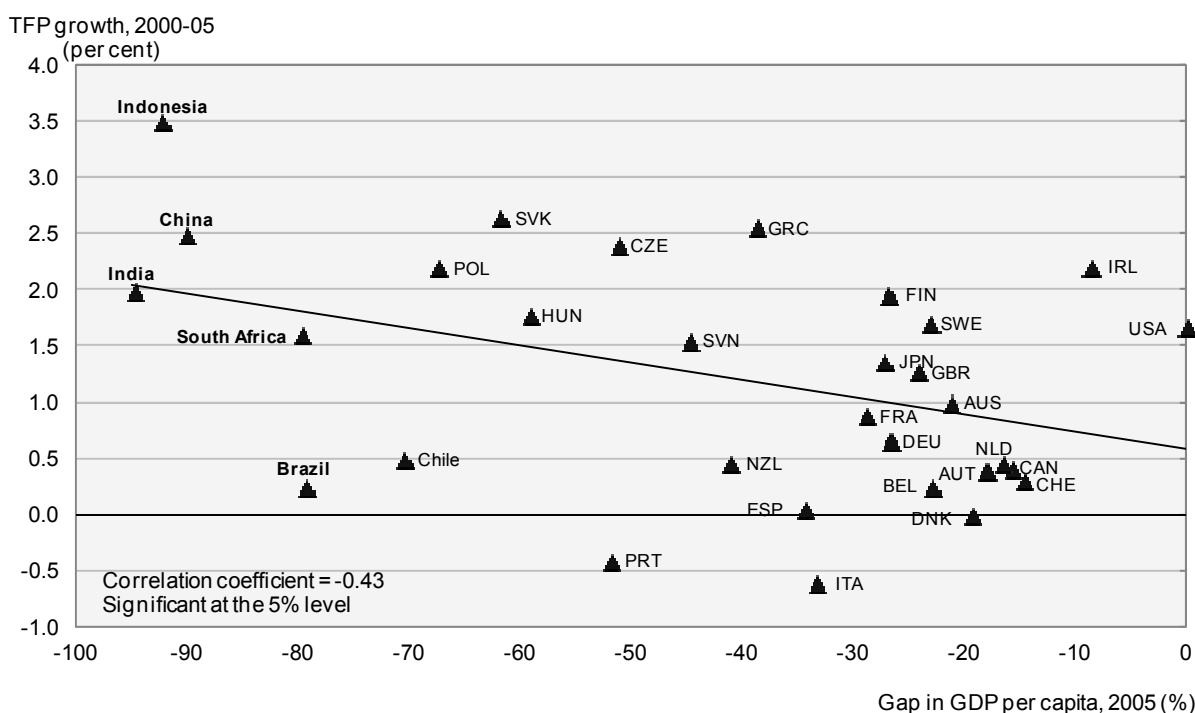
13. A large theoretical and empirical literature has found that TFP growth in industries and countries that lag behind the world technological frontier depend importantly on the ability to adopt leading technologies and production techniques developed in more productive economies (Aghion and Howitt,

8. See Duval and de la Maisonneuve (2010) for details.

9. This is consistent with the “new stylised facts of economic growth”, which find that TFP accounts for the bulk of differences in GDP per capita across a broad cross-section of countries (e.g. Easterly and Levine, 2001; Caselli, 2005; Caselli and Coleman, 2006).

2006). With indicative TFP gaps ranging from around 40% in South Africa up to 75% in India and Indonesia, technological diffusion is potentially a key source of productivity growth in the BIICS going forward. The evidence suggests that, with the possible exception of Brazil, TFP growth in the other BIICS has been reasonably good since 2000 and it has been broadly consistent with their stage of economic development (Figure 6).

Figure 6. TFP growth slows with higher levels of GDP per capita¹



1. Note that the measure of TFP growth in this figure is not fully consistent with the TFP levels in Figure 5 since the former also implicitly includes the growth of human capital in TFP growth. Data for OECD countries come from OECD Productivity Database, while for the BIICS it comes from OECD Economic Surveys.

Source: OECD analysis.

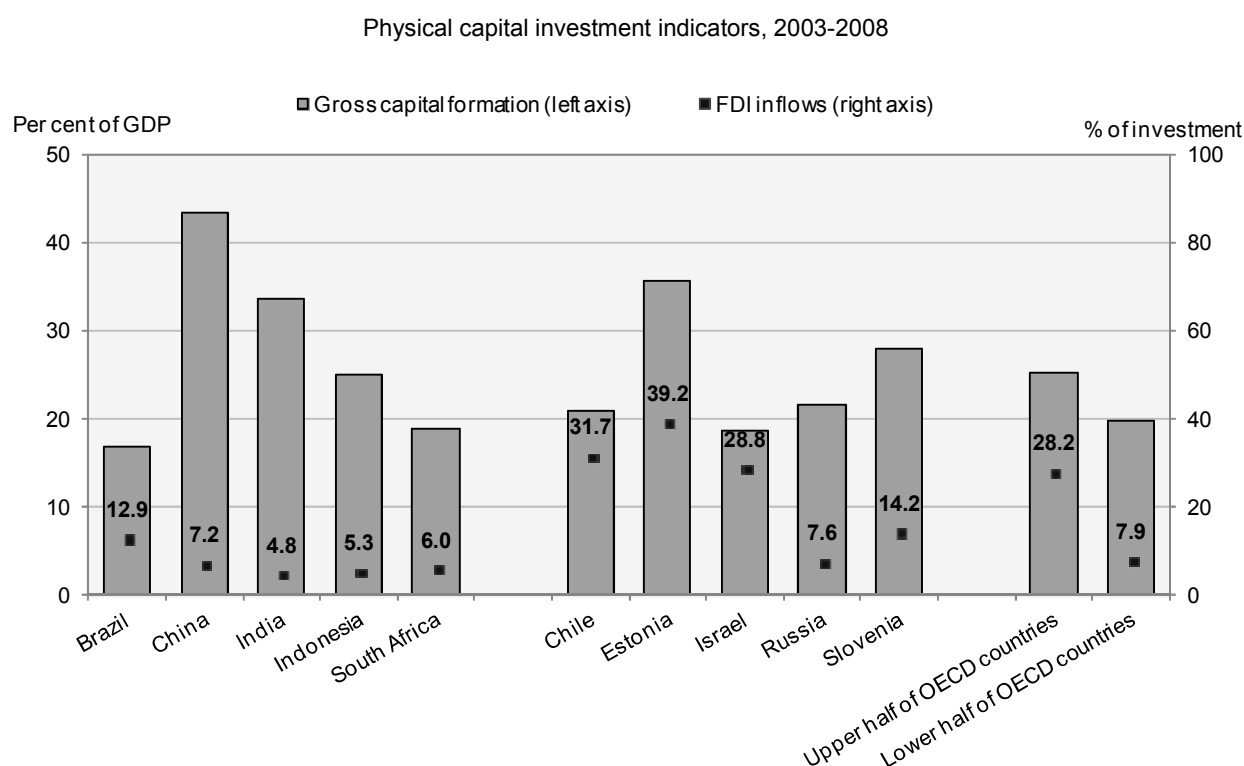
Physical capital intensity

14. The decomposition shown in Figure 5 indicates that shortfalls in physical capital per worker are also an important driver of labour productivity gaps in the BIICS. In China, capital intensity is still about half the level of the upper half of the OECD but increasing rapidly, with investment accounting for almost 45% of GDP (Figure 7). In India and Indonesia, capital intensity remains relatively low, although the investment share of GDP has picked up markedly over recent years, particularly in India where it has been helped by increased domestic savings. In South Africa, the relatively small gap in capital intensity largely reflects high rates of capital accumulation during the Apartheid era whereas the investment share of GDP has been lower more recently, before picking up somewhat since 2003. Brazil also has a relatively small gap in capital intensity compared with the other BIICS, although the investment share of GDP has been relatively low, increasing only in the past few years.

15. As outlined in more detail below, foreign direct investment (FDI) can be particularly effective in promoting productivity catch-up. In general across the BIICS, the FDI share of investment is low

compared with most current OECD member countries and accession candidate countries (Figure 7). Although China has been the world's largest recipient of FDI in absolute terms, the share of investment funded by foreign capital has been steadily declining since the mid-1990s. Moreover, FDI into China's service sectors has been largely concentrated in the real estate and financial sectors, while inflows into other service sectors have remained relatively modest, constraining technological diffusion (OECD, 2010a). In India, FDI inflows have been steadily increasing since the 1990s but still remain comparatively low, as are inflows into Indonesia and South Africa. In Brazil, FDI inflows as a share of investment have been robust over recent years compared to the other BIICS and some of the OECD countries.¹⁰

Figure 7. Physical capital investment rates vary widely across the BIICS



Source: World Bank (WDI), UNCTAD.

16. Investment in network infrastructure sectors can have a positive impact on long-term income levels that goes beyond the effect of increases in the capital stock. This can arise for a number of reasons including economies of scale, the existence of network externalities and competition-enhancing mechanisms (see Égert *et al.*, 2009). Furthermore, there is fairly general agreement that the link between infrastructure and growth tends to be stronger in lower-income countries, where infrastructure deficiencies are most pressing and the (marginal) return to investment highest (Estache and Fay, 2007). Indeed, although it is notoriously difficult to measure the stock of infrastructure, some standard indicators of provision suggest that there are large infrastructure gaps in the BIICS (Table 1).

10. A large share of FDI in OECD countries is for mergers and acquisitions, implying that comparisons with investment may exaggerate the importance of FDI as a source of new capital formation.

