India's Development Strategy: Accidents, Design and Replicability

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Abstract

This paper examines India's development strategy, and to what extent it may be considered a success. It provides a brief history of why and how the strategy was adopted, as well as of its implementation, including the role of initial conditions, such as human capital, geographical location, and infrastructure. It analyzes the extent and reasons for success of the strategy, including policy, political economy, timing, and linkage of the strategy to economy-wide development. Particular attention is given to the relative roles of domestic and international actors, including the part played by foreign investment, trade, and other dimensions of openness. The paper considers the extent to which the strategy remain viable for the future, the challenges still faced, and what other strategies might be required. It concludes with possible lessons for other countries and their future development strategies.

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1. Introduction

India's economy seems to invite animal metaphors, particularly those of the lumbering elephant or caged tiger. The former is consistent with a culturally or environmentally deterministic view of the country, or perhaps inspired by its size, which hinders nimbleness. The latter obviously suggests that there have been shackles placed on the economy, implicitly by policy makers. The experience of the last few years seems to have been favorable to the latter view, and invites a re-examination of India's development strategy. What has that strategy been, and to what extent can it be considered a success?

To answer that basic question, this paper proceeds as follows. It outlines the basic contours of India's development strategy, and provides a brief history of why and how that particular approach was adopted. The description of its implementation includes a discussion of the role of initial conditions, such as human capital, geographical location, and infrastructure. Next, the paper analyzes the extent and reasons for success of the strategy, including policy, political economy, timing, and linkage of the strategy to economy-wide development. This is followed by specific attention to the relative roles of domestic and international actors, including the part played by foreign investment, trade, and other dimensions of openness. The paper then considers the extent to which the strategy remain viable for the future, the challenges still faced, and what other strategies might be required. It concludes with possible lessons for other countries and their future development strategies.

2. Strategy Overview

The concept of a development strategy implicitly assumes a role for government. Whereas economic development in places such as Britain, the Netherlands and the United States had been driven by relatively decentralized commercial interests (though often influencing, or aligning with government policies), later European models of development, such as Germany and France, relied more explicitly on direction from the State. Most strikingly, the Soviet Union followed a model that included not just State guidance, but intervention in almost all aspects of the daily functioning of the economy. The latter required an elaborate conceptual and administrative apparatus of economic planning. The Soviet model also diverged from previous State-led industrializations in attempting to remove, rather than co-opt or collaborate with the commercial classes.

It is natural that the experience of capitalism in its imperialist form created a deep mistrust of the market institutions that underpin the capitalist system, in former colonies as well as other countries on the periphery of the system. This attitude affected views of international and domestic trade, international and domestic finance, and domestic production in agriculture and in industry. Such attitudes are well documented among leaders and intellectuals in India, from before independence to the current day. In the 1930s and 1940s, and even for several decades beyond, the Soviet model appeared to provide a viable and successful alternative for India.

The centerpiece of India's development strategy was modernization through industrialization. Private industrial effort was viewed as inadequate for the task. Underlying this view was a realization that infrastructure has public good aspects, or positive spillovers, that could lead to under provision if left entirely to the private sector. Even non-infrastructure sectors such as steel, chemicals or machine tools may be subject to coordination or linkage issues that require a "big push," further supporting public intervention.[1] Thus, India's leaders embarked on a program of government occupation of the "commanding heights" of the economy. An alternative approach of using tax and subsidy instruments to influence private actors was possibly viewed as infeasible, given the limited scope of the tax base and quantity of revenue at the time. Public sector enterprises were created to take leading roles in all industries and sectors viewed as central to the industrialization program, including steel, chemicals, and engineering, as well as trade and finance.

Unlike the Soviet model, however, private property was not discarded, and democratic institutions were successfully created and implemented. This approach reflected British influence, particularly that of the Fabian socialists. In this context, bureaucratic control – by civil servants reporting to elected politicians – became an important feature of the development strategy. This manifested itself in multi-layered indicative planning exercises, administrative discretion in the allocation of financial capital, private sector industrial location decisions, pricing decisions, and numerous other discretionary restrictions on private economic activity. While active bureaucratic participation had been an important part of much of continental Europe's economic development, as well as that of Japan, in the Indian case, its scope and depth were in many ways more reminiscent of the Soviet Union. In India, this approach of bureaucratic control can be traced to negative views of merchants and commercial activities more generally, which pre-dated colonial rule.

A second key dimension of India's development strategy was with respect to international trade and finance. In addition to negative perceptions of the results of international openness that were formed during the colonial period, there were two academic arguments for policies that restricted international trade and finance. The first was the older infant industry argument, which suggested that initial protection from external competition was essential to industrialization, so that firms and industries could develop sufficiently to compete internationally. This view also included restrictions on foreign investment and technology transfer, again because these would stunt the growth of domestic industries. The second argument was a more modern perspective of export pessimism, which held that exports of goods in which developing countries had natural

[1] The "big push" idea can be traced back at least to Paul Rosenstein-Rodan. Modern formulations of this and related ideas, as well as detailed references, can be found in Murphy, Shleifer and Vishny (1989), Matsuyama (1995), Basu (1997) and Ray (1998).

comparative advantages, such as primary products, were subject to inelastic demand, and therefore unlikely to be an engine of growth.[2] In general, therefore, international openness was seen as threatening, without significant countervailing benefits.

While industrialization was viewed as the linchpin of development strategy, policymakers certainly understood the importance of agriculture, since it provided (and still provides 60 years later) the largest source of employment in the economy. The potential for modernization of agriculture was not fully realized until the innovations that enabled the green revolution in the 1960s, but this was preceded by considerable government attention to creating the institutional and physical infrastructure necessary to improve agricultural productivity, including irrigation works and dams, rural roads and markets, credit cooperatives, price support programs and extension programs for education and training of farmers. Land reform was also understood as a way of improving productivity as well as distributional equity, but limited progress was made on that front due to political obstacles, namely, opposition from politically powerful landed interests.

