

How Competitive is Product Market Regulation in India? An International and Cross-state Comparison

by

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Introduction

Since the mid-1980s, successive waves of reform have progressively moved India away from its former *dirigiste* economic model towards a market-based system. The reform of regulations that shape the business environment in markets for goods and services – henceforth referred to as product market regulation – has been an integral part of this transformation. As in a number of developed and developing countries, this reform process has been closely intertwined with increasing the extent of competition in product markets. State intervention and control over economic activity has been significantly reduced and the role of private-sector entrepreneurship increased.

Although India has clearly made significant progress in liberalising product markets, the extent to which regulations are conducive to competition is still an important concern and a number of national and international surveys have highlighted weaknesses in India's business environment.¹ As well as being an issue at the national level, the degree to which the regulatory environment is supportive of competition is also an important concern at the state level. India's constitution mandates direct responsibility for a number of areas of economic policy to the state governments as well as shared responsibility with central government in a number of other areas.² Accordingly, state governments may implement their own laws in certain areas, or amend central legislation prior to implementation. Moreover, the state governments usually formulate and administer the rules and procedures through which all laws are enforced. As a result, differing views across state governments on the role of the public sector and the efficiency with which laws and regulations are administered can lead to considerable differences in the business environment across states.

This paper assesses the extent to which India's regulatory environment promotes or inhibits competition in markets where technology and market conditions make competition viable. The analysis is based on the OECD's indicators of Product Market Regulation (PMR) which have been used extensively over the last decade to benchmark regulatory frameworks in OECD countries and have proven useful in encouraging countries to implement structural reforms that enhance economic performance.³ The PMR system summarises information on a large number of economy-wide and industry-specific regulatory provisions that have a bearing on competition. The system is based on 16 low-level indicators that collectively span most of the important aspects of general regulatory practice. These low-level indicators fall into three broad regulatory areas: i) *state control*; ii) *barriers to entrepreneurship*; and iii) *barriers to international trade and investment*. At the top of the PMR structure, the overall indicator serves as a summary statistic of the overall stance of product market regulation.

The PMR indicators have a number of characteristics that differentiate them from other indicators of the business environment. First, in principle, the low-level indicators only record "objective" information about rules and regulations, as opposed to "subjective" assessments of market participants as in indicators based on opinion surveys. This isolates

the indicators from context-specific assessments and makes them comparable across time and countries. Second, the PMR indicators follow a bottom-up approach, in which indicator values can be related to specific underlying policies. One of the advantages of this system is that the values of higher-level indicators can be traced with an increasing degree of detail to the values of the more disaggregated indicators and, eventually, to specific data points in the regulation database. This is not possible with indicator systems based on opinion surveys, which can identify perceived areas of policy weakness, but are less able to relate these to specific policy settings.

As well as benchmarking India's regulatory environment relative to OECD and a number of other countries, a modified version of the PMR indicators is also estimated for 21 states, which collectively encompass around 98% of both India's GDP and population.⁴ The results of this analysis indicate that there is still considerable scope for improving the extent to which product market regulations allow competitive market forces to operate in India. Although reforms over the past 20 years have aligned regulations in a few areas with international best practice, the overall stance of product market regulation remains much more restrictive than in a typical OECD country. At the state level the PMR indicators confirm that cross-state differences in product market regulation are significant. In broad terms, changing the governance structure for public-sector enterprises, reducing administrative burdens on enterprises, and ongoing consolidation of tariff rates and ceilings on foreign investment would go a long way towards increasing the extent of competition in India's product markets.

The paper also draws on recent work on regulation and economic performance and finds that the Indian experience is generally consistent with previous findings on the impact of product market regulation on productivity in both OECD and developing countries. In particular, states in which the regulatory environment is relatively supportive of competition are found to have higher productivity than relatively restrictive states. This result adds to the growing consensus in the literature of a positive relationship between liberal regulatory regimes and improvements in productivity performance.

The paper goes on to consider a number of channels through which the regulatory environment might influence productivity at the state level. States with relatively liberal regulatory settings are found to attract more foreign direct investment, have better infrastructure, and a larger share of employment in the organised sector relative to more restrictive states. This implies that liberalising markets and increasing competition in less productive states would improve resource allocation and stimulate innovation and technological diffusion from more to less productive states. This would help ensure that the benefits of India's economic transformation spread throughout the national economy, which is an important key to reducing poverty (OECD, 2007). In the relatively more liberal states and at the centre, the challenge is to further improve business framework conditions towards those in the OECD area so as to hasten the international diffusion of more productive production techniques. These are potentially crucial sources of productivity growth in India and, as in the OECD and other countries; the extent to which regulations are conducive to competition will be a central determinant of India's future growth rate.

The remainder of the paper is structured as follows. A second section briefly outlines the indicator results at the national and state level. It also compares the PMR indicator results at the state level with entrepreneurs' perception of the investment climate and finds that they are generally consistent. The third section contrasts the impact of

regulation on productivity performance across Indian states with similar work on OECD and other countries. A number of channels through which product market regulation might influence state economic performance are also considered. In the final section, the detailed indicator results are used to outline a number of regulatory areas where policy changes would help increase competition and improve economic performance.

The overall stance of product market regulation in India⁵

At the national level

At the national level the overall stance of product market regulation in India is less conducive to competition than in OECD member countries, including the emerging market economies within the OECD area (Table 1). India's regulatory framework is also less supportive of competition than in the eastern European and Latin American countries for which PMR indicators are available.

Table 1. **Product market regulation in India, an international comparison**

	India	OECD average	OECD emerging markets ¹	Euro area ²	Eastern Europe ³	Latin America ⁴	United States
Overall indicator	2.85	1.49	1.98	1.49	1.82	2.08	1.03
State control	3.47	2.12	2.46	2.40	2.74	2.16	1.19
Barriers to entrepreneurship	2.57	1.46	1.89	1.43	1.44	1.94	1.20
Barriers to trade and foreign investment	2.56	0.97	1.66	0.75	1.35	2.31	0.73

1. Czech Republic, Hungary, Korea, Mexico, Poland, Slovak Republic, Turkey.

2. Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain.

3. Bulgaria, Czech Republic, Hungary, Romania, Slovak Republic, Turkey.

4. Brazil, Chile, Mexico.

Relative to comparator countries, all three of the high-level sub-components of the overall PMR index are found to be restrictive at the national level in India. In particular, as will be elaborated on in the final section, a high level of *state control* indicates relatively pervasive public-sector involvement in India's product markets. *Barriers to entrepreneurship* are also estimated to be relatively extensive, reflecting prohibitive administrative burdens on business start ups and other regulatory hurdles to a dynamic business environment in India's formal sector. This may also be indicative of more widespread transaction costs in government administration. Results at the national level also indicate that *barriers to international trade and investment* are relatively high, indicative of significant tariff and non-tariff barriers to trade and foreign direct investment (FDI).

At the state level

At the state level, the PMR indicators highlight notable differences in the extent to which state government policies are conducive to competition (Figure 1).⁶ This reflects differences in the extent of both *state control* and *barriers to entrepreneurship*.⁷ In broad terms, according to the PMR indicators, the regulatory environment in some of the southern and north-eastern states is relatively more supportive of competition, in contrast with states in the east and west of the country which have regulatory frameworks that are relatively restrictive of competition (Figure 2).