Table 1. Infrastructure in network sectors ¹

	Rail density (per 100 km)	Road density (per km)	Telephone lines (per 100 people)
Brazil	0.3	0.2	21.4
China	0.7	0.4	27.7
India	2.1	1.1	3.3
Indonesia	0.3	0.2	13.3
South Africa	2.0	0.3	9.5
Chile	0.8	0.1	21.0
Estonia	2.3	1.3	37.2
Israel	4.4	0.8	39.7
Russian Federation	0.5	0.1	31.1
Slovenia	6.1	1.9	49.5
Upper half of OECD countries	8.3	2.2	53.2
Lower half of OECD countries	2.3	0.6	33.0

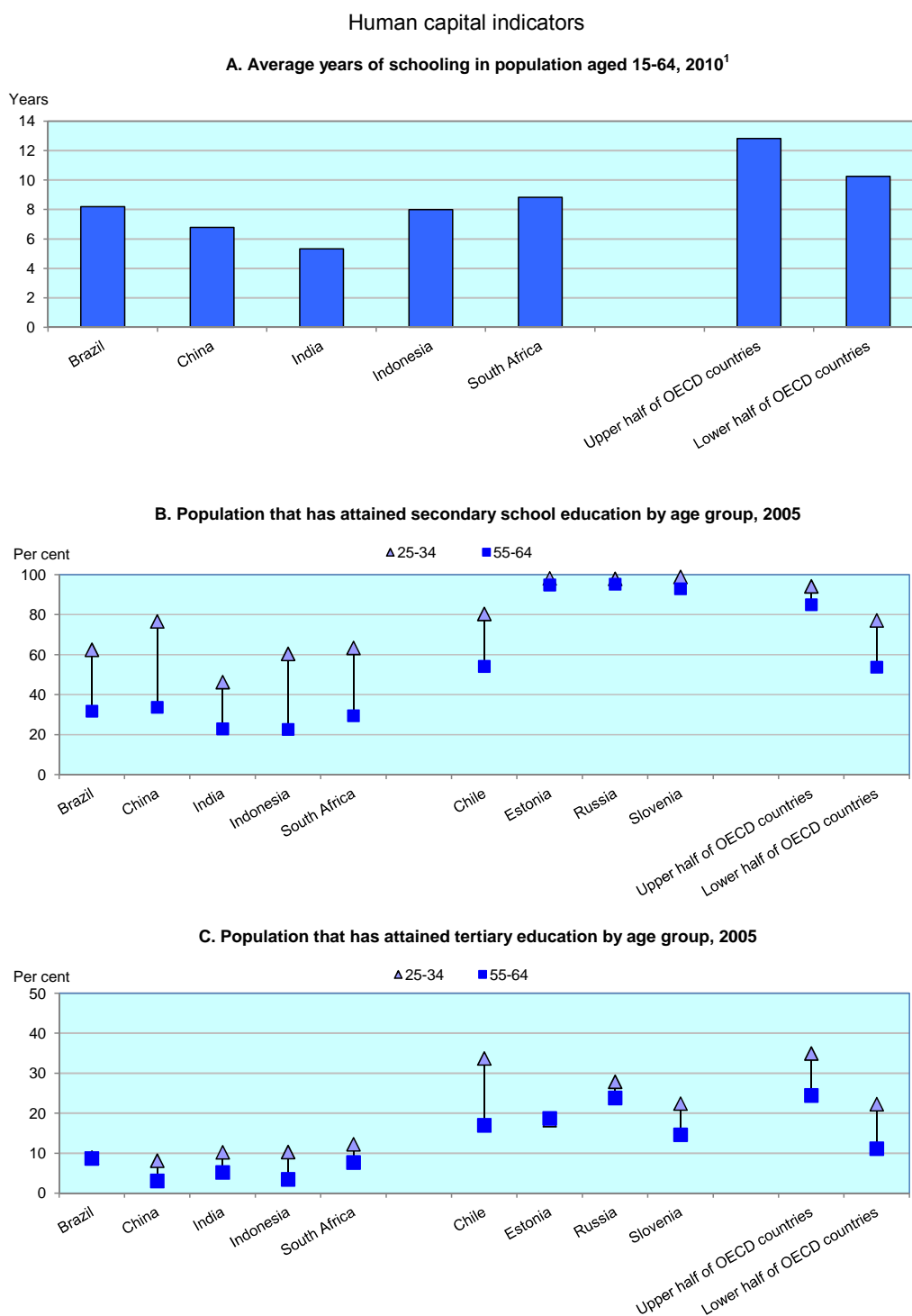
1. Rail density is route length in km per 100 km² of land area; road density is total network length in km per km² of land area; telephone lines are total mobile and land lines per 100 people.

Source: World Bank (WDI).

Human capital

17. The stock of human capital, as measured by the average years of education across the population, is considerably lower in the BIICS than in OECD countries (Figure 8a). However, a large part of this gap is a result of the age-education structure of the population, and it will be substantially closed provided that educational attainment is sustained at current rates. To a large extent, attainment rates for secondary school education have increased over time, with the share of graduates among younger individuals being much higher than among their older counterparts (Figure 8b). This increase in human capital has been particularly pronounced in China, where secondary-school attainment in younger cohorts is now close to some of the best-performing OECD countries. Indonesia, Brazil and South Africa have also made good progress in this area. In India, secondary school completion rates have also risen but remain low compared to the other BIICS. With the exception of Brazil, tertiary education attainment rates have also increased in the BIICS, but not to the same extent as secondary school attainment, and still generally remain significantly lower than in OECD countries (Figure 8c).

Figure 8. Most of the BRICS are catching up in educational attainment



1. Estimate based on a forward-looking demographic projection.

Source: Cohen and Soto (2007); Samir *et al.* (2008).

3. Applying the *Going for Growth* framework to the BIICS

18. The cross-country differences in various aspects of economic performance outlined in the previous section partly reflect differences in policies and institutions in the BIICS, which is the focus of the remainder of this paper. Notwithstanding challenges in assessing the impact of policies on performance,¹¹ there is growing evidence – some of which underpins *Going for Growth* – that improvements in institutional quality lead to lasting improvements in resource allocation, productive capacity and economic development. This section applies the *Going for Growth* framework to the BIICS to identify some of the potential policy weaknesses that could be remedied to deliver strong and sustained growth. This application is necessarily more limited than in OECD countries given that the full suite of policy and performance indicators used in *Going for Growth* is not yet available across all of the BIICS.

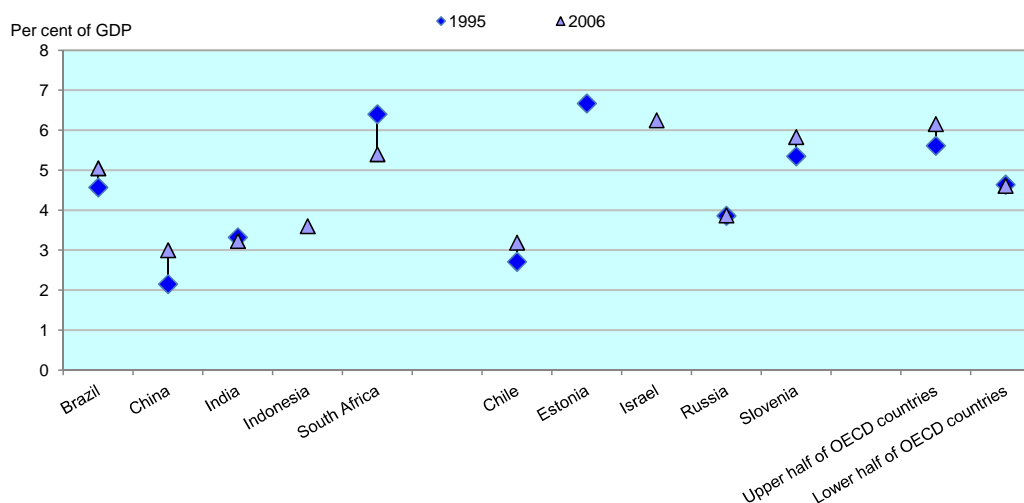
3.1. Education

19. Human capital is a fundamental determinant of economic growth and long-run living standards. Improved educational attainment means more skilled and productive workers that increase an economy's productive capacity (OECD, 2003). Recent evidence suggests that schooling quality and the development of cognitive skills is of particular importance for enhancing human capital and economic growth (Hanushek and Woessmann, 2008). As well as aiding in the development of skills-intensive industries and new technologies, human capital also influences a country's productivity performance by facilitating technological diffusion between firms. In the context of the BIICS, this may speed the adoption of advanced technologies from multinationals operating at the productivity frontier. This suggests a distinction between different types of education spending, with investment in higher education improving a country's ability to make cutting-edge innovations whereas investment in primary and secondary education is more likely to improve a country's ability to implement existing frontier technology (Aghion and Howitt, 2006). Human capital also has an important bearing on labour market outcomes, since better-educated workers are more employable and easier to train/re-train. Such flexibility is particularly important in the increasingly globalised BIICS economies.

20. As described in the previous section, secondary school attainment rates have increased markedly in the BIICS and, with the exception of India, are similar to average attainment rates in the OECD for younger cohorts, although tertiary enrolment has increased less. In no small part, this reflects the impact of policy initiatives to increase access to education. Notwithstanding these laudable improvements, however, indicators such as PISA scores suggest that student performance and education quality in the BIICS lags that in OECD countries. In India and Indonesia, weak outcomes may partly be associated with insufficient investment given that total public spending on education is low relative to GDP¹² (Figure 9). Brazil and South Africa, however, devote a similar share of GDP to education as a number of OECD countries (though less in terms of real expenditure at PPP per student), raising some questions about the administrative cost efficiency and quality of publicly-provided education. In particular, high unemployment in South Africa partly reflects an excess supply of low-skilled labour, though there is also a shortage of highly-skilled workers (OECD, 2008a). The substantial heterogeneity in the quality of education at each level of attainment also plays a role in exacerbating skill mismatches across the BIICS.

11. This is apparent from the wide range of theories of economic growth and the difficulty of indentifying the most robust drivers, see *e.g.* Sala-i-Martin *et al.* (2004).

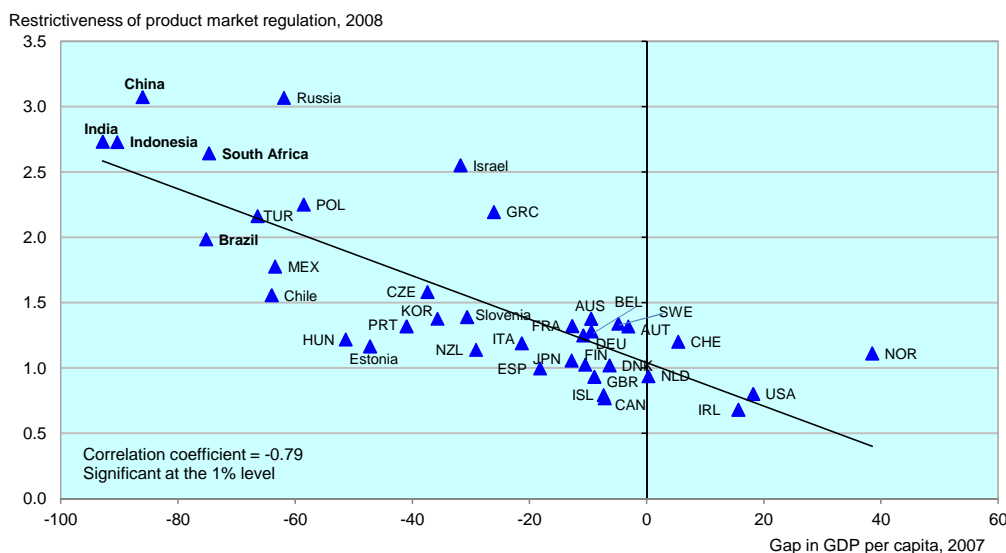
12. However, spending ratios in some OECD countries may be higher in part because of the higher relative cost of labour in education services.