A final, significant dimension of development strategy pertained to improving the well-being or capabilities of the population, by public provision of minimum levels of basic services in areas such as health and education. These had never been the particular concern of the State in India, though the British had begun to improve public health and sanitation along the lines of European progress in the 19th century. As a result of the latter, the population growth rate had increased by independence, but average life expectancy and educational attainment were both very low at that time. Tackling these aspects of impoverishment was also, therefore, conceived of as part of development. At the same time, higher education was promoted as critical to the main goal of modernization through industrialization.

In sum, India's approach to development strategy represented a pioneering attempt by a non-Western ex-colony to achieve higher standards of living through conscious and deliberate creation of institutions and policies, and through active State participation in, and direction of the process of development. It emphasized modernization through self-reliance, while enhancing social and economic equity. It is fair to say that this initial conceptualization of India's development strategy was met with a reasonable degree of consensus and approval, both domestically and internationally. Academic ideas that found expression in India's post-independence policymaking were relatively mainstream at the time. Many industrialized nations also took similar approaches to fostering economic progress in that era, albeit with different initial conditions.

3. History and Implementation

The previous section has summarized the state of thinking with respect to development strategy at the time of Indian independence, and in subsequent decades. To some extent,

[2] This view was associated particularly with the work of Prebisch (1959) and Singer (1949), though one should note that this brief mention does not do justice to the many other dimensions and different nuances of their respective theses.

the question posed in the introduction, of the relative roles of environmental and policy factors in shaping India's development strategy, remains. The task of shaping an answer can benefit from a brief historical excursion, and that is undertaken next, before turning to an assessment of implementation of the strategy. A key idea that runs through the historical summary is that India's initial conditions at independence were shaped by institutions that had exhibited remarkable longevity, as a result of influential environmental factors.

The Indian subcontinent is a distinct geographic region, bounded by oceans, mountains and deserts. It includes several large river basins, the most significant of these being the Indus and Ganges in the north, though several important rivers cross the southern peninsula. The monsoon rains are a central feature of Indian life, and contribute to parts of India being historically extremely fertile for rain-fed agriculture. At the same time, significant parts of the region are in rain shadows, and are characterized as semi-arid.

Lal (1988), marshalling a large amount of historical work in the lens of economic theory, has argued that India's terrain and environment have played a critical, even dominant role, in shaping India's institutions. In particular, he argues that the region's system of social stratification, which has survived numerous invasions and outside influences, is a consequence of the need to organize labor to meet the demands of agriculture in the Gangetic plain. In turn, this caste system has contributed to a long-running denigration of mercantile activities. [3] Indeed, the suspicion of merchants and traders is documented in writings by Indian intellectuals and leaders to the present day, and stands somewhat in contrast to the rise of merchant classes in parts of Europe even before the Industrial Revolution.[4]

Furthermore, Lal argues that the subcontinent's environment played a major role in shaping the system of governance. Most importantly, it led to a stable system of agricultural taxation which persisted through Muslim and British rule, and had strong elements of rent-seeking incorporated in it. The environment, along with political instability, also limited the scope of public works such as irrigation and flood control measures that might have improved agricultural productivity in the northern and eastern plains.

[3] It must be acknowledged that Lal's interpretation of Indian history and society is controversial. Nevertheless, one can accept many of the broad contours of his thesis, as summarized here, without accepting all the details, or an extreme version of cultural or environmental determinism.

[4] An interesting question is that of how India's ideology and economic trajectory differed from that of Japan. Under the shogunate, Japan also harbored relatively poor opinions of mercantile and industrial activity. In the Meiji period beginning in the later 19th century, the country embarked on an explicit strategy of State-led modernization and economic development. This included explicit borrowing of institutional innovations from the west, and careful promotion of international trade and technology transfer. Without going into a detailed excursion that is beyond the scope of this paper, it can be argued that the Meiji State did at least three things differently than post-independence India: (i) it more effectively increased agricultural productivity and harnessed that surplus for industrial expansion, (ii) it gave freer rein to business interests, and (iii) it worked more vigorously to reduce and even abolish traditional social stratification. Despite some disagreements over historical measurements of standards of living and growth, it is reasonable to state that Japan, while initially continuing to lag behind the West, grew much more rapidly than India from the latter part of the 19th century until the 1990s.

A hierarchical political system based on layers of revenue extraction complemented a high degree of social stratification, and as a result, non-agricultural production in the pre-colonial period was geared toward luxury items consumed by the ruling classes. Thus, India had a deserved reputation for fine handicrafts, textiles and precious ornaments. Supporting this pattern, Mughal India also had a relatively high level of average taxation. Nevertheless, average standards of living before the Industrial Revolution were roughly comparable in India and Europe.

Historically, India was an active trading nation, and trade relations led to a significant influence of Indian culture throughout Southeast and East Asia until the colonial period. Westward trade was also significant, and spurred by the early eastward push of Islam. Spices and fine textiles formed two important exports of the subcontinent. As is well known, European expansion and colonization was driven by competition among European powers for control of trade and trade routes.

The colonial period was marked at various times by transfers of wealth from India to Europe, by restrictions on trade, and even direct limitations on domestic producers. In the case of other British colonies, efficient, export-oriented plantation agriculture became the centerpiece of those economies. India was too large and its environment not suited for such a transformation. Instead, the British used India as a source of labor for plantation agriculture elsewhere in the empire, and for its imperial army. To rule India efficiently, they relied on a co-option of the governance chains of Mughal India, and dealt with potential local unrest by limiting the level of revenue extraction. In turn, this limited investments in infrastructure beyond those required for maintaining external security and internal order.

Lal (1988) argues that the British ultimately, in the 20th century, could not hold back the ascent of an indigenous industrial class, and the rising stirrings of nationalism led to increased protection of domestic manufactures in this latter part of colonial rule. At the same time, entry by domestic producers was constrained by the lack of domestic capital markets, and of access by these domestic entrepreneurs to European capital. A lack of competition and financial resources tended to limit technological progress in Indian industry. Without economies of scale, good access to industrialized countries' markets, or complementary infrastructure and institutions, Indian industrial development by the time of independence was limited, but still better than levels in other colonies.