Figure 1. Product market regulation at the state level

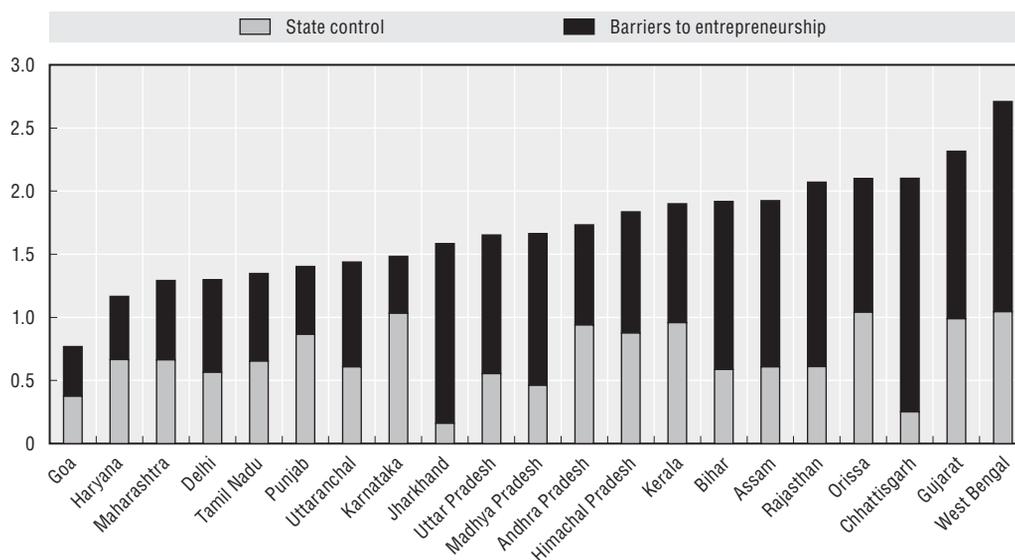
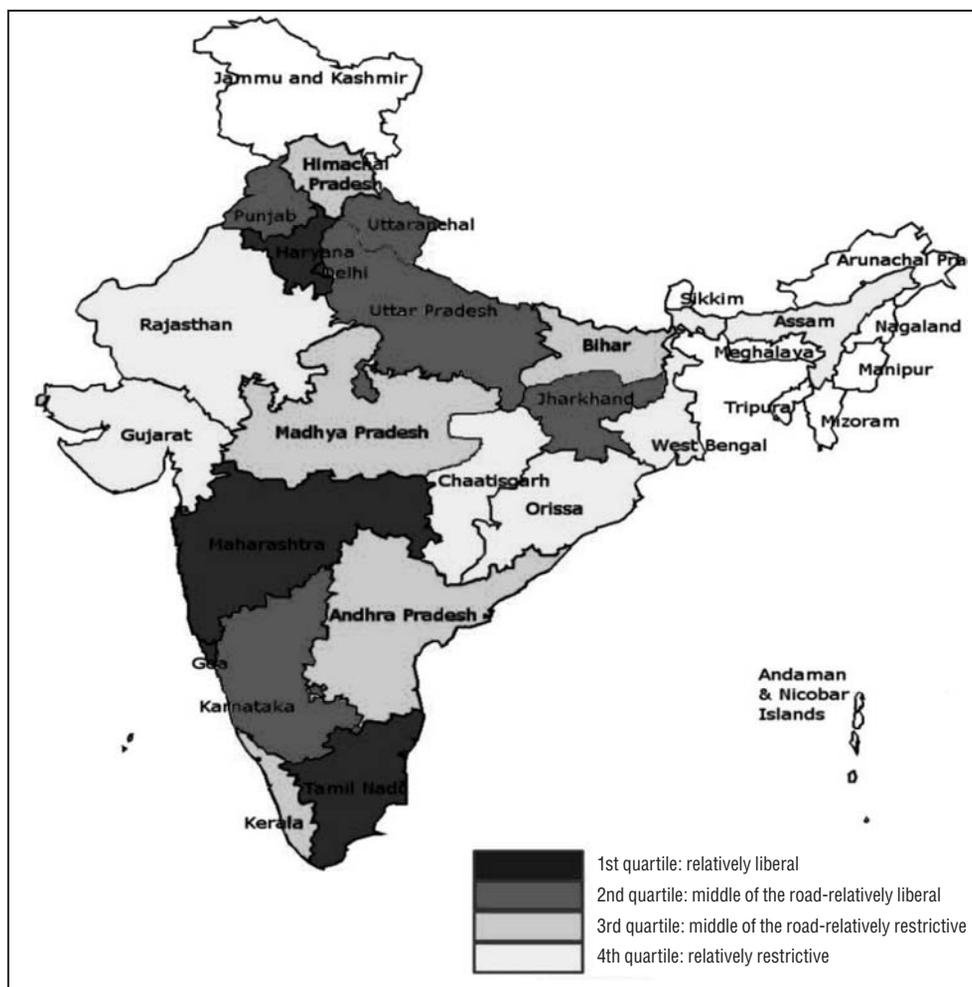


Figure 2. Overall PMR indicator by state



This pattern of product market regulation across states is generally consistent with more subjective perception-based assessments of the investment climate. For example, when the World Bank's ranking of entrepreneurs' perception of investment climate across Indian states are regressed on the PMR indicators, the latter are highly significant, even though the number of observations is very small (Table 2).⁸ The way in which regulations are enforced may also be an important determinant of perception-based assessments of the investment climate. However, measuring enforcement effects in isolation is conceptually difficult. Indicators of the extent of corruption at the state level may provide a proxy for state governments' approach to policy enforcement. When an indicator of the extent of corruption at the state level is added to the regression, it is significant at the 10% level and the R^2 indicates a good fit that is much higher than in an equation with only the PMR indicators on the right-hand side. This suggests that enforcement, as proxied by the corruption measure, may help explain differences between regulations *per se* and investor perceptions of the business environment.⁹

Table 2. Impact of regulation and enforcement on entrepreneurs' perception of the business environment

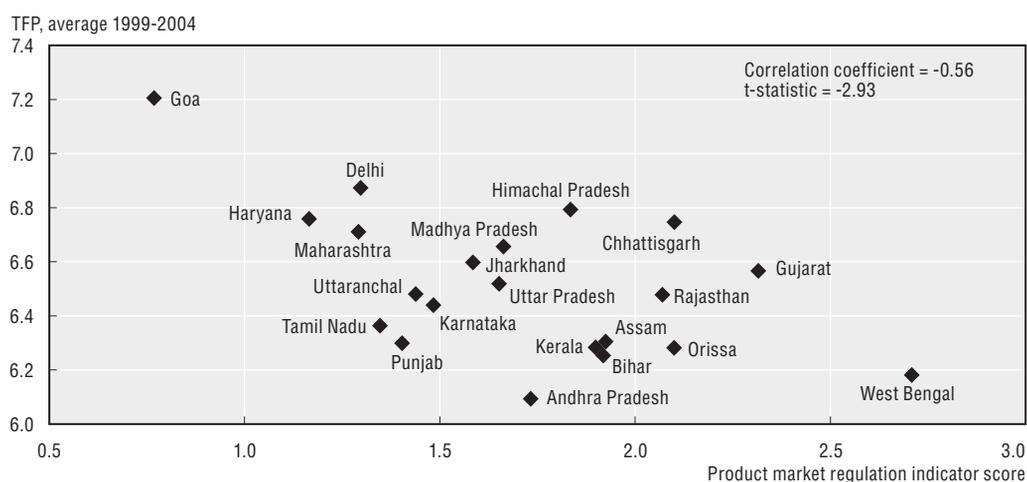
Dependent variable: entrepreneurs' perception of the business environment		
Product market regulation	1.038***	0.667*
Enforcement		0.435*
Observations	10	10
R-squared	0.55	0.71

* significant at 10%; *** significant at 1%.

Regulation and economic performance across Indian states

As well as explaining entrepreneurs' perception of the investment climate, empirical work using the PMR indicators implies that the extent to which the regulatory environment supports competition has a significant impact on economic performance at the state level in India. For example, there is a clear negative relationship between the stringency of product market regulation and total factor productivity across states (Figure 3). Confirming this result, Conway *et al.* (2008) estimate a model of productivity catch-up and find that cross-state differences in the regulatory environment, as measured by the PMR indicators, have a significant impact on both labour and total factor productivity in the state economies. States where the regulatory environment is less conducive to competition exhibit lower productivity growth in comparison to states in which regulation is more supportive of competition. This implies that inappropriate regulatory settings impinge on the ability of the state economies to reap the full benefits of economic reforms undertaken at the national level.

These results are in line with the emerging consensus in the existing literature that cross-state differences in the business environment significantly affect various aspects of economic performance at the state level in India. For example, World Bank-CII (2002) finds that states with a better investment climate attract more investment and are more productive. Purfield (2006) finds that the characteristics of the state business environment – such as the GDP share of government expenditure and transmission and distribution losses of electricity – have a significant negative effect on state per capita income. Veeramani and Goldar (2004) find that poor governance is associated with low productivity growth across states.¹⁰ Aghion *et al.* (2008) find that dismantling the license raj lead to increased industrial growth in states with relatively liberal labour market institutions.

Figure 3. **PMR and average total factor productivity**

Source: OECD and Indian National Account Statistics.

In turn, empirical results on the impact of regulation on economic performance across Indian states are consistent with a number of studies on policy and performance in both OECD and developing economies. A range of recent empirical work has found that regulatory environments that encourage competition have a positive impact on economy-wide productivity in OECD countries even when other potentially important factors, such as human capital and country- and industry-specific effects, are accounted for (Nicoletti and Scarpetta, 2003; Conway *et al.*, 2006).¹¹ In relatively less productive economies, product market reforms that encourage competition have also been found to have a pronounced impact on productivity at the sectoral level by influencing the speed with which low-productivity countries “catch up” to countries with higher productivity levels (Arnold *et al.*, 2008; Conway *et al.*, 2006).