Figure 9. Public expenditure on education varies widely across the BIICS

Source: World Bank (WDI).

3.2. Product market regulation

21. The OECD's indicators of product market regulation (PMR) measure the extent to which the regulatory framework is supportive of competition in markets for goods and services where technology and market conditions make competition viable. *Prima facie* evidence suggests that these indicators are highly correlated with gaps in average income across a range of developed and developing countries, including the BIICS (Figure 10). Evidence for OECD countries suggests that restrictive PMR can impair productivity growth as well as inhibit new firm creation and business investment (Conway *et al.*, 2006; *Going for Growth 2007*). Empirical analysis finds that the link between PMR and GDP per capita may be less robust in lower-income countries, given that the potential growth benefits of enhancing product market competition may be impaired by other structural weaknesses (Wölfl *et al.*, 2010).

Figure 10. Regulation and gaps in GDP per capita are correlated¹

1. Gaps in GDP per capita are measured vis-à-vis countries in the upper half of the OECD income distribution. Data are for the "simplified" PMR indicator, which has been consistently estimated across the largest number of countries, including all BIICS. See Wölfl *et al.* (2010) for details.

Source: OECD, Product Market Regulation Database, World Bank (WDI).

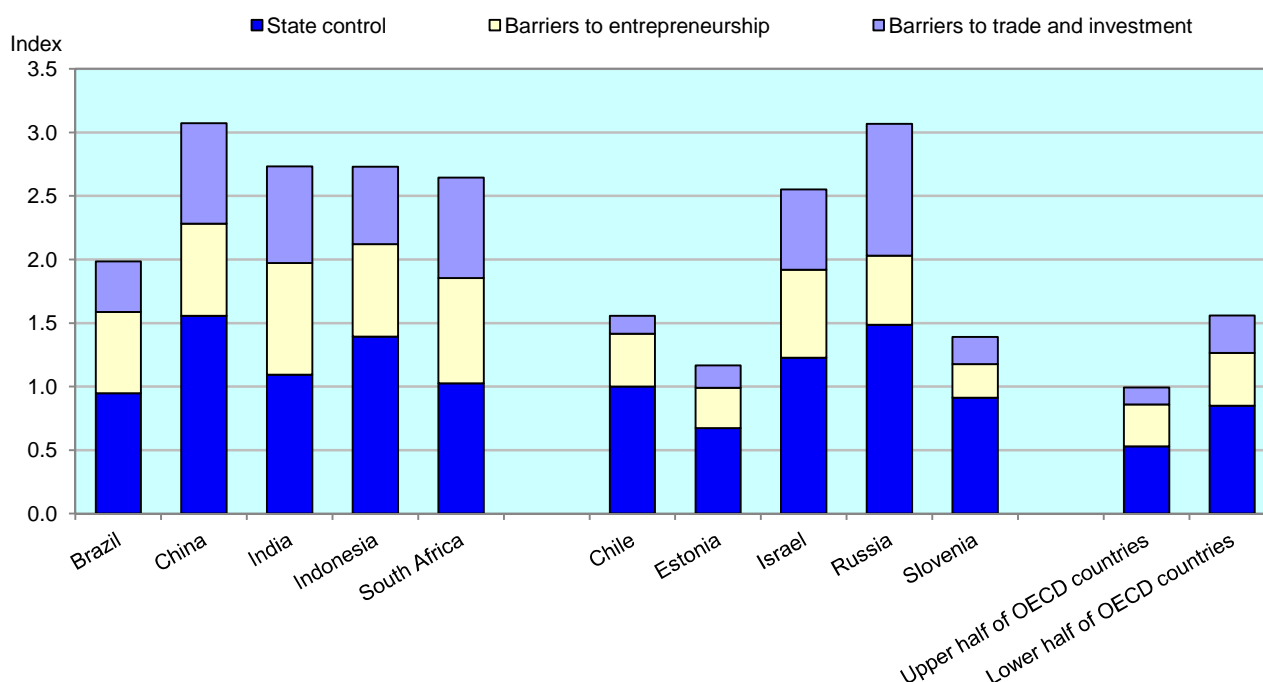
22. Although the effects of PMR reforms may depend on a country's distance to the efficiency frontier (Aghion and Howitt, 2006), recent theoretical and empirical work generally supports a number of potential mechanisms that may explain this significant link between PMR and economic performance. Broadly speaking, promoting competition by lowering (domestic and border) barriers to entry and leveling the playing field for different firm types can encourage the movement of capital from low to high-productivity firms and sectors, thereby improving resource allocation.¹³ Of particular relevance to the BIICS, there is also evidence that lower PMR speeds the international diffusion of new technologies and production techniques (Arnold *et al.*, 2008; Conway *et al.*, 2006; Aghion and Griffith, 2005). As well as stimulating catch-up, product market liberalisation can also facilitate firm monitoring and encourage managers of state-owned or newly privatised firms to improve efficiency (Aghion *et al.*, 2002). This impact may be potentially large in the BIICS, given their large state-owned sectors that are often less efficient than private-sector firms.¹⁴ Greater competition can also stimulate job creation and raise employment levels in the long run (Blanchard and Giavazzi, 2003; Nicoletti and Scarpetta, 2005; Bassanini and Duval, 2009). There is even some evidence that stronger competition may have particularly beneficial effects for the purchasing power of lower-income deciles (Urzúa, 2008).

23. On average across the BIICS, PMR is more restrictive of competition than in OECD countries and in most of the countries in accession to the OECD (Nicoletti and Wölfl, 2010) (Figure 11). Regulatory regimes in the BIICS are estimated to be relatively restrictive of competition across all three of the broad regulatory areas assessed in the PMR framework: *state control*, *barriers to entrepreneurship* and *barriers to trade and investment*. High *state control* in the BIICS reflects activist industrial policies that entail widespread government control of business enterprises and a prevalence of coercive instead of incentive-based regulations. In China and Indonesia, where *state control* is particularly high, state-owned enterprises (SOEs) still operate across most sectors of the economy despite extensive privatisation. Although public ownership does not need to be at the expense of competition, SOEs are, in practice, often granted "national champion" status and enjoy some degree of monopoly power and excessive mark-ups.¹⁵ In some of the BIICS, SOEs also still benefit from soft budget constraints and exemptions from competition law, which further tilt the playing field in their favour. Although all of the BIICS have taken important steps to lessen government involvement in product markets, the PMR indicators suggest that the line between the public and private sectors remains blurred to some extent. More complete implementation of the OECD Principles of Corporate Governance would be helpful in this regard.

13. See Arnold *et al.* (2008) for a summary of this literature. Capital reallocation can potentially lead to large productivity improvements in emerging countries. For example, using micro data on manufacturing firms, Hsieh and Klenow (2009) find that reallocating capital and labour to equalise marginal products to the extent observed in the United States would increase manufacturing TFP by 30-50% in China and 40-60% in India.

14. For evidence of the relative inefficiency of state-owned enterprises in China and India, see Dougherty *et al.* (2007, 2009).

15. In China, for instance, increasing concentration of SOE in sectors deemed to be "strategic" has led to increasingly concentrated market shares in these sectors (OECD, 2010).

Figure 11. Regulation is on average highly restrictive in the BIICS¹

1. Data are for 2008 using the “simplified” PMR indicator, which has been consistently estimated across the largest number of countries. The indicator ranges from 0 to 6 from least to most restrictive of competition. See Wölfl *et al.* (2010) for details.

Source: OECD, Product Market Regulation Database.

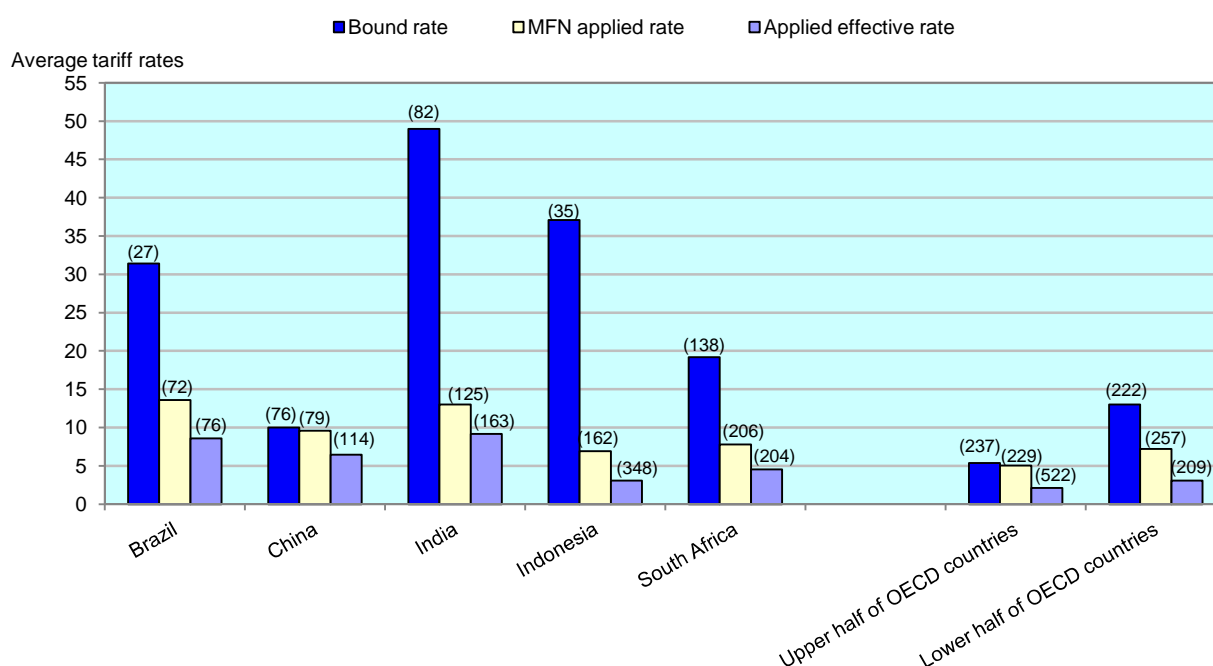
24. Administrative reforms have generally made governments in the BIICS less reliant on microeconomic interventions and more focused on framework conditions with improved capacity to oversee market-based economies. However, in international comparison, *barriers to entrepreneurship* still discourage private sector firms and competitive markets. The main reasons for these barriers differ across countries. In China and India, recent initiatives to improve government bureaucracy and cut red tape have made less headway in practice than expected, such that administrative burdens on entrepreneurs are still very high and act as an obstacle to entry. In South Africa, administrative burdens are comparable to those in some of the OECD countries but the licensing and permits systems are cumbersome and legal barriers to entry persist in a number of sectors generally considered to be competitive. Legal barriers to entry are also high in Indonesia, particularly in sectors where the government has majority (or full) ownership of the dominant firm – for example, in financial services, public utilities and transport sectors. Excessive government bureaucracy is also an ongoing problem in Indonesia. In Brazil, *barriers to entrepreneurship* are estimated to be the least restrictive among BIICS even though legal barriers to entry remain in place in some sectors.