In light of the historical overview, India's development strategy at independence can be viewed as the reversal of one facet of colonial rule, but the continuation of another trend. With full-fledged democracy, in contrast to the colonial period (or even to preceding eras) government became avowedly an instrument of the governed, and public spending took on the objective of economic development as well as political stability. On the other hand, engagement with the international economy continued to be viewed with suspicion, and this colored policymaking quite heavily. In addition, the much longer tradition of disdain for merchants and commercial activity, which had not been altered under British rule, was also an important driver of policy conceptualization and implementation.

Perhaps it is the last of these characteristics that distinguishes the Indian experience from that of East Asia, and explains some of the peculiarities of implementation of India's development strategy. In the previous section, broad contours of the strategy with respect to industry, agriculture, social welfare and international engagement were outlined. To some extent, the intended thrusts in all of these areas can be justified, and the overall approach has many defenders. Certainly, India's growth rate went up from the pre-independence period, health and education indicators improved steadily, modern industries were created, agricultural productivity increased, and greater self-reliance was achieved in many ways, while inequalities were held in check.

On the other hand, poverty came down very slowly, the improvement in human development indicators was also limited, and democracy came under increasing strain, as competition for rents within the system became fiercer due to the limits on the redistributive options of government placed by slow growth. The limitations of the path being taken by India became apparent in the 1980s, in comparison to the sterling growth record of East Asia, and with the collapse of the Soviet model and its exposure as an economic failure. However, changes in policy and implementation have still been difficult to achieve, reflecting the constraints placed by existing institutions, interests and ideas.

In each of the dimensions of India's development strategy, three sets of problems arose with implementation. First, policy measures often were inferior ways of achieving avowed goals. Second, the system of discretionary bureaucratic control created classic 'vested interests' that prevented reform. Third, the short-run political logic of governing India often conflicted with long-term economic rationality. In all of these cases, vigorous debate on economic ideas did take place, and helped over time to move policies, and implicitly India's development strategy, in the right direction. The three types of difficulties with implementation are elucidated next.

First, policies were often misguided, because economic principles were not always well understood. Quantitative controls, case-by-case discretion for approvals, and outright prohibitions permeated all aspects of the economy, including industry, agriculture and international trade and finance. Even when taxes and tariffs were used, so that the price system and markets could do some of the work of resource allocation, there were often multiple, arbitrarily high and non-transparent rates, which encouraged evasion and distorted decision-making. A major example of price distortion occurred with the exchange rate, which was kept artificially high, contributing to a fulfillment of the attitude of export pessimism. Competition policy was not applied in an economically rational manner, and in any case was undercut by the artificial restrictions placed on industrial capacity. In the realm of social welfare, a major example of policy suboptimality – one that has still not been corrected – has been in the design and application of laws designed to protect the interests of labor in the organized industrial sector.[5]

Second, once policies were in place that created distortions, situations almost invariably arose where there were beneficiaries of these distortions, through the economic rents created.[6] Customs officers and income tax officials became notorious for extracting payments in return for ignoring punitive restrictions or tax rates, but all government bureaucrats were put in positions where they had the potential to profit from the lawful or unlawful exercise of their discretionary control. In many cases, politicians became eager collaborators in, or even drivers of this process, to claim their share of the rents. Even in the current liberalized regime, some of these problems remain. Of course, policy restrictions and entry barriers also created rents for private economic actors – industrial license holders, middlemen in agricultural markets, licensed foreign exchange dealers, import license holders and so on. These groups also developed interests in preserving the status quo. Indeed, there was a long period after independence in which economic controls steadily increased, as more and more groups and organizations sought to create rent-seeking opportunities.

Third, India's size and diversity required considerable attention to creating winning political coalitions – in this respect, India is quite distinct from State-led industrializers such as France, Germany or Japan. A system in which the government occupied the commanding heights became a natural tool for seeking political advantage. Examples include the spread of all kinds of subsidies, especially to numerically important rural voters. These have reached ridiculous extremes, such as commitments of free electric power and water for farmers. Another example has been the nationalization of banks in 1969, designed to create a populist image and electoral appeal for then-Prime Minister Indira Gandhi as she sought to consolidate political power.[7] Essentially, these exercises in competitive populism were often driven not by economic logic, however imperfectly applied, but by political imperatives. Once the new interest groups were created, as beneficiaries of the transfers or economic rents, they made it difficult to reverse the process, as discussed in the previous paragraph.

It can be argued that the exigencies of India's national and state politics in the 1960s and 1970s deepened the control regime that had been designed to implement India's development strategy. Beginning in the 1950s, and with increasing voice in the subsequent two decades, many academics had been arguing for some reorientation of the strategy.[8] In some cases, these were minor policy adjustments. For example, the planning process was continually under review, as its efficiency was always suspect, in terms of public sector spending of 'plan' allocations for developmental purposes. In other cases,

[5] In particular, the laws, or their interpretation, can make it impossible to fire workers, even if the firm has ceased to be operational, or is effectively bankrupt. Some court interpretations have even extended protections to workers' heirs.

[6] India was one of the cases that led to the coining of the term 'rent-seeking society' (Krueger, 1974). See Singh (2004a) for a conceptual framework for considering India's governance institutions.

[7] A counter-argument, that bank nationalization facilitated financial development, does have some empirical support, and is discussed later in the paper: see footnote 13.

[8] See, for example, Bhagwati and Desai (1970).

there were calls for an overhaul of the foreign trade regime.[9] Certainly, around this time, East Asian economies such as South Korea and Taiwan (China) had successfully begun a major industrial transition, using export markets as a source of demand, and external competition as an incentive for efficiency and quality upgrading. This transition from import substitution to export promotion has been widely studied, and given empirical support, especially for East Asian cases. India did not make this policy shift, which could have been seen as mostly consistent with its initial development strategy, though giving international economic forces a greater role in driving industrial and agricultural growth. This critical dimension of development strategy is treated in more detail in section 5.