This raises the possibility of differences in product market regulation influencing the extent to which new technologies and production techniques flow from more to less productive national or state economies. At the firm level, the impact of competition on the diffusion of new technologies may differ depending on the level of productivity relative to global technological leaders. An increased threat of new entry from highly-productive foreign firms may spur domestic firms that are relatively close to the technological frontier to increase innovation to escape competition but discourage very low productivity domestic firms that may be unable to “catch up” to the leading global firms and appropriate the benefits of innovation. Accordingly, a greater threat of entry has been found to increase cross-firm differences in performance and turnover. In the Indian context, Aghion *et al.* (2008) find that entry liberalisation (de-licensing) in Indian states lead to an increase in within-industry inequality in output, labour and total factor productivity.¹² At the sectoral and economy levels, however, the impact of increased competition on aggregate productivity is unambiguously positive as weaker incumbents shrink or close and more productive incumbents and new firms innovate (Aghion and Bessonova, 2006). This is consistent with the positive link between liberal PMR and productivity across Indian states and highlights the key role of product market liberalisation in improving the efficiency with which resources are channelled from low to high productivity firms.

Although much of the work on the impact of regulation on productivity catch-up has developed outside the context of transition economies, a number of studies find that regulation is also an important determinant of economic performance in these countries. For example, Aghion *et al.* (2002) argue that transition economies are likely to have a relatively large number of state-owned or newly privatised firms run by “satisficing” managers who are more interested in minimising effort than maximising efficiency and profits. As regulation becomes more conducive to competition, these firms are confronted with the need to restructure and innovate in order to survive. Accordingly, the impact of reform on economic performance via improved corporate governance is likely to be relatively large in transition economies.

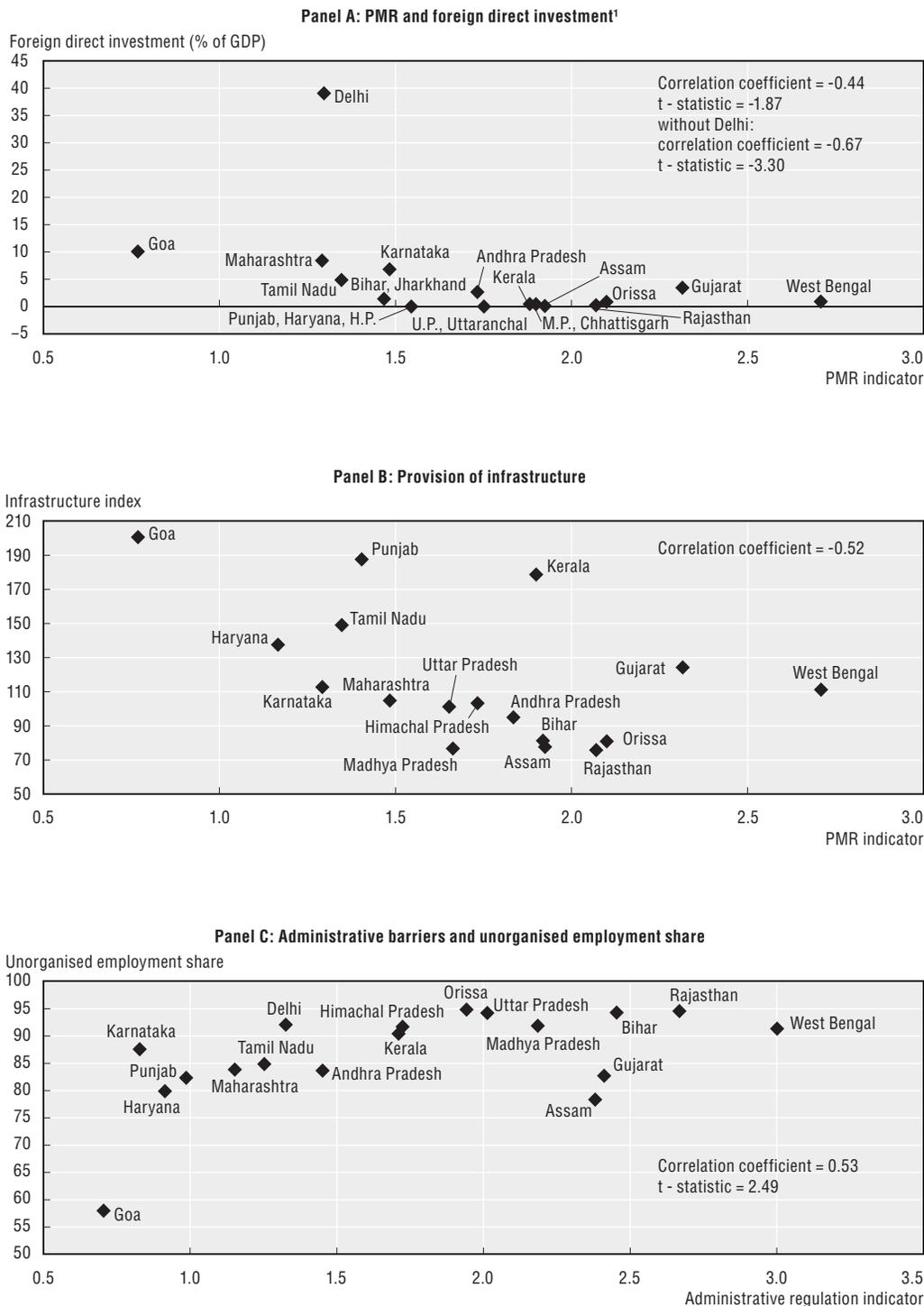
Potential transmission channels

It would seem that poor product market regulation in Indian states reduces firms’ incentives to invest and enhance efficiency. Casual empiricism suggests a number of reasons why states with a relatively more liberal regulatory environment have higher productivity growth. First, the location of FDI is negatively related to product market restrictions, with the relatively more liberal states receiving virtually all of India’s FDI inflows (Figure 4, Panel A). This is consistent with a growing body of recent research that finds the regulatory environment to be a key determinant of FDI. As shown in Nicoletti *et al.* (2003), regulatory policies that restrict market access in one way or another negatively influence the share of FDI in OECD countries. Conway *et al.* (2006) find that the employment share of foreign affiliates in manufacturing sectors is higher in OECD countries with relatively more liberal product market environments. Given that foreign affiliates in a host country have been found to be more capital and skill intensive and invest more in research and development than domestic firms in the same industry, they generally have a beneficial effect on productivity growth (Keller, 2004; Keller and Yeaple, 2003). In the case of India, because these firms are attracted to the relatively more liberal states, the beneficial impact on productivity performance is concentrated in these states.

States in which product market regulation is more conducive to competition have also been more successful at infrastructure provision (Figure 4, Panel B). Because infrastructure has, to a large extent, been provided by the public sector in India, this points to complementarities in state government competences: well-functioning state governments that have enacted policies that are supportive of product market competition have also been more successful at infrastructure provision. In a number of studies, infrastructure has been found to be an important determinant of economic performance across states (*e.g.* Purfield, 2006).

Finally, higher administrative burdens, as measured by the PMR indicator of *barriers to entrepreneurship*, are associated with a lower share of private sector employment in the formal sector of the state economies (Figure 4, Panel C). This suggests that firms in relatively restrictive states prefer to remain small and informal so as to stay under the radar of having to interact with government and thereby avoid overly onerous administrative requirements. However, firms in the informal sector of the Indian economy have lower capital intensity and are generally much less productive than formal-sector enterprises (OECD, 2007). As a result, states with excessive administrative burdens suffer from relatively low fixed capital formation and small average firm size, which weighs on productivity performance.

Figure 4. Channels through which product market regulation affects economic performance



1. FDI is measured as cumulative inflows over the period 2000 to 2006 as a share of annual average state GDP.

The low-level indicators and areas in need of reform

The results discussed in the preceding section imply that ongoing reform of anti-competitive regulations in the less productive states would improve their economic performance, which is an important key to reducing poverty (OECD, 2007). In the relatively more liberal states and at the centre, the challenge is to further improve business framework conditions towards those in the OECD area so as to hasten the international diffusion of more productive production techniques. In this section, the detailed results of the PMR benchmarking exercise are used to outline specific areas in which the regulatory environment hinders product market competition and could be improved. It uses the indicator results at the national and state levels and is divided into the three broad categories of the PMR indicators: i) *state control*, ii) *barriers to entrepreneurship* and iii) *barriers to international trade and investment*.

State control

Compared with other countries, the extent of state control in product markets is relatively high in India at the national level (Table 3). On the positive side, the PMR sub-indicators show that direct government interference in the conduct of private sector firms is minimal. Price setting, for example, is free of government interference in most segments of the Indian retail market and the degree of direct government control over private firms is broadly similar to that in emerging OECD economies. This reflects the absence of government-owned special voting rights, notwithstanding restrictions on the voting rights of private shareholders in government-owned banks. On the other hand, the public enterprise sector is relatively large in India and public-sector enterprises (PSEs) operate across a broad range of sectors. In addition, there is also a relatively high level of command-and-control regulation for private firms reflecting, for example, the imposition of universal service obligations.