Barriers to trade and investment

25. Barriers to international trade and foreign direct investment can be particularly detrimental to productivity growth, with an extensive literature finding that countries that grow relatively quickly as a result of higher physical and human capital investment and sustained improvements in productivity tend to be more open economies (*e.g.* Wacziarg, 2001). Multi-national enterprises tend to be more efficient than their local counterparts and can act as conduits for knowledge transfer by opening sectors up to frontier technologies, including those embedded in more modern intermediate inputs and capital goods. This growth-enhancing effect of FDI is potentially greater in emerging economies, though domestic barriers to competition can also impede the process (Savvides and Zachariadis, 2005; OECD, 2009e).

26. Notwithstanding the benefits of openness, the BIICS remain relatively restrictive in all forms of *barriers to trade and investment*, as measured by the PMR indicators (Figure 11). Tariffs are high and leave considerable scope for selective policy intervention in India (Figure 12). In Brazil, tariffs are also high, but overall restrictions on foreign ownership are the least restrictive among the BIICS (except in the banking sector, where it is strongly limited) and comparable to barriers in some of the more restrictive OECD countries. South Africa also has a comparatively open FDI regime in the context of the BIICS while Indonesia has relatively restrictive rules regarding foreign ownership. As outlined in Section 2, barriers to foreign ownership across the BIICS are reflected in moderate rates of FDI inflows as a share of investment, consistent with empirical evidence across a range of countries (Golub, 2009).

Figure 12. Tariffs are high in some of the BIICS¹



1. Data are for 2008, or latest year available for applied effective rates.
2. Bound and most favoured nation (MFN) applied rates are simple averages. Applied effective rates are import-weighted. In parentheses, the coefficients of variation are shown, based on 100 times the standard deviation divided by the average. OECD aggregates are averages across countries.

Source: TRAINS and WTO Tariff Databases.

Regulation in infrastructure sectors

27. The respective roles of public and private firms in infrastructure sectors are partly determined by the regulatory regime. Reforms to support free entry into potentially competitive market segments, and to establish independent regulators immune to capture by market participants or political interests, need to reflect the particular circumstances of the industry and be carefully coordinated along the supply chain. Notwithstanding the complexities of infrastructure regulation, the experience of a number of countries in the OECD area and beyond suggests that with appropriately designed regulatory frameworks, a competitive environment in market segments where competition is viable can help ensure more efficient investment, leading to an expansion of supply and lower prices (Sutherland *et al.*, 2009). As well as benefiting end-users, this can also flow through to downstream sectors by lowering the price and improving the quality of their intermediate inputs, spreading the benefits of reform throughout the economy. In market segments characterised by natural monopoly, arm's length regulation can, in principle,

limit the exercise of market power by aligning private and social costs and benefits. In practice, this has proven difficult in some market segments, although technological progress and regulatory innovations have at the same time gradually reduced the natural monopoly element. Given that governments will continue to play key roles as providers and financiers of infrastructure, mechanisms to ensure investment efficiency also need to be put in place.

28. On average, entry barriers in infrastructure sectors tend to be higher and regulators less well established in the BIICS compared with OECD countries. In Brazil, regulatory reform and a privatisation programme in the 1990s have lowered entry barriers in some infrastructure sectors, particularly electricity and telecommunications, though regulation still limits competition in some areas. In South Africa, the regulatory environment is still highly restrictive in the telecoms, rail freight and electricity sectors. In China, network regulation is, overall, estimated to be more restrictive than in any of the OECD countries. In India and Indonesia, although OECD indicators of regulation in network sectors are yet to be constructed, network sectors tend to be vertically integrated and dominated by state monopolies, leading to poor outcomes with infrastructure deficiencies often cited as major constraints on business.¹⁶

Subsidies

29. Subsidies are commonplace in the BIICS, though they are often concentrated in different sectors than in OECD countries. While agricultural support tends to be lower than in OECD countries, other government subsidies to producers and consumers in the BIICS, including trade measures, have the potential to distort production and investment decisions by biasing rates of return. Direct subsidies also risk lowering the quality of government expenditure by reducing the funds available for infrastructure investment and human capital development. Despite these negative effects, India and Indonesia respectively spend 10% and 20% of government expenditure on subsidies, particularly for energy. By keeping the price of fossil fuels artificially low, such price support encourages wasteful consumption and has a detrimental impact on the environment. Moreover, a high proportion of indirect subsidies distributed through local governments in some of the BIICS do not reach the poorest groups in society. Policies to provide more direct cash support to individuals and incentives for education or healthcare can be more effective in helping to sustainably raise incomes of the poorest segments of the population (see OECD, 2007a). As an example of this type of policy, Brazil has built a cash transfer program for families, to incentivise them to send their children to school (modeled on Mexico's *Oportunidades* programme). Over the longer term, transfer and benefit systems can provide safety nets and redistributive tools that can help to address broader welfare concerns.

3.3. Labour market regulation

Employment protection legislation

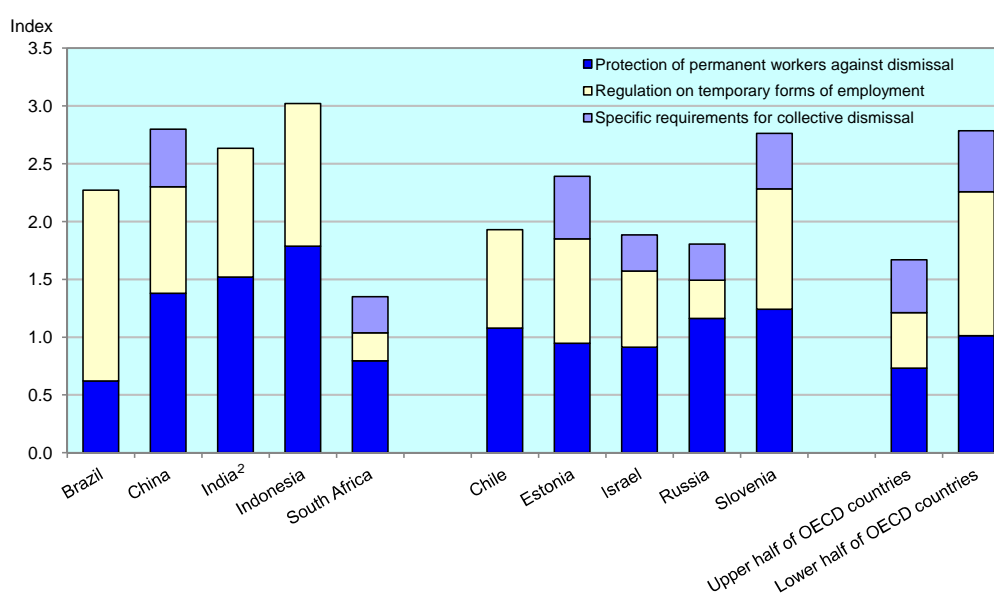
30. Research on the impact of employment protection legislation (EPL) has found that overly-rigid labour regulations can reduce job flows and negatively impact on the employment prospects of some groups of workers, notably youth and women (OECD, 2004; Kahn, 2007; Haltiwanger *et al.*, 2008). Such labour market dualism may, in the context of BIICS, contribute to enlarged informal sectors. Overly strict EPL often fails to provide effective social protection for the most needy, given that it is not binding in the informal sector. Based on the experience of OECD countries, the employment and re-employment of workers can be better supported through the development of appropriate benefit schemes and activation systems, such as active labour market programmes (OECD, 2006). Strict EPL can also negatively impact

16. For example, see the World Bank's Enterprise Survey for India (www.enterprisesurveys.com).

productivity growth by restricting the movement of labour into emerging high-productivity activities and reducing incentives for firms to grow (Bassanini *et al.*, 2009).

31. The OECD's indicators of EPL imply that overall legislation in the BIICS is, with the exception of South Africa, on a par with those in the more restrictive OECD countries (Figure 13). In Indonesia and India, the cost of individual dismissal is in fact the most restrictive across all assessed countries, reflecting strict notification requirements that make it extremely difficult to lay off workers (OECD, 2007a; Dougherty, 2009). In turn, this deters firms from taking on new workers and encourages informality. EPL is also fairly restrictive in China, although the comparatively less stringent restrictions applying to fixed-term employment have led to a preponderance of short-term contracts. In Brazil, and particularly South Africa, EPL on regular contracts does not appear to be overly stringent in international comparison. Instead, substantial (though falling) informal employment in Brazil and chronically high unemployment in South Africa suggests that the causes of labour market inefficiencies lie elsewhere.

Figure 13. Employment protection legislation is stringent in the BIICS except South Africa¹



1. Estimates are for 2008 for all countries. See Venn (2009) for details. The scale of the indicator ranges from 0 to 6, from least to most restrictive.
2. The indicator for India does not fully capture the effects of collective dismissal regulation under the Industrial Disputes Act (see OECD, 2007a).

Source: OECD Employment Outlook Database.