4. Hows and Whys of Success

How successful has India been in its development strategy? Using the colonial period as a benchmark, India certainly has done well. Its GDP growth and improvements in human development indicators were both well above the earlier era, and this accelerated progress began almost immediately after independence. This achievement came while preserving a democratic political system, with minimal reliance on outside help,[10] and accompanied by the development of a rich set of governance and private sector institutions for delivering food, health, shelter and education to a much greater proportion of the population than ever before in the region's history. Infrastructure investment was greater than before, industries were developed in support of modernization goals, and higher education, in particular, grew dramatically. India also sustained relatively low inflation rates, preventing the kind of tax on the poor that has been characteristic of Latin American economies, several of which have experienced hyper-inflations of varying severity. Table 1 summarizes some aspects of India's economic growth performance after independence.[11]

On the other hand, as early as the 1960s, several East Asian countries began to outstrip India's economic performance. Their example became the basis for a shift in mainstream academic views of development, especially toward emphasizing the benefits of openness to international trade. However, as noted earlier, in India this period was marked by political impulses that restrained economic policy changes in that direction. There was also the argument of Indian exceptionalism, based on its size, diversity and large hinterland, setting it apart from new industrializers such as South Korea or the city states of Hong Kong and Singapore. By the 1980s, India's relative lack of success became more apparent, with the cumulative impacts of decades of higher growth in East and Southeast Asia. China's embrace of the profit motive removed size as a major conceptual defense of India's strategy for development, and by the early 1990s, China's growth record clinched the argument. Even though India grew more rapidly in the 1980s than in previous post-independence decades, it lagged far behind China in its growth rate. Table

[9] See, for example, Bhagwati and Srinivasan (1975).
[10] The quantum of foreign aid was relatively low. However, India did receive critical help in the form of food supplies when domestic production faltered, and targeted assistance in specific areas such as setting up technology institutes and improving agricultural practices.
[11] The periodization in Table 1, excluding the latest two years, is due to Panagariya (2008), and is justified there.

2 compares India to China and to developing country averages in terms of per capita income and other development indicators.

Growth in the 1980s was aided by some reforms, as well as a macroeconomic stimulus that turned out to be unsustainable (Panagariya, 2008), and an external payments crisis in 1991 forced some dramatic changes in economic policy. Essentially, openness to international trade was increased dramatically through tariff reductions and replacement of import quotas by tariffs, and the scope of domestic industrial licensing was drastically reduced. Despite some differences among various empirical studies, the best evidence suggests that productivity growth accelerated in the 1980s and thereafter (Bosworth, Collins and Virmani, 2007; Bosworth and Collins, 2008), potentially representing a 'structural' shift in the growth trajectory. In the 1990s and subsequently, India has been one of the fastest growing economies in the world, and it is this last period that can be unequivocally characterized as a success in terms of economic development.

A dissection of India's growth performance, however, offers some support for an exceptionalist view. The reason is that India has not grown through the conventional route of producing and exporting labor-intensive manufacturing goods, with quality and variety increasing over time. That pattern of development has theoretical (e.g., Grossman and Helpman, 1991) as well as empirical (e.g., Hausmann, Hwang and Rodrik, 2006; Rodrik, 2006) backing, and seems to fit the case of many East and Southeast Asian economic successes. India instead has followed a growth path that has been characterized by capital and skill intensities that are out of line with other countries at similar per capita income levels (Kochhar et al., 2006).

Aggregate capital intensity in India's economy had long been identified as relatively high, and was a consequence of policies that pushed heavy industrialization. India's restrictive laws on hiring and firing labor have also contributed to a bias toward capital, though often (because of other policy restrictions) without allowing firms to grow enough to reap economies of scale. High capital intensity was also arguably caused by inefficient use of capital associated with the control regime, including domestic licensing and prohibitive trade restrictions. More recently, India's incremental capital-output ratio (ICOR) has declined somewhat, suggesting better use of capital.[12] Furthermore, investment rates in India have gone up in the past decade, especially in the last few years (Table 3). They are now approaching the levels observed in past East Asian successes, though still below China's.[13]

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[12] According to calculations presented in Mohan (2007), Table 1, the ICOR was 6.0 in the period 1965-1981, and has varied between 3.6 and 4.6 in various subperiods thereafter. Mohan argues that the period before 1965 was also a relatively successful growth episode, with low ICORs, though growth rates were lower because of lower savings and investment rates. See also Mohan's Table 8 for ICOR calculations based on alternative periodization, and comparisons to other countries.

[13] In a more refined analysis, Sen (2007) identifies private equipment investment as the key driver of growth in India. He notes that this importance is consistent with theory (based on spillovers associated with this investment) and cross-country evidence. Sen also notes a high correlation between private equipment investment and productivity growth, which is consistent with a spillover interpretation. Furthermore, this component of investment was itself positively affected by public infrastructure investment, trade openness (by reducing the relative price of such investment) and financial deepening. This last cause is connected by

Despite improvements in capital use, India's capacity to generate employment in labor-intensive manufacturing still remains limited. As a result, there has been limited absorption of the rural labor force into manufacturing – this would have been the classic development model. Instead, Indian manufacturing has been, and remains unusually skilled-labor-intensive. The roots of this situation can be traced to the overall development strategy and its particular implementation through industrial and trade policy. An important aspect of the overall strategy that played into this mix was a bias toward higher education (as measured by private and social rates of return) compared with primary education. Labor laws which bite more stringently for unskilled versus skilled workers have also been a factor. Finally, it is arguably the case that social stratification, operative over two millennia and reinforced by colonization, has tilted policies in this direction.