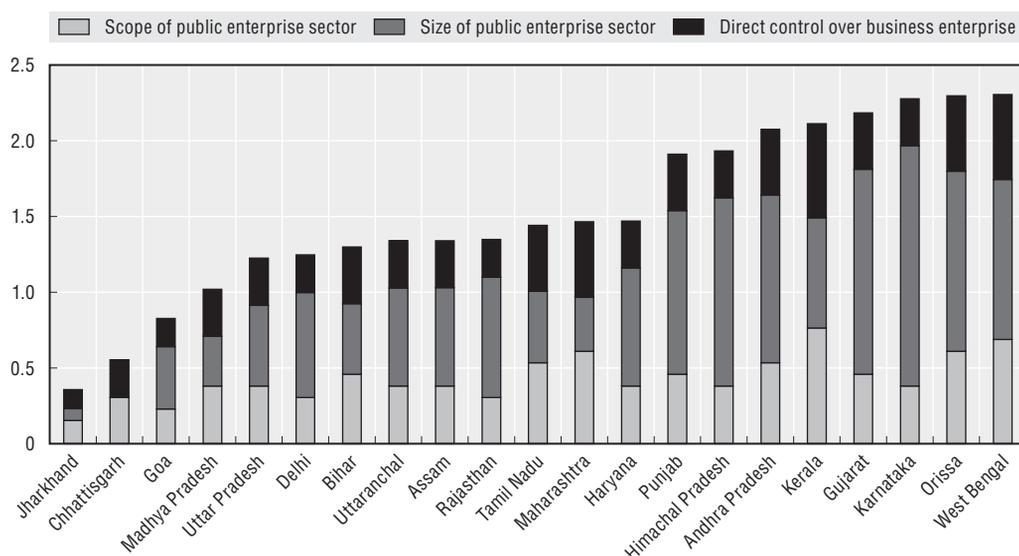
Table 3. **State control: National level**

	India	OECD average	OECD emerging markets	Euro area	Eastern Europe	Latin America	United States
State control	3.47	2.12	2.46	2.40	2.74	2.16	1.19
Public ownership	3.82	2.42	2.88	2.72	3.22	2.16	1.20
Scope of public enterprise sector	4.91	3.14	3.48	3.34	3.36	3.06	2.50
Size of public enterprise sector	4.58	2.53	3.09	3.03	3.15	2.13	0.59
Direct Control over business enterprises	2.45	1.86	2.33	2.06	3.20	1.95	0.75
Involvement in business operations	3.03	1.73	1.92	2.00	2.12	1.79	1.18
Use of command-and-control regulation	5.00	2.16	2.17	2.78	2.48	3.13	1.50
Price controls	0.75	1.01	1.27	0.92	1.12	1.08	0.80

At the state level the PMR indicators suggest that there is wide variation in the degree of state control (Figure 5). This arises predominantly as a result of differences in the size and scope of the public enterprise sector, reflecting different starting points and commitments to privatisation by state governments.

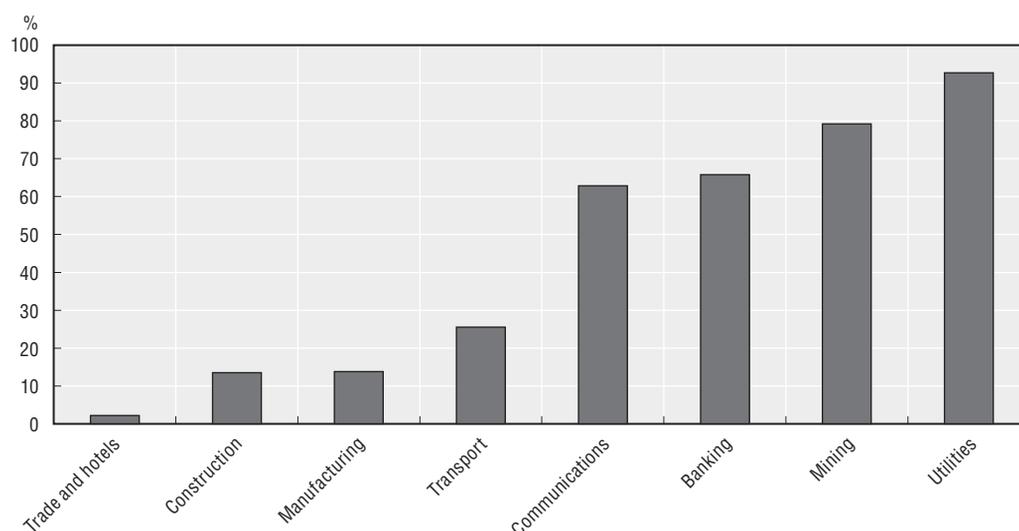
Public ownership

Until the 1990s the public sector was widely seen as the mechanism to bring about India's industrialisation and modernisation through control of the "commanding heights of the economy". Since then, despite some initiatives to sell stakes in public companies, the

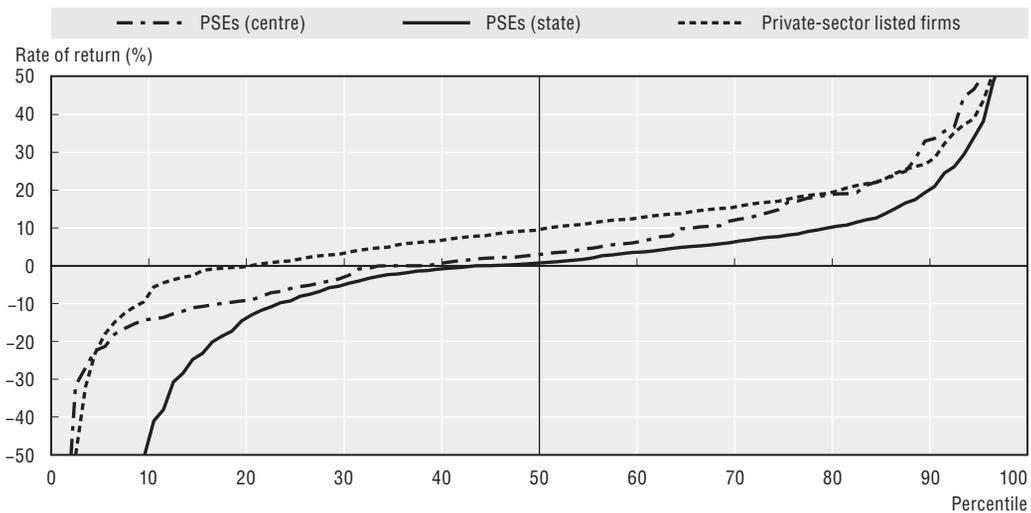
Figure 5. **State Control: State level**

size of the public sector has changed little. PSEs produce 21% of net value added and account for 38% of the capital stock of the non-farm business sector. Their weight in the formal business sector is even larger, accounting for 36% and 55% of value-added and capital respectively. This is high compared with the average of OECD countries (OECD, 2005). As well as being large in size, the public enterprise sector is broad in scope with PSEs operating across a diverse range of sectors. In addition to the network sectors, PSEs also operate in, and in some cases dominate, sectors that are inherently competitive (Figure 6).

Over the period 1990 to 2006 private firms were, on average, as much as one-third more productive than PSEs (OECD, 2007). Although the profitability of PSEs has improved recently, their relatively low productivity is still reflected in low rates of return in

Figure 6. **Share of public-sector enterprises in sector output**

Source: Central Statistical Organisation, National Accounts Statistics.

Figure 7. **Distribution of rates of return of central enterprises**

Source: Authors' calculations based on data from the Comptroller and Auditor General and Prowess database.

comparison to the private sector. In 2005, the rate of return earned by the median PSE controlled by the centre was 3% (after subsidies) in contrast to almost 10% for the median private sector company (Figure 7).

At the state level the amount of capital and loans invested in PSEs as a share of state GDP ranges from just 0.2% in Jharkhand to 26.2% in Karnataka (Table 4).¹³ In comparison to central government, the state governments collectively control a much larger number of PSEs – just over 1 000 in 2003 in comparison to 245 at the centre. However, the average size of state-level PSEs is much smaller than at the centre, with state governments collectively controlling slightly more than 50% of the total capital stock of the public enterprise sector. At the state level, investment in PSEs is often concentrated in the electricity sector, underlying the importance of ongoing regulatory reform in this sector.¹⁴

Although there is significant variation across states, the financial health of the state-owned PSEs is, on average, worse than that of the central enterprises, with a large tail of highly unprofitable public-sector firms (Figure 7 above). The proportion of loss-making PSEs ranges from 15% in Andhra Pradesh to 77% in Assam (Table 4). Some of the worst-performing PSEs at the state level are in the power sector, indicative of enormous (implicit) electricity subsidies and high transmission and distribution losses. In addition to “working” PSEs most state governments also have a number of “non-working” PSEs on their books. These firms no longer produce output but, given the difficulties of retrenching staff and closing down in India, continue to exist as corporate entities, with potentially severe fiscal implications. Restructuring may be a partial solution for some of them, but many are non-viable and need to go through an insolvency process. In 2005, the total losses of the loss-making PSEs controlled by the central and state governments amounted to 0.3% and 0.6% of GDP, respectively.