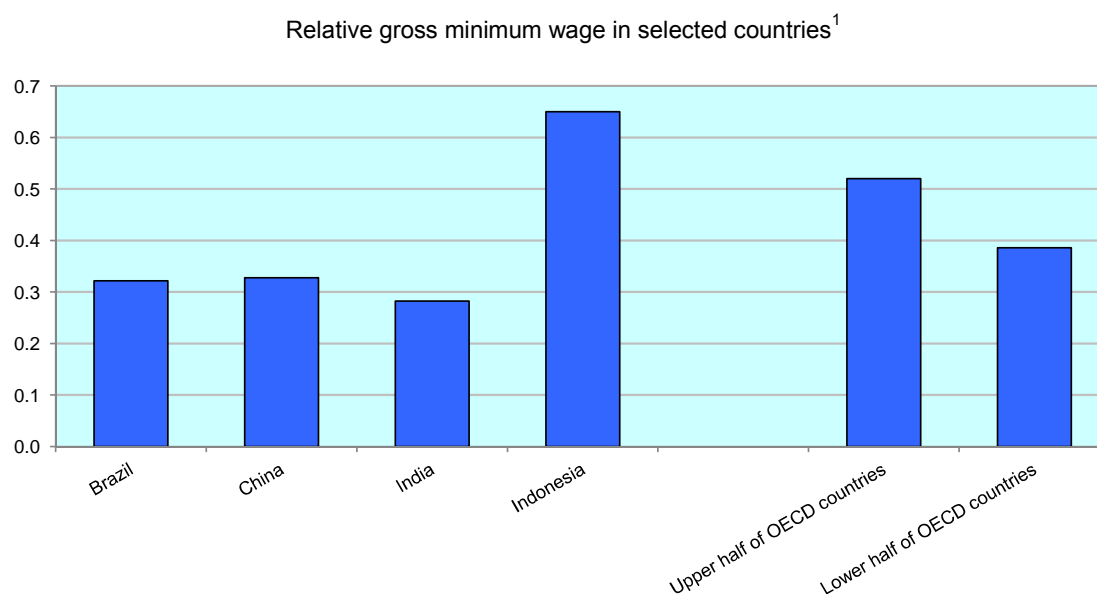
Minimum wages

32. Minimum wages set too high relative to average wages truncate the earnings distribution in the formal sector and reduce demand for lower-skilled workers (OECD, 2004). Groups with weak labour market attachment – typically females, youths and less-educated individuals – are most likely to be adversely affected with greater risk of job losses and be trapped in the informal sector. The adverse effect of excessive minimum wages can therefore be particularly marked in emerging economies, characterised by relatively young and less-educated workforces (Kantor *et al.*, 2006).

33. The relative minimum wage in Brazil, China and India are below the lower half of OECD countries where minimum wages exist (Figure 14). South Africa has no uniform statutory minimum wage, and sectoral minimum wages set by the government in sectors without bargaining councils are low and cover a relatively small number of employees. However, collective bargaining arrangements in South

Africa impose *de facto* minimum wages on a number of additional sectors.¹⁷ Indonesia has one of the highest minimum wages in the world, 65% of the median wage of salaried workers, which has had a detrimental impact on the labour market, especially by reinforcing a high degree of informality (Suryahadi *et al.*, 2003; OECD, 2008).

Figure 14. The relative minimum wage varies among the BIICS



1. Ratio of minimum to median wage in 2005 for Indonesia; 2007 for OECD countries; ratio of minimum wage to average manufacturing wage in Brazil, China and India in 2005.

Source: OECD (2009), OECD Employment Outlook.

Taxation

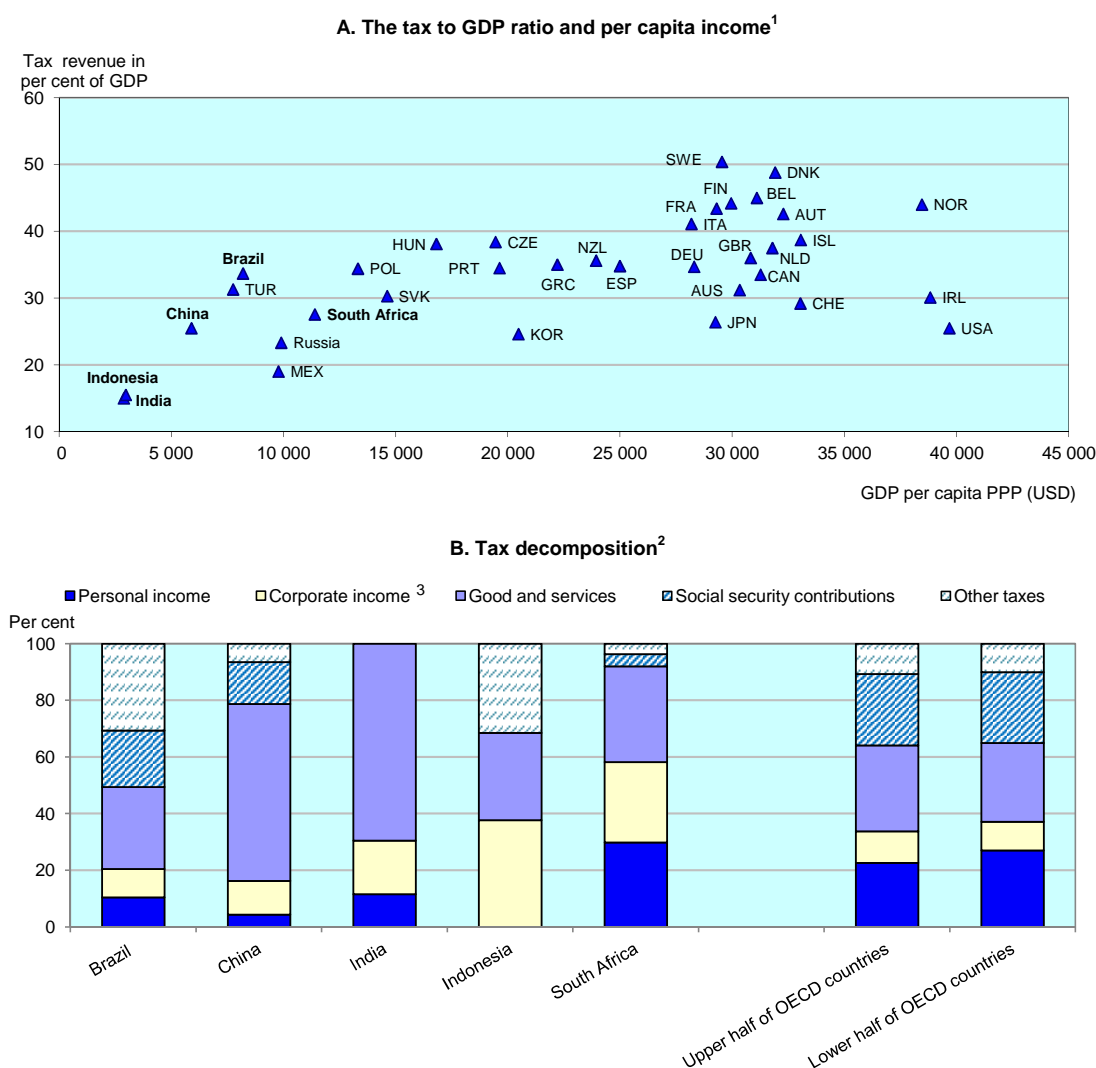
34. Demand for social protection will increase as the BIICS continue to develop, as witnessed by the recent expansion of formal social safety nets in Brazil and China. This raises the question of the most appropriate way of financing social protection over the longer term. The relative roles of individuals and general taxation can vary *inter alia* according to social preferences. To the extent that taxation is used to finance social protection, along with other government spending priorities, the tax system needs to be designed to minimise efficiency costs. In particular, general property and consumption taxes are typically less distorting than capital and labour incomes taxes (OECD, 2009a). Minimising the tax burden on labour income and broadening the tax base beyond wage earners is particularly important in most of the BIICS given the risk of reinforcing already pervasive informality. In turn, informality narrows the tax base and shifts the tax burden disproportionately onto formal enterprises and individuals.

35. In Brazil, the overall tax take is high relative to income levels (Figure 15a), with a particularly heavy tax burden on labour income. The adverse labour market impact of high taxes may be reinforced by the complexity of the tax system, which features a multitude of payroll levies on top of social security contributions, though some reforms in this area are underway (OECD, 2009c). In India and Indonesia, tax

17. Such *de facto* minimum wages are set by sectoral bargaining councils and legally extended to firms and workers within the sector covered by each council; these minima in some cases depress demand for low-skilled labour in these sectors.

revenues are low, reflecting the absence of social safety nets (for health, pensions and unemployment) beyond the employees of larger companies and the government. The overall tax burden in South Africa is broadly in line with other countries that have similar levels of GDP per capita. However, a large proportion of the tax take in South Africa comes from direct taxes on workers and firms (Figure 15b). In contrast, there has been a largely favourable trend across the BIICS characterised by an increasing dependence on indirect taxation. The emphasis on the taxation of consumption (*i.e.* of goods and services) rather than labour has to a large extent resulted from the difficulty of taxing income when there are a large number of potential taxpayers with low incomes, often with only very basic education and when informality is widespread (for example only 2% of the adult population pays income taxes in India). However, the design of indirect tax systems in most countries tends to be inefficient, due to fragmentation, complexity and changing provisions.

Figure 15. Tax to GDP ratios are typically higher in more advanced economies



1. Data are for 2004.
 2. Data reported are 2006 for Brazil and OECD countries; 2007 for China, Indonesia and South Africa; 2005 for India.
 3. For Indonesia, includes both corporate and personal taxes.

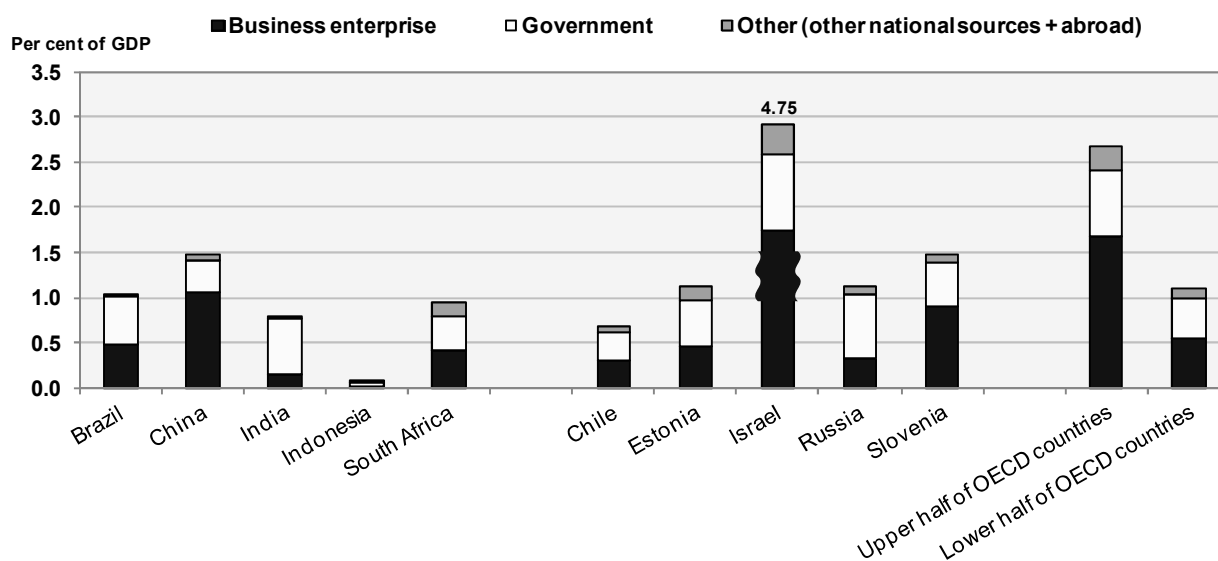
Source: OECD (2007); OECD (2008b), OECD (2008c), OECD (2009c), IMF (2009).