If manufacturing has not been as significant a contributor to India's economic growth as is the case for more typical development paths, what has filled the gap? The services sector in India has received considerable attention as one of the engines of the country's recent growth (e.g., Singh, 2006). The sector has contributed over half of GDP growth since the 1990s.[14] The share of services in India's GDP is an outlier with respect to typical shares for countries at similar per capita income levels. On the whole the services sector also displays some of the skill-intensity that characterizes Indian manufacturing. This is particularly true of areas in which India is best known as a global competitor, namely, information technology (IT) – specifically software development – and IT-enabled services (ITES, e.g., business process outsourcing, customer service, medical transcription, and financial research). Note that even seemingly low-skilled areas such as call centers require levels of education and English language proficiency that are possessed by less than 10 percent of the population.

Other areas of services that require education and skills beyond what would be required in typical factory jobs include financial services, and many components of tourism, where there is interaction with foreign visitors. On the other hand, trade and transportation are less skill-intensive, and one of the characteristics of service sector growth in India has been its breadth, across a very heterogeneous sector. In some countries, though not in Indian data, infrastructure services such as electric power and water supply are included in the service sector. In any case, the power sector is clearly one which has not grown as rapidly as targeted, even after policy reform and the growth acceleration, and it, along

Sen to bank nationalization in 1969, and provides an alternative viewpoint to that expressed in section 3 of the current paper. One way to reconcile the two perspectives is to accept that there was some positive impact of financial deepening via nationalization, but that subsequent deepening has come about through later reforms that have promoted competition in the financial sector.

[14] To some extent, India's growth has been marked by a shift (as measured by share of GDP) from agriculture to services rather than to manufacturing. Kochhar et al. (2006), analyzing the period 1980-2000, find no correlation between growth and the share of manufacturing or of labor-intensive industries, but do find a small positive relationship between growth and the share of services. Using state level data for 1993-94 to 2003-04, Singh (2006) creates a more general structural change index, and finds no correlation between the index and initial year per capita state domestic product levels but a negative correlation between growth and the structural change index.

with service sub-sectors such as transportation, has been a constraint on growth, (Singh, 2006). Another infrastructure sector, telecommunications, has grown very rapidly, driven by rapid technological change, and pressure from India's successful new IT industry (Singh, 2004).

Software and ITES have been export-oriented from the start, and in some ways, their progress follows the classic development path. Initially, India's software programmers were characterized by some observers as akin to sweatshop workers, though obviously with much higher education and skill levels. However, there has been a significant climb up the value-added ladder, so that India's software firms now provide a wider range of, and more complex, services. Global competition has played a role in this evolution, as has the skill-bias of the Indian workforce.

It has been argued that the success of India's IT and ITES industries was the result of the post-independence development strategy focused on modernization and growth through industrialization. Certainly, the creation of top notch engineering and technology institutes as part of that strategy, and the availability of their graduates, contributed to the success of India in this dimension. However, software was never seen as an independent activity in IT – policy attention was all on hardware design and manufacturing. Furthermore, telecommunications development was stifled by a perspective that characterized the industry as providing a luxury service rather than a basic need. Software development was able to fly beneath the policy radar (it was not subject to the worst industrial policy controls), and then spur telecommunications reform through its initial success (Murthy, 2004). This was the key factor in its success, rather than a deliberate design of development strategy and application of policy (Singh, 2004).

The success of the software development industry involved building direct relationships with business customers, and development of management expertise. Both these factors led to spillovers that generated the ITES industry in India, and thereafter contributed to successful new manufacturing efforts in areas such as automotive components, and to IT-based development in financial services. New microeconomic evidence also establishes the positive productivity impacts of IT investments by Indian manufacturing firms (Gangopadhyay, Singh and Singh, 2008). The world-class rating of India's software industry also has been perceived as boosting the overall level of confidence of young, educated people in India (Kapur, 2002), as well as increasing incentives for acquiring specific training and education. In sum, the importance of the IT industry in India has arguably greatly exceeded its direct contribution to growth.

The acceleration of India's growth in the late 1980s and thereafter has also had a positive feedback effect, through the creation of a substantial middle class (Singh, 2006a). The domestic appetite for consumer goods, both durables and non-durables, has spurred foreign and domestic investment to meet this growing demand. Rising incomes and demographic changes have also encouraged savings. A final factor in this mix has been improved efficiency in financial intermediation, through a combination of entry of new private firms, organizational reform of public sector financial firms, and substantial regulatory reform in the financial sector. In some ways, this combination of growth factors is quite different from the initial development strategy, which was geared toward a much more limited set of consumer goods and financial services. Undoubtedly, a retreat from government control and intervention was necessary for the latest trends to be possible. Recent articulations by policymakers of the financial sector as an engine of growth are very different from the classic Indian suspicion of merchants, traders and other intermediaries that persisted in earlier post-independence India.

To summarize, many of the broad goals of India's initial development strategy were unobjectionable, but implementation was poorly done, and – perhaps inevitably with heavy government intervention – distorted by political imperatives and creation of vested interests. An overuse of controls on domestic and foreign trade and investment limited growth after early successes just after independence. The shift in strategy and policy with respect to these factors is considered further in the next section. India's growth spurt has been aided by this deliberate shift, but also by "accidental" factors such as the rise of the software industry, and the concurrent innovations in IT and telecommunications that came from abroad. The skill intensity of recent growth in India raises concerns about inequality, and those are examined in section 6, along with other challenges.

5. Domestic and International Factors

India has historically been a significant trading nation, and it was the colonial experience, involving discriminatory British policies against Indian goods, that contributed to the formulation of a development strategy that emphasized self-reliance after independence. Prohibitive tariffs and extremely restrictive quotas constituted the trade dimension of the policy framework. Foreign direct and portfolio capital investment was also highly restricted, mostly through outright prohibitions. Even in areas where investment was allowed, it was on a case-by-case discretionary basis. Similarly technology transfer, which would require foreign exchange payments or associated investment, was also severely limited through a process of discretionary approval. In practice, bureaucratic controls made restrictions much tighter than they might appear to be on paper. Finally, capital flows abroad, or indeed, any flows of foreign currency out of the country were greatly restricted.