Since the late 1980s, worldwide privatisation experience has shown that private ownership typically leads to improvements in firm profitability, output and efficiency (e.g. Megginson and Netter, 2001 and Kikeri and Nellis, 2004). In network sectors with monopoly elements, the regulatory environment needs to be consistent with private ownership for the gains from privatisation to arise. In the case of India, the proceeds from

Table 4. **State-level public sector enterprises**
2004

	Number of PSEs	Assets of PSEs	Proportion of loss making PSEs	Losses of loss making PSEs	Proportion of capital in "non-working" PSEs	Proportion of PSEs with negative net worth	Rate of return on capital	
		% SGDP	%	% SGDP	%	%	Medium	Average
Andhra Pradesh	54	18.3	15	-0.06	2.3	14.8	5.6	10.0
Assam	43	10.8	77	-3.47	1.6	20.9	-3.3	-16.4
Bihar	54	7.9	70	-1.38	13.0	11.1	-2.5	-7.7
Chhattisgarh	11	0.2	36	-0.02	0.0	9.1	5.1	4.6
Delhi	11	11.5	45	-4.21	0.0	9.1	3.6	-27.8
Goa	16	6.9	63	-0.57	0.0	0.0	-0.1	-11.0
Gujarat	51	22.4	39	-0.38	50.5	17.6	2.2	-8.9
Haryana	29	12.9	59	-0.05	1.4	13.8	5.5	5.0
Himachal Pradesh	21	20.5	62	-0.50	27.8	23.8	3.3	5.7
Jharkhand	6	1.5	17	-0.15	0.0	0.0	33.6	43.1
Karnataka	82	26.2	41	-0.28	1.5	7.3	3.6	31.2
Kerala	114	12.1	61	-0.39	1.1	14.0	1.7	-15.3
Madhya Pradesh	42	5.6	33	-0.13	3.8	14.3	1.3	2.2
Maharashtra	82	6.1	68	-0.38	3.2	20.7	-0.3	-4.6
Orissa	69	19.7	70	-0.28	1.1	21.7	-1.3	-35.0
Punjab	57	17.9	44	-0.23	0.3	15.8	-1.2	-12.0
Rajasthan	24	13.2	38	-0.06	0.1	20.8	7.4	20.6
Tamil Nadu	68	8.0	53	-0.14	0.6	29.4	2.4	-1.6
Uttar Pradesh	94	8.9	62	-0.94	51.1	17.0	-1.0	-29.9
Uttaranchal	25	10.8	60	-0.32	47.7	12.0	-2.3	-16.4
West Bengal	86	17.5	72	-0.50	0.8	44.2	1.4	-45.2

Source: Authors' analysis of data from the Comptroller and Auditor General.

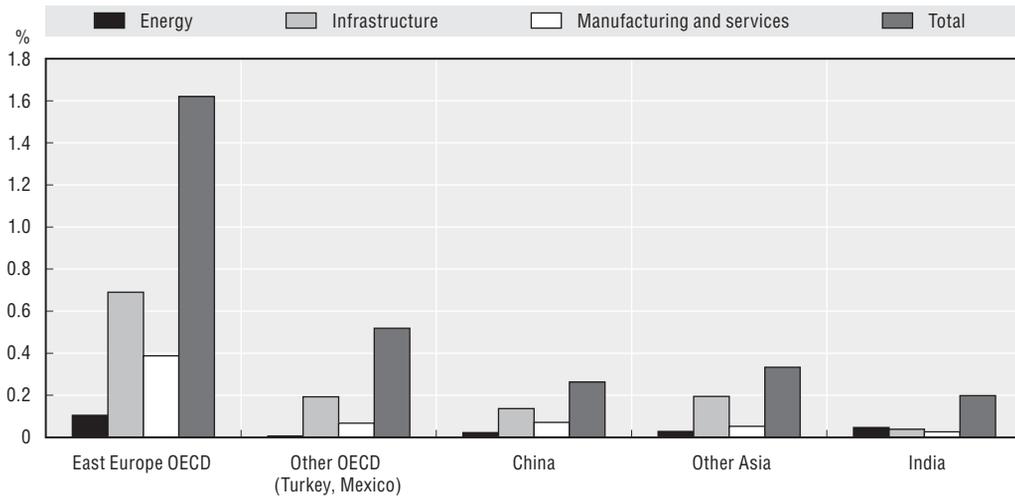
privatisations by the central government have been 50% below target since 1991/92 and relatively low in comparison with some other developing countries. Indeed, in contrast to India, privatisation programmes in a number of developing countries have gone as far as selling state-owned enterprises in the network/infrastructure sectors (Figure 8). As well as a relatively low level of privatisation, the divesture method typically used in India, which involves selling small tranches of shares to the private sector, may also be sub-optimal. Although partial privatisation can lead to improvements in firm performance, cross-country studies of privatisation in OECD countries indicate that the gains in profitability and productivity are typically larger in firms that are fully privatised (OECD, 2003). The disadvantage of partial privatisation is that it does not usually result in management control being passed to private owners or an infusion of new technology necessary to improve firm performance.¹⁵

Government involvement in business operations

India's large public enterprise sector negatively impacts on the extent of product market competition in various ways. First and foremost, because government can be a major market player as well as policymaker (and regulator in some of the infrastructure sectors) there is often no clear separation between the ownership function and other functions that influence market conditions. For example, PSEs are often required to fulfil social and public policy obligations and are subject to political interference and civil servants as board members. In many of the states, strategic commercial choices of PSEs

Figure 8. **Privatisation proceeds by country and sector**

% of GDP, 1998-2003 annual average



Source: World Bank.

often have to be cleared by the state assembly. The procurement policies of the central and state governments, which typically include a price or quantity preference for PSEs, are also biased against the private sector. Because they dominate some markets, political interference in the operation of PSEs not only threatens their profitability but also adversely influences competition.

Although some steps have been taken to commercialise the activities of the PSEs – such as granting more operational freedom to relatively successful PSEs and increasing limits for investments that do not need to be cleared by parliament – more could be done to ensure a level playing field and government neutrality in its dealings with the private sector. Moving towards a more centralised model of PSE management where PSEs are put under the responsibility of an investment agency would be an important step in this direction. Currently, at the centre, responsibility for the PSEs rests primarily with the line ministry while the Department of Public Enterprises plays a coordinating role. A more centralised approach would distance PSEs from political control and achieve a clearer separation between policy and commercial functions. It would also facilitate a more unified and consistent ownership policy, simplify the often elaborate committee structures that currently supervise and control PSEs, and ensure equitable treatment of non-state shareholders by preventing government from pursuing objectives outside the commercial interests of the PSE. By improving governance, centralising the ownership function within government would ensure a more level playing field between public and private sector companies and increase competition.

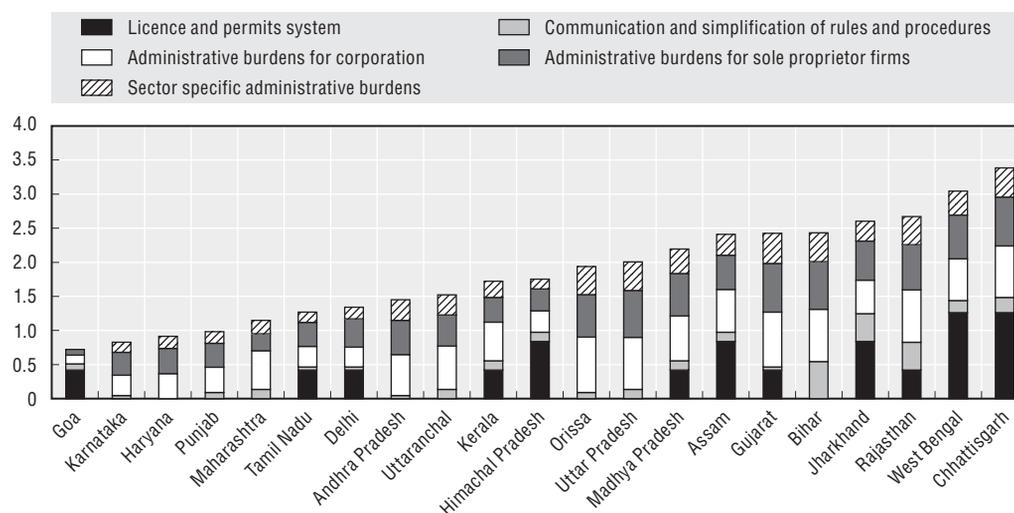
Barriers to entrepreneurship

At the national level India performs well in some of the regulatory areas covered by the PMR indicators of *barriers to entrepreneurship* (Table 5). In particular, reforms over the past two decades have been successful in removing most of the *legal barriers* to market entry, such as licenses to enter a particular sector, which had previously reduced competition and protected incumbents. In addition, the indicator of *regulatory and administrative opacity* is broadly comparable with those in emerging OECD countries, reflecting the recent introduction of one-stop shops for issuing licences and permits in some states and other