3.4. Research and development (R&D)

36. R&D investment enhances long-run income levels by facilitating innovation in countries near the technological frontier and increasing the “absorptive capacity” of countries lagging behind it. The process of transferring new technologies and production techniques from high to low-productivity countries is skill-intensive and requires sufficient R&D in the recipient country to master new technologies and adapt them to local conditions (Howitt and Mayer-Foulkes, 2005). Solid framework conditions – including many of the policies previously discussed – that encourage human capital accumulation and facilitate trade and investment openness can stimulate businesses to invest in innovation activities. These conditions are important for economies to fully reap gains from R&D, which can yield a very high social rate of return (see *Going for Growth* 2006).

37. As a share of GDP, R&D expenditures vary considerably across the BIICS but are typically lower than in the majority of OECD countries (Figure 16). In China, after a recent period of rapid growth, R&D expenditure is now around 1.5% of GDP, the highest among the BIICS (OECD, 2008c). R&D spending is broadly around 1% of GDP in Brazil and South Africa, slightly lower in India, and very low in Indonesia. While public-sector R&D can be particularly beneficial for creating new technologies with high social returns, private sector investments are crucial, and can be facilitated if the framework conditions provide sufficient incentives for businesses to invest. Most R&D in India is undertaken by the government, with private sector R&D relatively low. Indonesia’s low expenditure on R&D reinforces the impact of low human capital and barriers to trade and foreign investment that inhibit the absorption of new technologies.

Figure 16. Public and private R&D spending¹



1. Data are for 2007 or most recent year available.

Source: OECD Science and Technology Indicators Database and UNESCO UIS Data Centre.

3.5. Provisional policy recommendations based on *Going for Growth*

38. Although extensive policy and institutional reforms have already been undertaken in the BIICS, more reforms will be needed to deliver sustained growth and rapid economic convergence going forward.

Applying the *Going for Growth* framework to the policy and performance indicators outlined above points to a number of potential growth-enhancing policy priorities, summarised in Table 2 (for an overview of the *Going for Growth* framework see OECD, 2009). However, a good deal more judgment is necessary in formulating these priorities than is typically the case with OECD countries, given the incomplete coverage of policy and performance indicators, as well as of relevant econometric work:

- With product market regulation much more restrictive of competition than in OECD countries, there are a number of areas in which each of the BIICS could make significant improvements. In China, India and Indonesia, further reductions in the size and scope of state enterprises would help reduce implicit barriers to entry and increase competition in a number of sectors. Also, the strategic decisions of SOEs in these countries can still reflect the government's intentions, implying that improvements in governance would already help SOEs to operate on commercial grounds and maintain an arm's length relationship between the state and market. Barriers to entrepreneurship also need to be lowered across the BIICS to improve the quality of the business environment. This entails cuts in red tape to reduce administrative burdens and the removal of legal barriers to entry, particularly in Indonesia, Brazil and South Africa. Restraints on FDI also need to be reduced, particularly in the services and network sectors in Indonesia, China and India. And tariffs need to fall further in India and Brazil, while bound rates should be reduced in India especially.
- In infrastructure sectors, entry barriers need to be reduced by unbundling competitive and monopoly market segments and strengthening the hands of the sectoral regulators to encourage private sector participation and reduce public sector domination. This is especially pressing in China, India and Indonesia. In Brazil, although the overall approach to regulatory reform in network industries is well thought-out, more needs to be done to reduce regulatory uncertainty in some sectors, particularly water and sanitation. In South Africa, legal barriers to entry in network sectors should be reduced and the government's role as owner and regulator clearly defined and separated.
- In the area of education, increased spending in India and Indonesia is warranted, whereas the quality of education could also be improved in India by strengthening incentives for teachers and effectively decentralising school management. Basic education also needs to be improved in South Africa to improve the prospects of low-skilled workers. Low levels of tertiary education attainment may constrain innovation especially in Brazil and South Africa, the two BIICS countries with the smallest labour productivity gap *vis-à-vis* OECD countries. The quality of education in these countries could also be improved by increasing the cost-efficiency of publicly-funded education, given that spending levels are already relatively high.
- In the area of labour market regulation, EPL needs to be relaxed to encourage employment in the formal sector by reducing the costs of adjustment and allow firms to exploit economies of scale. In Indonesia, in addition to moderating the excessively high minimum wage, a reduction of EPL is also needed. A reduction of EPL is also needed in India, where special restrictions on dismissals in large plants should be eased. In South Africa, although EPL is relatively flexible, there are deficiencies in its implementation that raise costs and impose delays, and collective bargaining agreements can impose additional restrictions on hiring and firing which result in greater *de facto* rigidity than is inherent in the law.
- Other policy reforms suggested by the indicators include reducing the tax burden and simplifying the tax code in Brazil, which will be partly addressed by carrying through with proposed reforms. Incentives to increase R&D intensity need to be strengthened in Brazil and Indonesia to facilitate innovation and technological diffusion. In India and Indonesia, subsidies need to be reduced and, where used as social policy devices, spending should be better targeted to reach the poor.

Table 2. Indicator-based policy priorities for the BIICS

	Product market regulation				Education		Other policy areas				
	State ownership	Barriers to entry	Network regulation	Foreign investment	Primary & Secondary	Tertiary	EPL	Minimum wages	Tax policy	R&D	Subsidies
Brazil		X		X		X			X		
China	X		X	X	X	X					
India	X		X	X	X		X			X	X
Indonesia	X	X	X	X	X		X	X		X	X
South Africa		X			X	X	X				

4. Other policy reforms to speed up convergence

39. Other policy areas not currently covered in *Going for Growth* are of particular relevance to the long-term growth and convergence prospects of the BIICS.¹⁸ This section briefly reviews some of these areas and assesses the scope for growth-enhancing policy reform.

4.1. The pre-conditions for market-based economic activity

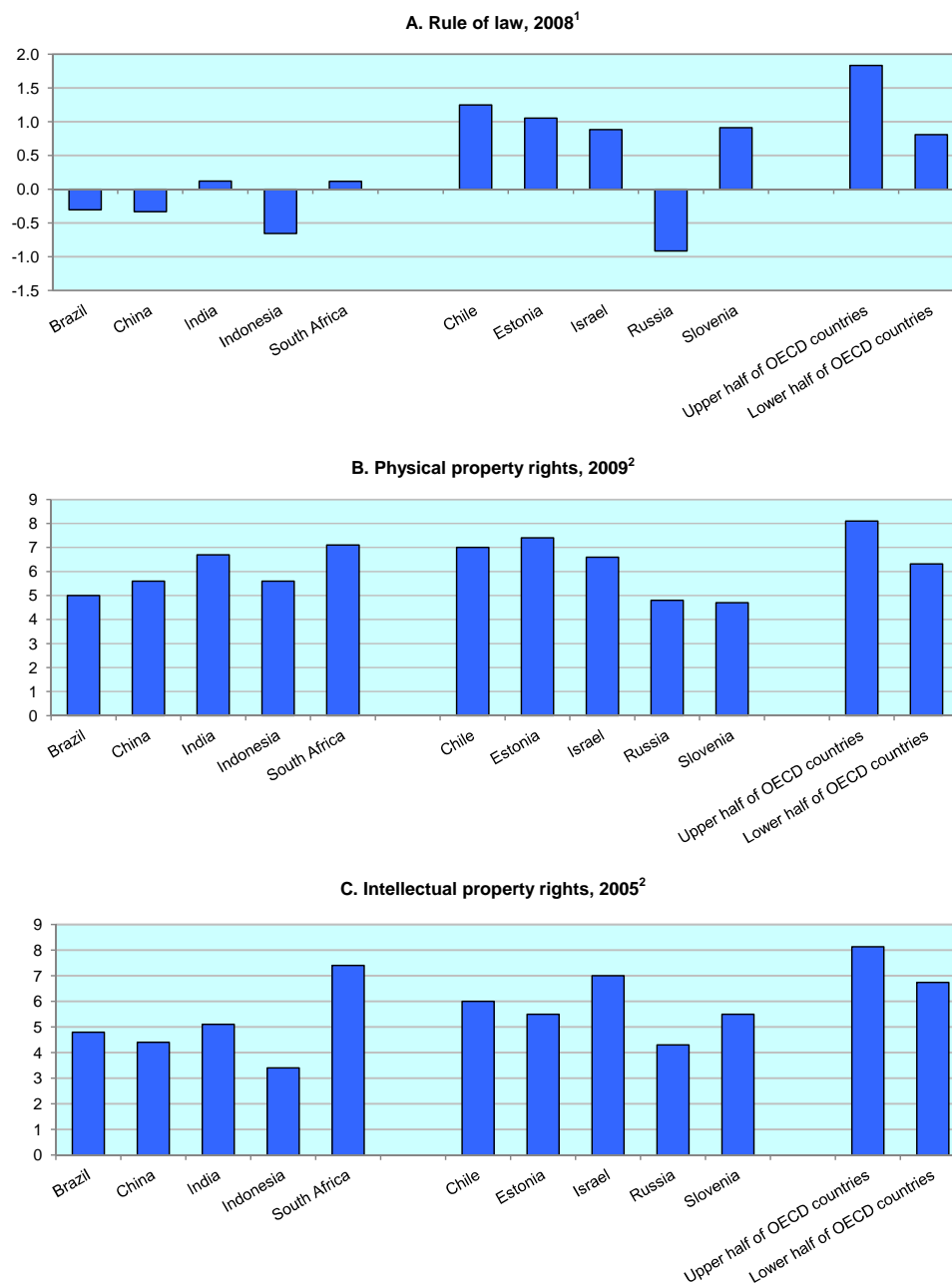
40. Property rights and the ability to enforce contracts are two critical elements of a country's institutional and legal framework. Secure property rights protect firms and citizens from expropriation while effective contracting institutions enable private contracts. Both are fundamental to the operation of market-based economies. A number of studies indicate that secure property rights and their associated legal systems have a first-order effect on long-run economic growth. In particular, countries with greater protection against expropriation have substantially higher income per capita (*e.g.*, Beck and Laeven, 2005). Although the precise causal links can be hard to identify as growth itself can help to bring about these types of institutions, empirical evidence suggests that strengthening property rights promotes firm investment and financial sector development (Acemoglu *et al.*, 2005).¹⁹ Put simply, investors need security of ownership before undertaking investment and engaging in risk taking.