A key underlying driver of all these policies was an overvalued exchange rate, which inhibited exports, and created an artificial scarcity of foreign exchange. As a result, a black market in foreign exchange flourished throughout India's early decades. Even after the Bretton Woods system of fixed exchange rates was abandoned in 1971, India continued to maintain a somewhat overvalued rate. In addition to making exports expensive, this policy made imports cheap, and the ostensible goal was to restrict imports through tariffs and quotas to those inputs that would be required for import substituting industrialization. Only in the 1980s did a significant depreciation of the rupee begin, and this process of market alignment accelerated further in the 1990s, so that after a few more years, the exchange rate was market determined, albeit with heavy intervention by the Reserve Bank of India (the central bank) to control volatility, and sometimes the level as well.

The re-orientation of exchange rate policy, together with making the rupee convertible on the current account, contributed to an export boom, which has contributed to India's growth from the 1980s onward.[15] At the same time, of course, import restrictions were greatly reduced. Inflows of technology and capital inputs that permitted modernization of Indian industry increased in this period. In some cases, Indian firms have faced severe competitive challenges, especially from imports of cheap manufactures from countries such as China, and export competitiveness remains difficult to maintain. Nevertheless, increased openness to international trade, and a more rational trade policy regime, have been hallmarks of a shift in development strategy that occurred in the 1990s (Srinivasan and Tendulkar, 2003).

India's past restrictive policies toward international trade led to a dramatic reduction in its share of world trade after independence, and even now, despite recent gains, its trade share remains relatively small, even compared to the other Asian giant, China (Table 4).[16] On the export side, much of this situation is due to domestic policies that inhibit labor-intensive manufactures at efficient scales. In addition to labor laws, policies that have reserved various products and product lines for small-scale firms have inhibited entry and achievement of efficient scales. These "small-scale industry reservations" persist even now, though considerably reduced in scope, and they illustrate one of the major contradictions in India's development strategy: it simultaneously sought to industrialize through investments in heavy industries, and to protect employment by throwing up walls around a range of traditional industries, techniques and firms. The result was a general stifling of competition, and failure to achieve efficiency, growth or equity goals in any significant manner through these policies.

While exports still contribute a relatively small amount to Indian growth, domestic demand has been significant. As noted in the last section, domestic consumption and investment have been robust in recent years. Improvements in bank efficiency, the creation of consumer credit and mortgage markets, and modernized and transparent stock markets have all played a role in supporting domestic economic activity. While newer sectors such as ITES have been able to operate relatively efficiency, traditional industries such as textiles are still inhibited by the continuance of old controls and restrictions on entry and exit. Land markets and retailing also are two areas where restrictions and frictions are substantial. In these latter cases, a continued gradual easing of restrictions on foreign direct investment is helping to increase competition and make quality upgrading more likely.

The interplay of domestic and external sector policies is illustrated by the textile industry. The industry is labor-intensive, and export-oriented. However, it contains a large number of small-scale producers, often with inefficient technologies. The depreciation of the

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[15] Panagariya (2005) summarizes India's experience with external liberalization, starting in the late 1970s. He documents the acceleration in India's growth rate in the 1980s, and ties this improvement to the external liberalization that took place. Several studies (e.g., Joshi and Little, 1994; Chand and Sen, 2002) formally establish a positive linkage between opening the economy and productivity improvements in manufacturing.

[16] In addition to Panagariya (2006), the source for Table 4, see also Srinivasan (2006).

rupee in the 1980s and 1990s, together with removal of international textile quotas, helped the industry. In 2007, however, an appreciation of the rupee due to capital inflows hurt exports and employment disproportionately in this sector. The first-best policy solution is to create conditions for microeconomic efficiency. In the absence of the ability to do that, however, an alternative policy is to keep the exchange rate low, through capital controls, sterilization of capital inflows, or both. This has also been a component of development strategy in East Asia's success stories, and is likely to be used in India if it faces increased capital flows due to its recent growth record: currently these flows have pulled back in the face of a global economic slowdown and increased uncertainty.

Finally, it should be noted that India's external engagement has relied very little on external borrowing. Aid flows have never been substantial or persistent, and have almost disappeared as a significant contributor to the economy, though there is some project-related borrowing from multilateral agencies. India's external debt is very low, and its maturity structure does not indicate high risks of an external crisis. There has been some recent increase in external borrowing by Indian corporations, and portfolio flows and foreign direct investment have become more significant. In these respects, India's development path differs from both Latin America and East Asia, and is reflective of continued conservative monetary management, and financial intermediation that is somewhat better than typical for countries with similar levels of income.

6. Future Challenges

While India has demonstrated that it can grow at almost double digit rates, comparable to those achieved by the economies of the East Asian "miracle," it faces numerous challenges if that growth is to be sustained for long enough to raise average levels of living comparable to, say, South Korea today, or even China. Human development indicators such as literacy, educational attainment and infant mortality also show significant deficits, when comparisons are made to other countries with similar income levels (Table 2).

A clear danger is that the current pattern of skill-intensive growth will be accentuated. Increasing inequality of income is paralleled by increasing regional inequality.[17] These trends can create political instability, or lead to growth that peters out, leaving a wealthy class connected with the global market economy, and significant numbers of poor people – what one can term "Latin Americanization." Reductions in public investments in health, education and infrastructure, and tendencies for the upper income groups to effectively secede into gated communities and private transport can accentuate this danger. Policy responses to this situation that re-introduce controls and exacerbate rent-seeking (e.g., through expanded quotas in higher education, or the introduction of quotas for private sector employment) represent another threat to sustained high growth. One of the features of the Indian development model was its ability to balance different interests through formal democratic processes as well as informal political bargaining, albeit at the

[17] Rao and Singh (2005) and Singh and Srinivasan (2005) examine much of the evidence for this phenomenon, and discuss causes and policy responses.

cost of higher growth. The challenge now is to create a new social contract that softens the growth-equity trade-off, so that both can be better achieved.