Table 5. **Barriers to entrepreneurship, national level**

	India	OECD average	OECD emerging markets	Euro area	Eastern Europe	Latin America	United States
Barriers to entrepreneurship	2.57	1.46	1.89	1.43	1.44	1.94	1.20
Regulatory and administrative opacity	1.55	1.43	1.41	1.31	1.35	1.49	1.28
Licenses and permit system	1.81	2.20	2.00	1.83	2.00	2.00	2.00
Communication and simplification of rules and procedures	0.92	0.49	0.55	0.62	0.54	1.27	0.39
Administrative burdens on start-ups	3.82	1.77	2.61	1.89	1.89	2.14	1.02
Administrative burdens for corporations	4.25	1.90	2.82	2.06	1.95	1.85	0.75
Administrative burdens for sole proprietor firms	4.75	1.91	2.73	2.10	1.91	3.17	1.25
Sector-specific administrative burdens	3.25	1.64	2.64	1.69	1.98	1.67	1.03
Barriers to competition	1.18	0.76	0.93	0.56	0.55	1.87	1.50
Legal barriers	0.86	1.41	1.34	1.33	1.35	2.06	1.36
Antitrust exemptions	1.25	0.45	0.71	0.18	0.14	1.16	1.63

initiatives designed to simplify the rules and procedures that enterprises must comply with. However, notwithstanding reforms in some areas, the overall indicator of *barriers to entrepreneurship* is still high in India in comparison to other countries. This predominantly reflects high administrative burdens on firms. This could also denote more widespread inefficiencies in government administration and imply that efforts to improve the government bureaucracy are yet to pay significant dividends. At the state level, the indicators imply widespread differences in the approaches of the state governments in supporting a dynamic environment in the formal sector (Figure 9).

Figure 9. **Barriers to entrepreneurship, state level**

Barriers to competition

Although formal legal barriers to entry have been removed in most sectors, there are still a few areas in which they could be reduced further to encourage market entry and competition. In particular, a range of policies are in place that favour small companies whose investment in plant and machinery is less than INR 10 million. As well as a system under which the manufacture of certain products is reserved for small industry – which is due to be

phased out by 2009 – small firms also get fiscal benefits, as they pay a lower rate of excise tax on the goods they produce. Government procurement also favours small firms, with 338 products reserved for small suppliers who also win tenders for other products if their price is less than 15% above the lowest quote. Finally, banks are obliged to make 10% of their advances to small firms. These policies skew the production structure towards small firms, thereby lowering the scope for productivity gains from producing on an efficient scale.

Regulatory and administrative opacity

The indicators of *regulatory and administrative opacity* in India compare favourably internationally, reflecting ongoing effort at the national and state levels to improve the efficiency of the public bureaucracy. One common initiative for reducing red tape, which has been introduced in some form in 19 of the 21 states for which the PMR indicators have been calculated, is the “one-stop shop” (OSS) for providing information and, in some cases, applying for the necessary licenses and notifications.¹⁶ The essential idea of the OSS is that potential investors only need to be in contact with a single entity to complete all the necessary paperwork and applications in a streamlined and coordinated process, rather than having to go through a labyrinth of different government bodies. In practice, given the impracticalities of assuming full control of the approval process, OSSs tend to act as a coordination mechanism between relevant government authorities. To be effective in reducing administrative burdens, OSSs need to be implemented along with other reforms geared towards cutting red tape (Sader, 2000). In the absence of such measures, OSSs run the risk of simply adding another layer of bureaucracy to the approval process. Indeed, because OSSs provide a focal point for investment clearance, they can act as important catalysts for improving administrative processes and cooperation across government departments.

Closely related to the OSS concept is the idea of “deemed clearance” under which licenses are issued automatically if the licensing office does not act by the end of the statutory response period. Deemed clearance regimes have been implemented in 10 of the 21 states for which the PMR indicators have been calculated. They can be an effective method of giving teeth to the single window concept if they are set and implemented judiciously. However, the administrative system must be reformed to the point where it is capable of meeting these statutory response periods. The objective is not to circumvent regulation but to implement and enforce it as efficiently as possible.

A number of state governments have also tried to improve the interface with the private sector by simplifying and consolidating various application forms and registers. However, simply combining all existing application forms into a single document, as has been done in a few states, is not enough. Instead, a composite application form should be the final outcome of a process to coordinate and improve the administrative function of government departments. There is also potential for reducing administrative burdens by better integrating the administrative functions of the central and state governments, which both process applications and collect information for areas in which they have concurrent responsibility.

Information and communications technology (ICT) offers enormous potential for reducing administrative burdens in India and has been successfully integrated into the administrative procedures of some of the state governments. At the central level, government is using Indian ICT firms to introduce electronic data interchange systems for customs clearance and checking the progress of documents. The tax administrations are

also implementing ICT in a similar vein. The introduction of ICT should reduce opportunities for corruption by reducing subjectivity and discretion in government administrative processes. It must, however, be linked to improving administrative processes. Automating existing inefficient processes or using ICT to simply disseminate information will only produce a limited payoff.

Administrative burdens on start-ups

Despite recent efforts to improve the functioning of the public bureaucracy, administrative burdens, as measured by the PMR indicators, remain high compared with other countries. Although these indicators are primarily a reflection of the complexities involved in starting up a business, they may also reflect more widespread inefficiencies in government. This increases compliance costs, especially for small firms, and discourages firm expansion into the formal sector, thus restraining competition and productivity.¹⁷ With an interventionist tradition and administrative structures that have in many cases not kept pace with economic liberalisation, a significant reengineering of administrative processes is needed to improve service delivery and simplify the interaction between government and firms.

A high-quality administrative system is transparent, accountable, and efficient. Establishing a coordinated programme of administrative reform to improve these aspects of public bureaucracies requires institutional change and is complex and time consuming. Recognising the scope of this challenge, most OECD governments have established regulatory oversight bodies with “whole-of-government” responsibility for regulatory policy (OECD, 2002). One advantage of this approach is that it promotes a consistent and systematic method of reform across the entire administration. In addition, OECD experience has been that regulatory reform will often fail if left entirely to ministries, implying that a degree of centralisation can improve the chances of successful reform.

The Indian government is well aware of the importance of improving the quality of public administration and has moved a long way towards becoming a more service-oriented facilitator of private-sector entrepreneurship. From the centre, the Department of Administrative Reforms and Public Grievances works with central ministries and state administrations on a number of projects aimed at improving government functioning. One of the most far-reaching recent initiatives enacted at the central level is the Right to Information Act (2005), which gives citizens access to information under the control of public authorities and should greatly improve the transparency of the public administration. Ten of the 21 state governments surveyed have also established centralised institutions for managing and coordinating regulation and its reform.

At present, however, there is no centralised oversight body charged with reviewing regulatory proposals to ensure they do not impose unnecessary or unreasonable administrative burdens on firms and citizens. This important task would involve the use of regulatory impact analysis (RIA) to assess the benefits and costs of significant proposed new regulation. A regulatory oversight body could also develop guidelines on the standards of good regulation and the use of alternatives to traditional command-and-control regulation. New ways of measuring the impact of administrative regulation would also need to be developed to identify areas of high administrative burden (OECD, 2006).¹⁸

Barriers to international trade and investment

Although the Indian economy has opened up considerably since the early 1990s, *barriers to trade and investment* remain relatively high in international comparison (Table 6). As discussed in the previous section, given that India is some distance behind the world technological frontier, the adoption of production techniques and know-how developed in more productive countries is potentially an important catalyst for economic development and productivity improvements. Both international trade and FDI encourage domestic firms to incorporate foreign technologies into the production process, thereby facilitating technological diffusion. As a result, more outward-oriented countries consistently grow more quickly than relatively closed ones (Srinivasan and Bhagwati, 1999).