41. Assessing institutional frameworks that protect property rights and facilitate private contracting is not straightforward. The World Bank *Governance Matters* indicators, which are based on expert assessments and firm surveys, include an indicator of the rule of law that gauges confidence in the rules of society, notably the quality of contract enforcement. According to this indicator, legal institutions in the BIICS are generally less reliable than in OECD countries (Figure 17a), with India and South Africa having relatively more solid legal institutions. This general pattern is also depicted in the Property Rights Alliance's indicator of the strength of physical property rights, although the BIICS are assessed to be closer to countries in the tail end of the OECD distribution (Figure 17b). Similarly, the Park index of intellectual property right protection shows India and South Africa as having relatively stronger institutions compared with Brazil, China and Indonesia (Figure 17c).

18. For a survey of indicators in some of these areas, see Mourougane and Furceri (2010).

19. De Soto (2000) argues that a lack of legal title to land and housing prevents workers from using their property as collateral for formal loans for business investment. This is seen as a key reason why informal employment persists in developing countries, since it poses a major barrier to small-scale entrepreneurship.

Figure 17. Contracting institutions and property rights are less developed in the BIICS



1. This indicator is constructed in a way such that its average across all countries is zero and the standard deviation is one.
2. The scale of the physical and intellectual property rights indexes are scaled to range from 0 to 10, with 10 representing the strongest level of property rights protection, and 0 a lack of any protection.

Source: Kaufmann *et al.* (2009); Property Rights Alliance (2009); Park and Lippoldt (2008).

42. Although the above indicators suggest that more progress is needed, a number of recent policy initiatives have made some important improvements in protecting private property rights in the BIICS. In China, a law introduced in 2007 explicitly recognises the equivalence of private assets with state and collective property, following up on the constitutional amendment in 2004 that recognised private property explicitly for the first time. In Indonesia, a new investment law enacted in 2007 clarified property rights protection by requiring that owners be compensated at the market value of assets should these be seized or

nationalised. Indonesia has also ratified all major conventions concerning intellectual property rights (IPRs) in the early 2000s. India has strengthened its regime for protecting IPRs by adopting the WTO's TRIPS standards in 2005. Such strengthening of IPRs should help to promote investments in innovation and R&D, especially as incomes rise and indigenous technological capacity grows through improving human capital. In addition, it can also help to attract foreign investment in more advanced sectors that can have beneficial spillovers (Maskus *et al.*, 2005).

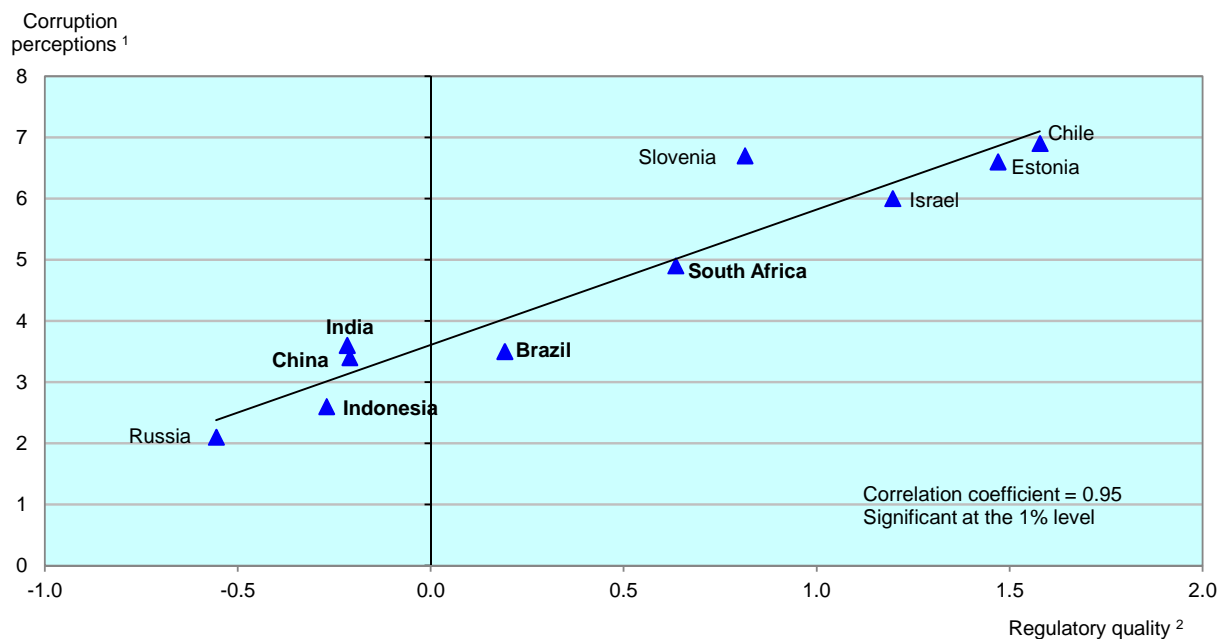
4.2. Policy implementation and enforcement

43. The effectiveness of a country's regulatory framework is not solely determined by the formal rules on the statute books but also by the effectiveness with which they are implemented and enforced. This enforcement effect is likely to be more important in countries where governance structures and judicial systems are weaker – and less independent from political interference – or when respect for formal laws and regulations is lacking. In addition, the incentive structures faced by government officials may also impact on the efficiency of policy enforcement (OECD, 2009d).

44. This suggests that the extent to which the business environment supports competition is a function of both regulations and the way they are enforced. Measuring policy enforcement is not straightforward. However, Kaufmann *et al.* (2005) find that indicators of corruption correlate with discrepancies in *de jure* and *de facto* measures of business regulation and therefore provide a reasonable proxy for enforcement. The extent of corruption in the BIICS is significantly higher than in the typical OECD country, according to perception-based indicators. Also, across the ten BIICS and OECD accession countries, perceived corruption is highly correlated with investors' perceptions of the quality of the business climate, suggesting that enforcement and implementation issues are of special importance (Figure 18).²⁰

45. According to this proxy indicator, enforcement is particularly weak in all BIICS except for South Africa, implying a risk that reforms aimed at changing formal policies may have a lower-than-expected impact on economic activity. In such a case, improvements in the institutional and administrative capacity for enforcing formal regulatory policies could magnify the effect of changes in formal policies on the business environment. Adoption of international rules such as the OECD Anti-Bribery Convention (already ratified by Brazil and South Africa) can be helpful in deterring corruption, especially important when there are foreign investors in industries with a significant risk of bribery, such as extraction and construction.

20. Indeed, in these ten countries, perceptions of the business climate are more highly correlated with corruption than they are with the PMR indicators, which measure *de jure* policy settings. In OECD countries, this result is reversed, implying that informal enforcement mechanisms play a greater role in shaping the business environment in the accession and BIICS countries.

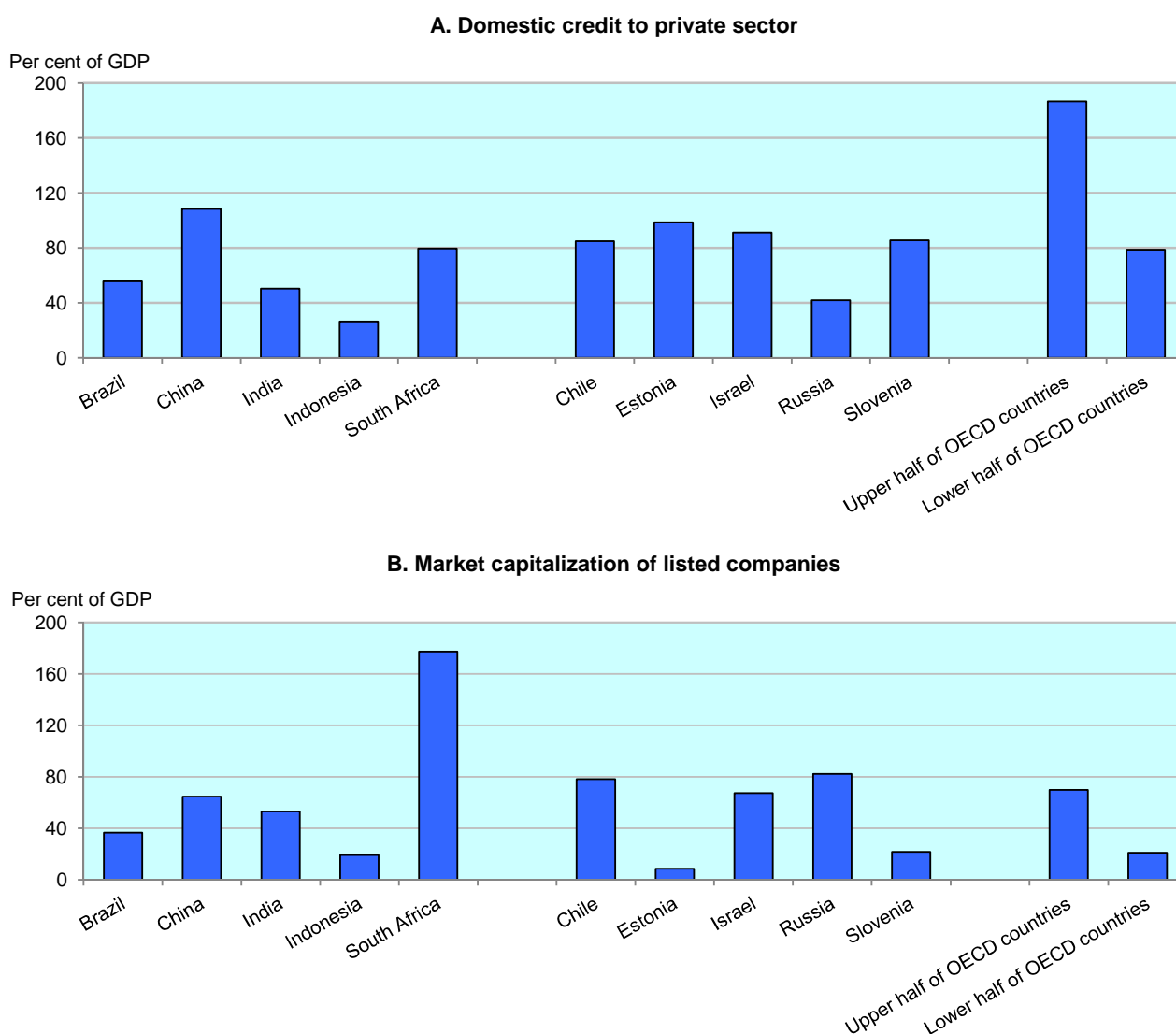
Figure 18. Enforcement and regulatory quality, 2008

1. The corruption perceptions indicator is from Transparency International for 2008. It assesses the degree to which corruption is perceived to exist among public officials and politicians.
2. The indicator of regulatory quality is from the World Bank Governance Matters Database. It is perceptions-based and assesses the ability of government to formulate and implement sound policies and regulations that promote private sector development.