As has been the case for a long time in India, social stratification does act as an inhibitor to equity. Many of the poorest parts of India, with the worst human development indicators, have high proportions of tribals or Dalits (former untouchables). Interestingly, the software industry provides an example of what is possible. Initially, the view of computer science as a cerebral activity with high social status made it attractive for upper castes in India, especially in the South, where quota systems had restricted access to government jobs for the highest castes. Over time, however, the industry has attracted entrants from all backgrounds. Global competition has promoted a meritocratic, relatively egalitarian culture in the industry. Women, too, are increasingly drawn into a specialty that does not suffer from the traditional social constraints associated with other disciplines such as civil and mechanical engineering. In general, growth and urbanization have begun to chip away at traditional manifestations of social stratification. It will be important for policies to be designed that improve access to education through targeted subsidies and supply increases, rather than increased use of quotas.

Agriculture remains one of the biggest challenges for India's future development, though it must be recognized that agricultural modernization cannot be a substitute for growth in labor-intensive manufacturing.[18] After the diffusion of the Green Revolution, which introduced high-yielding varieties of several cereal crops, along with increased fertilizer use and irrigation, agricultural growth has slowed. Part of the problem is that farmers have been locked into growing low-value crops by the existing physical and organizational infrastructure and political arrangements. New investments are required throughout the agricultural value chain, but these also require innovations in risk management and adjustment assistance that have been slow to develop, especially for agricultural producers. Individual bureaucrats, visionary entrepreneurs and enterprising politicians together played a role in previous agricultural development, as did foreign expertise (Kohli and Singh, 2005). Clearly, a concerted approach to revamping this dimension of development strategy is required for India.[19] Many of the changes required have to do with relaxation of controls, but others require institution building, which is more difficult. Improvements in agricultural growth, and rural development more broadly, will address some of the concerns with respect to inequality, and have a value from that perspective as well.

While rural development through road building, better telecommunications connections and investments in health and education can help to create non-agricultural rural employment, it remains the case that urban, industrial employment must increase dramatically. As agricultural productivity increases, labor will be freed up and must be

[18] A comprehensive analysis of agricultural policy in India, including its past defects and future potential, is in Srinivasan (2007).

[19] An important new aspect of this concerted approach will have to be environmental management. Whereas industrial development brings well-recognized traditional problems of pollution, the pattern of agricultural development in India, driven by subsidies for electric power and water and mispricing of inputs and of certain types of crops, has led to rapid environmental degradation in states such as Punjab.

absorbed into industry and services. Given the limitations of services as an employer of unskilled labor, Indian policy reform must be geared toward creating the conditions for large-scale labor-intensive manufacturing, for the domestic as well as the international market. This may be the single most important change needed in India, for sustained growth – it represents a very traditional, but logically sound goal for development strategy. The problem has been in agreeing on and implementing a set of policies that will support this goal. Microeconomic reforms of labor markets, small-business finance, industrial and vocational training, and land use policies are all likely to be needed (e.g., Kelkar, 1999; Srinivasan, 2007; Panagariya, 2008; and references therein). The urgency of creating job-friendly growth is highlighted by India's demographic dividend, which will give it a bulge in the working-age population.

In the last decade, India has made significant progress in improving the efficiency of its tax system, including direct and indirect taxes. Better administration of the income tax, reductions in penal rates that promoted evasion and corruption, and most recently, the introduction of a value added tax, have all helped to improve the revenue side of government, and reduce distortions created by the old system. There has been less progress on the expenditure side of government, and inefficiency of expenditure, as well as severe distortions caused by subsidies for rural water, power and fertilizer, all remain. The planning process is little changed, and there is still no good monitoring of outcomes, or assessment of efficacy of expenditures. In some ways, government expenditure and functioning is the last bastion of the old approach to development strategy, and will only change as the balance of political weight shifts to the modern economy comprising the entrepreneurs, professionals and the urban middle classes more generally.

In the larger realm of governance, macroeconomic management on the monetary side has always been a relative bright spot in India. Inflation has been managed, and financial scandals and crises have mostly been avoided. There is certainly much to be done in terms of continuing the process of building new financial sector institutions, such as derivatives markets, modern risk managers, and venture capitalists. Perhaps the greatest macroeconomic challenge is the one discussed in the previous section – that of managing exchange rate policy, capital controls and domestic monetary policy for inflation control. Finding the optimal mix of instruments in this triad is especially difficult in a world where large quantities of mobile capital can overwhelm individual governments' resources.

7. Lessons

India's size can limit the lessons that might be drawn for other developing countries, which are almost all an order of magnitude smaller in total population. However, since economic reform has led to some decentralization of economic policy, the differential recent experiences of the Indian states provide additional benchmarking information. A fairly straightforward lesson from the overall Indian case is that both initial conditions and policy matter. Several states or subnational regions which were favorably positioned to engage with the global economy have grown faster since the economic reforms of the 1980s and 1990s. At the same time, states that were not necessarily so well-placed, and were lumped together as 'sick,' have diverged somewhat, arguably as a result of differences in economic policy.[20]

At the national level, the change in India's growth rate and prospects, following policy reforms that opened up the economy to foreign trade and investment and substantially removed domestic industrial controls, seems to provide strong support for the view that policy matters (e.g., Panagariya, 2008), though this view is still not unanimous. To the extent that the various policy reforms constituted an overall shift in thinking, they together represent a change in development strategy, similar to what occurred in many countries after the fall of the Berlin Wall. A reading of speeches by prominent reformers such as the current prime minister and finance minister of India support the case for a conceptual shift from 'governing the market' (e.g., Wade, 1990) to 'enabling the market.' India's experience provides support for this perspective on development strategy. It is also plausible that some of the areas where India faces significant challenges, such as agriculture and higher education, are precisely ones where reform has been almost non-existent, leaving the old control regime with artificial scarcities and allocation distortions in place.