Table 6. **Barriers to foreign trade and investment**

	India	OECD average	OECD emerging markets	Euro area	Eastern Europe	Latin America	United States
Barriers to trade and investment	2.56	0.97	1.66	0.75	1.35	2.31	0.73
Explicit barriers to trade and investment	3.02	1.36	2.26	1.04	1.90	1.92	1.14
Foreign ownership barriers	2.89	1.80	2.55	1.36	2.17	1.57	1.83
Discriminatory procedures	2.00	0.49	0.75	0.49	0.60	1.45	0.00
Tariffs	4.00	1.40	3.00	1.00	2.50	3.67	1.00
Other barriers	1.98	0.47	0.88	0.37	0.66	2.17	0.21
Regulatory barriers	1.60	0.22	0.46	0.17	0.27	2.21	0.00

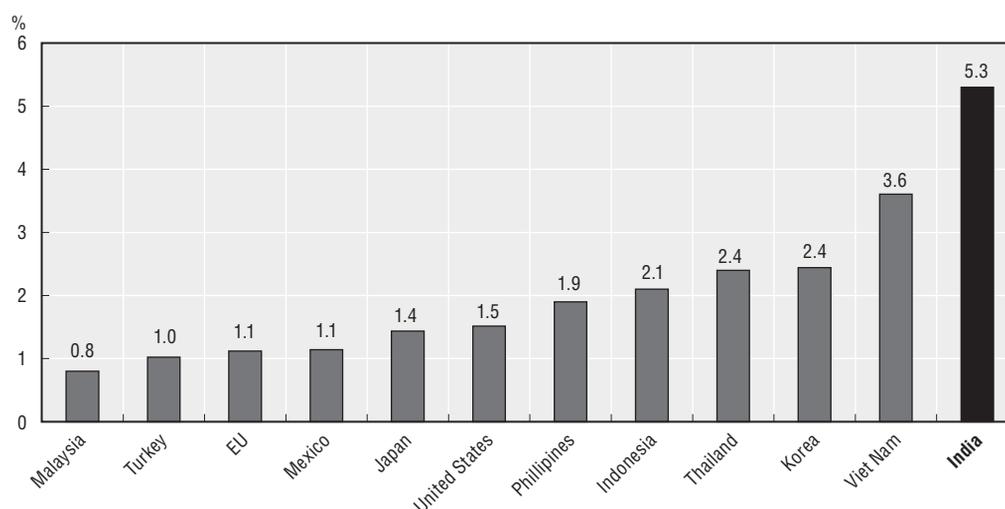
Explicit barriers to trade and investment

Tariff revenue as a proportion of import values – a broad measure of tariff barriers – has fallen by a factor of six since the late 1980s. More recently, the government has progressively reduced the highest standard tariff rate for non-agricultural products from 35% in 2001 to 10% in 2007.¹⁹ However, despite these significant improvements, tariff revenues and the average most favoured nation (MFN) tariff rate, as well as the associated PMR indicator, are still much higher than in OECD and a number of emerging countries (Figures 10 and 11).

As a result of substantial derogations from the standard tariff rates, the yield from tariffs, at around 5%, is considerably lower than the simple average of the MFN tariff (13% in 2007). In other countries, such as Mexico and Turkey, these derogations arise as the result of regional trade agreements. In India, however, these derogations are domestic in nature with 134 duty exemption Acts in place. In sectors reserved for small firms, instruments are in place to channel duty-free imports through trade associations. Other schemes mandate a 5% import duty on capital goods subject to an export obligation equivalent to eight times the duty saved over a period of eight years. Agri-export zones also grant duty-free imports of capital goods. These exemptions are partially offset by the use of anti-dumping levies, of which India is one of the largest users. In addition, India has one of the highest dispersions of actual tariff rates in WTO member countries (Dihel *et al.*, 2007). Widespread exemptions and the variability of the tariff structure result in an inefficient allocation of resources. In addition to the gains from lower average tariffs, substantial efficiency gains would result from moving to just one tariff rate.

As with its tariff policy, India adopted a highly restrictive FDI policy after independence, which was then liberalised somewhat during the reforms in the early 1990s. Over more recent years, the policy framework has improved further with the creation of a system of

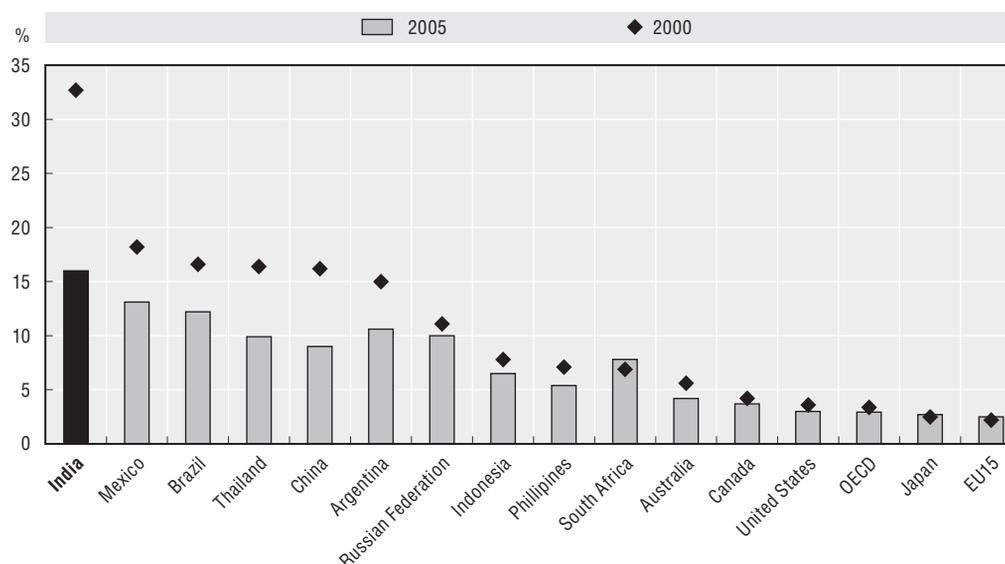
Figure 10. **Tariff revenue relative to import value in selected countries**¹
2005, tariff revenue (excluding domestic taxes) as percentage of import value



1. This figure excludes the so-called countervailing duty (CVD). This tax is levied on imported goods that are produced domestically at the same rate as the central value-added (excise) tax on domestic goods. The CVD can be offset against payment of the value-added tax. Given that the CVD can be offset, it should not be regarded as part of the tariff in much the same way that the levy of a normal value-added tax on an imported product is not regarded as a tariff. The CVD accounted for almost half of total receipts of taxes on imported goods in FY 2005.

Source: OECD Revenue Statistics, European Court of Auditors, *Public Finance Statistics of India*, various national publications.

Figure 11. **A cross-country comparison of simple-average tariffs**



Source: UNCTAD, Trains database.

automatic clearances for FDI inflows and increases in caps on foreign ownership across a range of sectors. Currently, foreign ownership of up to 100% is permitted in many sectors (Table 7), with only the need to notify the authorities. In areas reserved for small-scale industries, foreign ownership is limited to 24%. In a number of sectors – alcoholic drinks, cigarettes and tobacco products; electronic, aerospace and defence equipment – government permission for FDI is required on a case-by-case basis.

Table 7. **Foreign direct investment: Ceiling on investment in a given company by sector**

2006	
	Percentage of equity permitted to be held by a foreign company
Agriculture	0
Coal mining (own use)	100
Coal mining (other)	0
Manufacturing	100
Newspaper publication	26
Electricity generation	100
Airports ¹	100
Distribution of petroleum products	100
Pipelines	100
Roads, highways, ports	100
Civil aviation ²	49
Internet service providers (without gateways) ³	100
Internet service providers (with gateways)	74
Telecommunication services	74
Banking	74
Insurance	26
Retail distribution	0
Retail distribution (single brand)	51
Wholesale cash and carry distribution	100

1. FDI of more than 74% in existing airports requires government approval.

2. Provided there is no direct or indirect participation by foreign airlines.

3. Subject to divestment of 26% of equity after five years if the investing company is listed in another part of the world.

Source: Department of Economic Affairs, GoI.

Despite substantial recent improvements in policy and actual FDI flows, the policy framework for FDI in India is still restrictive in comparison with OECD countries (Koyama and Golub, 2006). In addition, many of the FDI restrictions in place apply to potentially fast-growing sectors with low productivity, which would benefit from increased investment. Specifically, relaxing FDI restrictions in banking, insurance and retail distribution would improve real incomes, given the poor productivity levels in these industries. In addition, allowing FDI into the retail sector would result in the modernisation of supply chains and substantially reduce the amount of food produce that rots before getting to market. In turn, this would improve incomes in the agricultural sector.

Notes

1. See, for example, World Bank (2007) and World Bank-CII (2002).
2. The Union List stipulates areas of regulatory responsibility that are the exclusive preview of the Government of India (for example, exit policy and bankruptcy procedures) whereas items on the State List come under the jurisdiction of the state governments (for example, inspections and compliance with regulation). A third list – the Concurrent List – covers areas where the centre and state governments have joint responsibility (for example, entry and labour regulation).
3. For a detailed description of the PMR indicators and the results for OECD countries see Nicoletti *et al.* (1999), Conway *et al.* (2005) and Wölfel *et al.* (2009).
4. The regulatory data used to calculate the PMR indicators are primarily collected using a detailed questionnaire – the *OECD Regulatory Indicators Questionnaire* – that is answered by civil servants with knowledge and/or responsibility related to the relevant policy area. In the case of India, the questionnaire was split into two parts covering product market regulations under the jurisdiction of the central and state governments. For details, see Conway and Herd (2008).