Source: Kaufmann *et al.* (2009); Transparency International.

4.3. Financial sector development

46. Financial systems can have important effects on economic growth. Properly regulated, well-functioning banking systems and securities markets channel funds efficiently between savers and investors, diversify risks of households, and generate information on prospective as well as ongoing investment projects. The result is that scarce savings is allocated to investment projects with relatively high returns for individual investors and society at large (OECD, 2003). In the BIICS, financial markets are typically much shallower than in the upper half of OECD countries, implying low levels of financial inclusion and a more limited role for financial intermediation in capital allocation (Figure 19). To some extent, this reflects differences in regulation. In particular, international evidence suggests that high state-ownership of banks tends to depress financial sector development, with negative implications for economic growth (de Serres *et al.*, 2006). These effects are found to be stronger for countries with relatively shallow financial markets such as the BIICS (la Porta *et al.*, 2002).

Figure 19. Financial markets in the BIICS are relatively shallow

Source: World Bank (WDI).

4.4. Policy reforms to reduce informality

47. As discussed in Section 2, BIICS economies have substantial informal employment. While informal sectors absorb low-skilled workers and therefore reduce poverty and social exclusion, there are important reasons why a high degree of informality in labour markets should be of concern to policymakers. First, the informal sector may become a trap for unskilled workers, thus perpetuating a vicious circle of low human capital, low pay and high income inequality in a segmented labour market. Second, informality narrows the tax base, concentrating the tax burden on formal enterprises and individuals. This is also the case for existing or planned social security schemes, as long as entitlements are not strictly contribution-dependent. Finally, a lack of access to the financial sector increases the financing costs facing informal enterprises, resulting in low capital accumulation and small scale, which contribute to low productivity. Yet as industrialisation proceeds in BIICS countries, enterprises need to become increasingly capital-intensive, through increased economies of scale.

48. The causes of informality are complex (OECD, 2009c). A high tax burden and product and labour market regulatory complexities that increase compliance costs are often considered to encourage firms to operate informally, and to force the low-skilled into low-productivity and insecure informal employment (Schneider and Enste, 2000; World Bank, 2007). In India and Indonesia, for example, highly restrictive labour market regulation has contributed to persistently high informality and a lack of dynamism in labour-intensive sectors, despite abundant low-cost labour (Dougherty *et al.*, 2009; OECD, 2008). In countries with a relatively well-developed social welfare system, such as Brazil, the combination of numerous social security charges, fiscal levies and mandated saving schemes has been found to have a negative impact on hiring of low-skilled workers (OECD, 2009c). On the other hand, schemes where benefit eligibility is not conditional on worker contributions reduces the opportunity cost of informality, and might encourage informality in the upper informal labour market tier (World Bank, 2007). In Indonesia, a very high minimum wage additionally depresses formal employment (OECD, 2008b). Large tax wedges and/or high minimum wedges can act as barriers to formal employment especially for workers with low human capital. This interaction illustrates the potential for improved educational attainment to reduce informality.

49. Policy efforts to reduce informality need to focus on all these key areas. There is therefore a strong case for a multifaceted strategy pursuing four objectives: *i*) reducing barriers for firms to create more formal sector jobs, *ii*) giving informal workers the necessary means (legal, financial, educational) to shift to formal employment; *iii*) providing incentives to those who are located in the upper tier of informal employment to become formal; and *iv*) providing informal workers with basic social services without creating perverse incentives to stay informal. The emphasis should be on facilitating formal sector employment rather than trying to suppress the informal sector, since the latter is likely to increase open unemployment (OECD, 2009b). The most fundamental policy challenge is to enhance the human capital through improved education and incentives for on the job training, also in the informal sector. Labour market flexibility needs to be enhanced in most BIICS countries, while the safety net for unemployment should play a larger role relative to employment protection, all the more so as it is a more targeted, equitable and effective insurance device against the risk of income loss. However, it is equally important to strike the right balance in further development of the social safety net between adequate, cost-effective social protection and incentives to work in the formal sector (see OECD, 2008d). Employment-based contribution rates should be kept low for low-paid workers, while social entitlements may be partly linked to formal employment status in order to raise its attractiveness. Simplifying the tax system and reducing burdensome product market regulation would further improve entrepreneurship and formal job creation and should play a prominent role in any employment formalisation strategy. Finally, boosting the enforcement capacity of tax authorities could be used as a complement – although not as a substitute for – policies addressing the fundamental causes of informality.

**ANNEX:
THE GOING FOR GROWTH METHODOLOGY FOR OECD COUNTRIES**

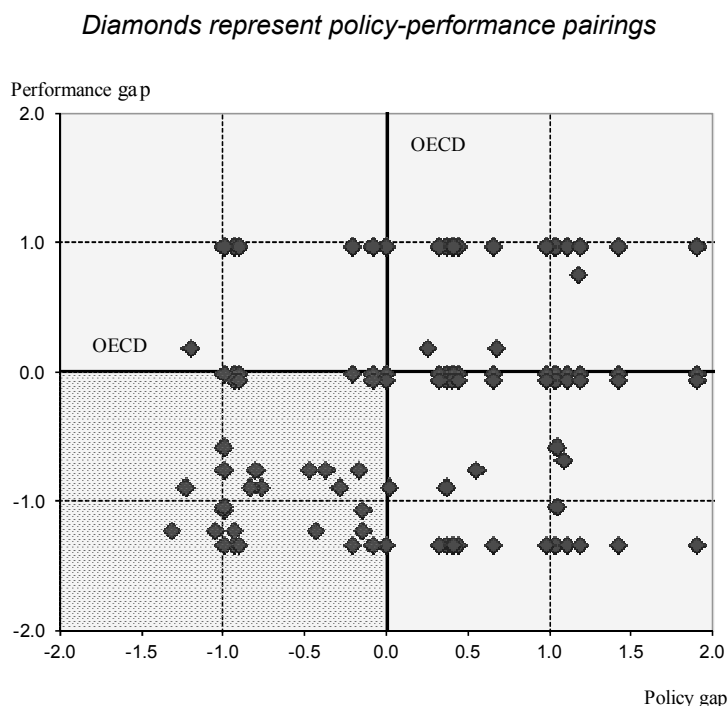
50. The *Going for Growth* framework seeks to help policy makers to achieve improved standards of living for their citizens. Drawing on knowledge of economic circumstances in individual countries, the exercise applies a systematic international benchmarking framework to analyse indicators of policy and performance. On this basis, it then identifies policy priorities for each country that would help promote higher GDP per capita. These policy priorities are discussed and vetted by member countries, and then the report itself is published annually under the responsibility of the OECD Secretariat. The report, which began in 2005, serves as a vehicle for the OECD to issue reform recommendations across a range of policy areas, as part of its multilateral surveillance work on structural issues.²¹ This systematic benchmarking relies primarily on objective policy indicators that have been linked econometrically to economic performance for OECD countries (see OECD, 2009a and Blöndal and Dougherty, 2009).

51. So far, the *Going for Growth* exercise has focused heavily on product and labour market policies (rather than deeper institutions) that can be demonstrated to increase GDP per capita in OECD countries, in a straightforward fashion. To do this, it has relied upon studies using specific quantifiable policy indicators that have been vetted by policymakers and can be directly linked to policy actions. Given this practice, virtually all policy indicators that are currently used are produced in-house by the OECD Secretariat. Though a large number of organisations produce various types of indicators that could potentially be of relevance, these indicators usually lack a direct connection to policy levers (Furceri and Mourganne, 2009). Indicators of financial market competitive regulation have been lacking, although the OECD has proposed to expand the coverage of its indicators in this area.

52. The *Going for Growth* structural surveillance exercise seeks to identify five policy priorities for each country, based on a systematic benchmarking approach. Three of these policy priorities are identified based on internationally comparable OECD indicators of policy settings and performance. The additional two priorities are often supported by indicator-based evidence, but may also draw on country-specific expertise. These priorities are meant to capture any potential policy imperatives in fields not covered by indicators. The policy indicators generally meet three main quality criteria: *i*) they can be tied to relevant performance indicators based on econometric evidence, *ii*) they relate to policies that are under the direct control of policy makers, and *iii*) they can be reliably measured with a sufficient degree of confidence to be credible to governments and the public.

53. For the selection of the three indicator-based policy priorities, the starting point is a detailed examination of labour utilisation and productivity performance relative to the OECD average, so as to uncover specific areas of relative strength and weakness compared with other OECD countries. Each performance indicator is juxtaposed with the corresponding policy indicators, where OECD empirical research has shown a robust link to performance, to determine where performance and policy weaknesses appear to be linked. This evaluation process is carried out for each of the approximately 50 areas where OECD policy indicators provide coverage. For the BIICS countries, coverage is currently much more limited, and at present, only about half of these areas are covered by policy indicators.

21. As such, *Going for Growth* is a core part of the mutual accountability and peer pressure that are central to the OECD's mission. This horizontal structural surveillance exercise supplements the country-specific surveillance that is reported in Economic Surveys, as well as thematic reviews that are done in specific areas such as agriculture, education, environment, innovation, investment and regulatory policy.

Figure A1. Selection of candidates for *Going for Growth* priorities for Germany¹

1. Performance and policy gaps relative to OECD average, where positive numbers indicate position better than average. Policy-performance pairs with below-average scores (the bottom-left quadrant) are shown below ranked by descending distance from the mean. Indicators rescaled to have mean of zero and standard deviation of one across countries.

Source: OECD analysis.

54. As an example, Figure A1 shows a scatter plot for Germany of pairings of policy indicators (on the horizontal axis) with corresponding performance indicators (on the vertical axis). Since many of the approximately 50 policy indicators are associated with more than one performance area, there are more than 100 potential pairings to be examined. The indicators of policy and performance are standardised by re-scaling them so that each has a mean of zero and a cross-country standard deviation of one, with positive numbers representing positions more growth-friendly than the OECD average. The scatter plot is thus divided into four quadrants, depending on whether a country's policy-performance pairing is below or above the average policy or performance score. Candidates for recommendations thus fall into the lower left quadrant, where policy indicators and corresponding performance are *both* below average.²²

22. For OECD countries, where there are often more than three unique policy areas that qualify as potential priorities (for instance, Germany had 16 candidates in the 2009 exercise). When there are more than three candidate policy priorities, the list is narrowed using a combination of country expertise with the following criteria: *i*) the estimated quantitative impact of reforms in the policy area on GDP per capita as determined in previous OECD analysis, *ii*) the normalised distance of the policy stance from the benchmark (the OECD average), and *iii*) recent trends in policy and performance. The limit on the number of priorities means that for some countries, obvious policy imperatives may not be identified as priorities because other priorities are deemed as more important.

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