However, it should also be clear that the lessons from India do not support any extreme version of market orientation. The standard economic arguments for public intervention in certain areas are also borne out by the Indian case. In fact, the Indian State spread itself too thin by trying to run all manner of industries, either by direct ownership or through elaborate discretionary controls, and it is plausible that this was a contributing factor to the slow progress in areas such as basic health, nutrition and education. The national government, as well as state-level governments, are still struggling with the reorientation that is required for them to become focused vehicles for the delivery of public goods and services. A similar struggle is occurring with respect to reforming the provision of law and order, property rights protection, taxation, and arm's length regulation of industries where market forces alone may not guarantee efficient competition.

A less clear-cut boundary for the government's role lies in the realm of industrial policy. This paper has argued that there is little evidence for the success of industrial policy as a component of India's development strategy after independence. Rodrik (2006) makes a modern general case for government intervention, based on the view that economic development is fundamentally driven by structural change in the economy, and that this change is "fraught with externalities and spillovers of all kinds." However, the nature of government intervention as conceived by Rodrik is quite circumscribed. His conclusion is worth quoting in detail:

> What I understand by "industrial policy" is not an effort by the government to select particular sectors and subsidize them through a range of instruments (directed credit, subsidies, tax incentives, and so on). The critics of industrial policy are correct when they argue that governments do not have adequate

[20] The illness metaphor was played on in the acronym BIMARU, which approximates the Hindi word for 'sick,' and stands for Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh. The second and third of these have shown improved performance, particularly in human development indicators, since the 1990s, and this can be plausibly traced to policy improvements.

knowledge to pick "winners." [I]ndustrial policy is more appropriately conceived as a *process* whereby the state and the private sector jointly arrive at diagnoses about the sources of blockage in new economic activities and propose solutions to them. Industrial policy requires the government to take an ex-ante stand neither on the activities to be promoted nor on the instruments to be deployed. It simply requires it to build the public-private institutional arrangements whereby information on profitable activities and useful instruments of intervention can be elicited.

It is not clear, however, to what extent Indian policymaking has achieved the creation of such 'public-private institutional arrangements.' It is unobjectionable to argue that doing so would be a useful step in meeting future development challenges.

If India's development failures and successes offer some lessons for other countries on balancing the role of government and market in development strategy, perhaps its most important lesson comes from its political institutions. Democracy in India, however, imperfect, has survived and deepened over the last six decades. It has provided an important institutional backdrop for the recent economic success of the country. If anything, it has begun to provide a vehicle for more vigorous competition among politicians to serve long-term constituent interests (Singh, 2007).[21] Democracy has also allowed the media and civil society organizations to operate relatively freely in India, bringing greater transparency and accountability to markets and governments. The design of robust democratic institutions must be considered the greatest achievement of India's strategy of development.

If one recalls the chaos of India's partition in 1947, it is clear that achieving sustainable democracy was not a foregone conclusion. To some extent, the heterogeneity of India, and the lack of any single axis of social domination made it easier to sustain the institutions created from 1947 onward: the contrast with Pakistan is perhaps telling in this regard. The same heterogeneity also created problems of multiple vetoes (Bardhan, 1984). However, greater federalism and economic decentralization have helped break some of those previous logjams. The final lesson from the Indian experience is that carefully designed political institutions that can manage competing interests effectively are an achievable goal, as well as a supportive backdrop for development.

[21] The dual importance of political and economic competition emphasized in our discussion of India is not dissimilar to the independently developed thesis of Weder and Weder (2008) for the Swiss case, as part of this project: "This paper argues that economic competition and political contestability are two key determinants of the successful development of the Swiss economy in the nineteenth and twentieth century." This similarity in the analytical examination of the development of two such different countries (in size, history and environment) does suggest a value to the exercise undertaken in this "country role models" project.

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Table 1: Aggregate and Sectoral Growth Rates

Period	GDP	Agriculture, Forestry and Fishing	Industry	Manufacturing	Services
1951-65	4.1	2.9	6.7	6.6	4.7
1965-81	3.2	2.1	4.0	3.9	4.3
1981-88	4.8	2.1	6.3	7.1	6.3
1988-2006	6.3	3.4	6.5	6.8	7.8
2006-07	9.6	3.8	10.6	12.0	11.2
2007-08	9.0	4.5	8.1	8.8	10.7

Sources: Panagariya (2008), Table 1.2, and Reserve Bank of India (2008), Table 1 for last two years. The latter figures are estimates, and not finalized.

Table 2: Comparative Development Indicators

	Low Income	India	China	Middle Income
Births attended by skilled health staff (% of total)	n.a.	42.5*	96	n.a.
GNI per capita, Atlas method (current US$)	438.53	530	1270	1938.11
Immunization, measles (% of children ages 12-23 months)	61.52	56	84	86.43
Life expectancy at birth, total (years)	58.62	63.42	71.05	69.73
Mortality rate, infant (per 1,000 live births)	83.88*	64**	33*	35.4
Mortality rate, under-5 (per 1,000)	127.66*	94*	41*	45.18
School enrollment, primary (% gross)	99.75	107.43	115.02	112.3

Notes: *Year 2000, ** Year 2002, n.a. not available
Source: World Bank World Development Indicators

Table 3

Year	Gross Domestic Saving (percent of GDP)	Gross Domestic Capital Formation (percent of GDP)
1954-55	9.1	9.3
1959-60	10.8	12.3
1964-65	11.6	13.8
1969-70	14.0	14.5
1974-75	15.7	16.5
1979-80	19.8	20.3
1984-85	18.2	19.6
1989-90	21.8	24.3
1994-95	24.4	25.5
1999-2000	24.8	25.9
2004-05	31.8	32.2
2005-06	34.3	35.5
2006-07	34.8	35.9

Table 4: India and China in World Trade

	India			China		
	1982	**1990**	**2003**	**1982**	**1990**	**2003**
Exports of goods and services as percentage of GDP	6.2	7.2	13.8	11.7	16.2	29.6
Imports of goods and services as percentage of GDP	9.0	9.3	15.6	9.4	13.2	27.4
Exports of goods and services as percentage of world trade	0.5	0.5	0.9	1.1	1.3	5.2
Exports of goods and services as percentage of world trade	0.8	0.7	1.0	0.8	1.1	4.9

Source: Panagariya (2006)