5. Note that in all cases, the scale of the PMR indicators at the state and central levels runs from 0 to 6, representing the least to the most restrictive regulatory regime.
6. Indicator values for the states are given in the annex.
7. Because all of the regulatory provisions summarised by the indicator of *barriers to international trade and investment* are determined by the central government, this branch of the PMR indicator system is not estimated at the state level. Some of the regulatory provisions in the indicators of *state control* and *barriers to entrepreneurship* are also determined at the central level and not included in the state-level indicators. Full details are given in Conway and Herd (2008).
8. This result mirrors that of Nicoletti and Pryor (2006) who find that the PMR indicators for OECD countries are generally significantly correlated with subjective perceptions-based measures of the regulatory environment. The small number of observations in the regression reported in Table 2 reflects the relatively small number of states included in the World Bank-CII study.
9. The indicator of corruption is from Transparency International (2005) and reflects people's perception of the extent of corruption and experience of actually paying bribes in 11 public services.
10. Veeramani and Goldar (2004) also provide a review of other work in this area.
11. Enhanced product market competition can also contribute to GDP per capita growth by increasing employment (Blanchard and Giavazzi, 2003; Haefke and Edell, 2004; Nicoletti and Scarpetta, 2004). As restrictions are eased and competition increases, firms earn lower product market rents, activity is expanded and employment rates tend to rise. However, employment in some of the large firms, particularly in the network sectors, where previous regulations were conducive to overmanning, may be adversely affected by deregulation.
12. A number of other empirical studies also find evidence that more competition increases the heterogeneity of firm performance. For example, Sabirianova, Svejnar and Terrell (2005) find support for heterogeneous effects of firm entry on firm performance in Russian and Czech industrial firms. In OECD countries, Arnold et al. (2008) find that the result of liberalisation increasing heterogeneity in firm performance also holds in OECD countries.
13. In 2000 three new states were created. Jharkhand was created out of the southern districts of Bihar, Chhattisgarh was created out of eastern Madhya Pradesh and Uttaranchal was created out of north-western Uttar Pradesh.
14. The share of state government investment in the electricity industry is over 80% of total investment in the following states: Jharkhand, Chhattisgarh, Haryana, Rajasthan, Punjab and Orissa. It is between 60 and 80% in Assam, Andhra Pradesh, Madhya Pradesh, Tamil Nadu, Delhi and Maharashtra.
15. For more on India's privatisation experience, see, for example, Gupta (2005) and Kaur (2003).
16. The OSSs in Indian states typically involve three levels depending on the size of the proposed investment. For example, in Haryana, new investment proposals of a value up to IRP 5 million (USD 1 million) are dealt with by a district-level committee, those between IRP 5 million and IRP 30 million (USD 6.5 million) by a state-level committee and those above IRP 30 million by a high-level committee.
17. A growing body of research finds that poor quality government administration creates particular problems for small and medium-sized firms, which are often less able to bear the costs of bureaucratic burdens than larger, more established – and in some cases more influential – businesses.
18. Given the existing expertise within the Department of Administrative Reforms and Public Grievances and some of the state-level departments, these institutions are best placed to perform this important role.
19. The objective of the current programme of tariff reductions, which began in 2002, is to lower the peak tariff rate to the average peak rate in ASEAN countries, which is currently around 7%.

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ANNEX A1

Data Annex

This annex presents the PMR indicator values for India at the national level and for the 21 states surveyed.

Table A1.1. **Low-level indicators, state level, 2006**

	State control			Barriers to entrepreneurship				
	Scope of public enterprise sector	Size of public enterprise sector	Direct control over business enterprise	Licence and permits system	Communication and simplification of rules and procedures	Administrative burdens for corporation	Administrative burdens for sole proprietor firms	Sector-specific administrative burdens
Andhra Pradesh	1.91	4.19	0.95	0.00	0.25	2.83	2.61	1.47
Assam	1.36	2.45	0.68	4.00	0.75	2.94	2.60	1.51
Bihar	1.64	1.77	0.82	0.00	3.00	3.60	3.64	2.08
Chhattisgarh	1.09	0.00	0.55	6.00	1.25	3.55	3.72	2.09
Delhi	1.09	2.62	0.55	2.00	0.25	1.37	2.15	0.83
Goa	0.82	1.56	0.41	2.00	0.50	0.60	0.43	0.00
Gujarat	1.64	5.12	0.82	2.00	0.25	3.78	3.72	2.16
Haryana	1.36	2.94	0.68	0.00	0.00	1.72	1.93	0.87
Himachal Pradesh	1.36	4.70	0.68	4.00	0.75	1.48	1.66	0.71
Jharkhand	0.55	0.30	0.27	4.00	2.25	2.30	3.00	1.43
Karnataka	1.36	6.00	0.68	0.00	0.25	1.40	1.75	0.71
Kerala	2.73	2.75	1.36	2.00	0.75	2.66	1.89	1.17
Madhya Pradesh	1.36	1.24	0.68	2.00	0.75	3.08	3.24	1.77
Maharashtra	2.18	1.35	1.09	0.00	0.75	2.66	1.29	0.98
Orissa	2.18	4.50	1.09	0.00	0.50	3.82	3.24	2.02
Punjab	1.64	4.09	0.82	0.00	0.50	1.74	1.82	0.85
Rajasthan	1.09	3.00	0.55	2.00	2.25	3.60	3.46	2.02
Tamil Nadu	1.91	1.79	0.95	2.00	0.25	1.42	1.82	0.74
Uttar Pradesh	1.36	2.01	0.68	0.00	0.75	3.58	3.59	2.05
Uttaranchal	1.36	2.45	0.68	0.00	0.75	2.99	2.36	1.44
West Bengal	2.45	4.00	1.23	6.00	1.00	2.87	3.33	1.73

Table A1.2. **Higher-level indicators, state level**

	Product market regulation	State control	Public ownership	Barriers to entrepreneurship	Administrative burdens on start ups	Regulatory and administrative opacity
Andhra Pradesh	1.73	2.08	2.18	1.45	2.24	0.24
Assam	1.93	1.34	1.39	2.41	2.34	2.55
Bihar	1.92	1.30	1.32	2.43	3.06	1.46
Chhattisgarh	2.10	0.55	0.53	3.38	3.10	3.86
Delhi	1.30	1.25	1.31	1.34	1.41	1.25
Goa	0.77	0.83	0.86	0.72	0.36	1.28
Gujarat	2.32	2.18	2.33	2.42	3.15	1.35
Haryana	1.17	1.47	1.54	0.91	1.45	0.10
Himachal Pradesh	1.84	1.93	2.07	1.75	1.29	2.50
Jharkhand	1.59	0.36	0.35	2.60	2.23	3.19
Karnataka	1.48	2.28	2.46	0.83	1.24	0.19
Kerala	1.90	2.11	2.14	1.72	1.90	1.47
Madhya Pradesh	1.66	1.02	1.03	2.20	2.65	1.53
Maharashtra	1.29	1.46	1.46	1.15	1.64	0.41
Orissa	2.10	2.30	2.40	1.94	2.96	0.39
Punjab	1.40	1.91	2.02	0.98	1.43	0.31
Rajasthan	2.07	1.35	1.43	2.67	2.99	2.18
Tamil Nadu	1.35	1.44	1.46	1.27	1.30	1.24
Uttar Pradesh	1.65	1.22	1.26	2.01	2.99	0.50
Uttaranchal	1.44	1.34	1.39	1.52	2.22	0.45
West Bengal	2.71	2.30	2.39	3.04	2.63	3.73

Table A1.3. **PMR indicators, national level**

India, 2006

Low-level indicators															
State control					Barriers to entrepreneurship							Barriers to trade and investment			
Scope of public enterprise sector	Size of public enterprise sector	Direct control over business enterprise	Use of command and control regulation	Price controls	Licence and permits system	Communication and simplification of rules and procedures	Administrative burdens for corporation	Administrative burdens for sole proprietor firms	Sector-specific administrative burdens	Legal barriers	Antitrust exemptions	Ownership barriers	Discriminatory procedures	Regulatory barriers	Tariffs
4.91	4.58	2.45	5.00	0.75	1.81	0.92	4.25	4.75	3.25	0.86	1.25	2.89	2.00	1.60	4.00
High-level indicators															
Product market regulation	State control	Public ownership	Involvement in business operation	Barriers to entrepreneurship	Administrative burdens on start ups	Regulatory and administrative opacity	Barriers to competition	Barriers to trade and investment	Explicit barriers	Other barriers					
2.85	3.47	3.82	3.03	2.57	3.82	1.55	1.18	2.56	3.02	1.98					

