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South Asia

*India's economic reforms:
towards a new paradigm?*

Ric Shand and K.P. Kalirajan

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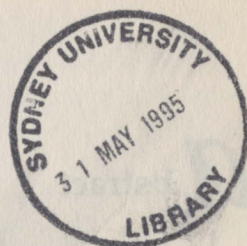
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inaugural launch

This working paper is the first publication of the newly founded Australia South Asia Research Centre in the Research School of Pacific and Asian Studies, The Australian National University.

This paper is also the first in a new series of Economics Division Working Papers on South Asia.

The first copies were launched by the Vice President of India, Mr. K.R. Narayanan, at the formal inauguration of the Australia South Asia Research Centre on 20 April 1994.



In an era of worldwide economic reform, the question of sustainability of the reform process is prominent. This study indicates that the reforms implemented in India since 1990/91 have been yielding the anticipated positive results. Though the reform process has been gradual, it is becoming increasingly clear that sustainability is not in question. This paper summarises the reform measures taken to early 1994 and examines the development path India has taken in light of existing structural linkages in the economy. Unlike the situation in China and other East Asian economies, significant linkages between agriculture and industry are not found in the Indian context. The study concludes that India may be evolving a 'new paradigm' of growth which could be relevant to other developing countries with similar structural linkages. However, it is yet to be demonstrated that high economic growth rates can be achieved and sustained without the creation of significant linkages between agriculture and industry.

Abbreviations

BIFR	Board for Industrial and Financial Reconstruction
CRR	cash reserve ratio
GDP	gross domestic product
GNP	gross national product
MODVAT	modified value added tax
NABAND	National Bank for Agricultural and Rural Development
NSEI	National Stock Exchange of India
SEBI	Securities and Exchange Board of India
SLR	statutory liquidity ratio
VAT	value added tax

india's economic reform: towards a new paradigm?

The road to crisis

Upon achieving independence in 1947, India had two alternative and contrasting growth models to choose from for its development strategy: the Eastern European/USSR model of socialism and the Western bloc model of capitalism. After the Second World War, both models demonstrated the feasibility of achieving high economic growth rates, although each had limitations. India wanted the benefits of both models. Under the influence of the writings of Keynes on managed capitalism, India chose the path of a mixed economy (Ghosh 1972). But the policymakers were attracted to Fabian philosophy and, over time, the mixed economic model moved more towards the Eastern European model. This led, in the mid-1950s, to a shift in priority from agriculture to heavy industries in the Second Five Year Plan (India 1956).

The Mahalanobis (1955) model formalised India's development strategy. It called for the public sector to be the prime mover of the economy through strong involvement in investment and employment generation. P.C. Mahalanobis was a member of the High Council of the Planning Commission in the 1950s and influenced basic decisions on sectoral investment and output using his four sector model (Mahalanobis 1955). Under his influence, investments in factories, mining and power were to expand greatly in the Second Plan (and did thereafter); mining and modern industry were to grow relative to the total economy; and within industry, there was to be a major shift away from consumer goods towards output of capital goods. Within the broad industrial sector, public activity was to grow relative to private activity. The government also planned to reduce the relative importance of its agricultural investment in the First Plan by half. By the Third Plan, the public ratio in factory, power and mining investment exceeded 70 per cent. Under the Mahalanobis regime real GDP growth rate increased from the pre-independence rate of 2.5 per cent to 3.5 per cent, but it stagnated at the latter rate until the 1980s, despite a high savings ratio (Bhagwati 1993).

India persisted with restrictive economic policies without revision for nearly 30 years despite the emergence of the global economy and widening opportunities for international trade. India continued to cling to policies and institutions long after they had served their purpose, considering them as the ends rather than as means.

From the 1970s, the success of the East Asian growth model was increasingly acknowledged in the literature and was being successfully followed in some Southeast Asian countries. This persuaded Indian policymakers to begin to recast India's development strategy. From 1977, and particularly after 1985/86, policy changes were initiated to move the economy towards liberalisation and deregulation. Some important changes in trade and industrial policies were announced in broad terms in the documents of the Seventh Plan (1985-90). Consequently, the GDP growth rate increased to 5.5 per cent from the long stagnant 3.5 per cent. But in the process of establishing and maintaining heavy industries, the government had accumulated large deficits on internal and external accounts making the economy highly vulnerable to external shocks.

By 1987 the government weakened and further reform came to a halt due to political rivalries. After the general elections of 1989, the Janata Dal government adopted a populist approach and announced agricultural loan waivers resulting in an additional burden of 8,000 crore rupees on the exchequer (1 crore = 10 million). Further, although the procurement prices of wheat and rice were raised twice, they were still less than the open market price. Fertiliser prices remained unchanged from 1981, and as a consequence, the burden of the fertiliser subsidy stood at around 4,400 crore rupees in 1990/91 (Jalan 1992).

Although the Ninth Finance Commission projected the national revenue deficit at 8,500 crore rupees for 1990/91 and 1991/92, the actual figures were twice as high with inevitable increases in inflationary pressures. This aggravated the balance of payments deficits (India 1992a). These imbalances were further exacerbated by the Gulf crisis. In 1991, India faced an economic crisis of such unprecedented dimensions that the initiation of a sustained and comprehensive reform process became paramount and unavoidable.

Sectoral policies: agriculture and industry

Since independence, government agricultural policy has been guided by three major factors

- maintaining self-sufficiency in food

- providing a public distribution system through a procurement system to support the poorer section of the population (Tyagi 1990)
- allowing exports only after fulfilling the above two requirements and domestic demand.

This has meant strong government intervention in agriculture. Generally, intervention has taken the form of input subsidies, low procurement prices (typically about 20 per cent lower than open market prices) (Table 1) and quantitative restrictions on agricultural commodity exports. These interventions have produced a situation in the sector where first, the growth rate of agricultural output (particularly foodgrains) has exceeded the population growth rate; second, subsidies for fertiliser (Table 2) and food have been increasing year-by-year at the cost of capital expenditure on development; and third, agriculture's share of exports has been declining over the period.

Table 1 **Open market, procurement and public distribution system (PDS) price differentials for wheat (rupees per quintal)**

Last day of month	Wholesale price in Delhi	Procurement price	PDS issue price
1991			
January	345	275	234
April	280	275	234
July	295	275	234
October	310	275	234
1992			
January	440	330	280
April	330	330	280
July	375	330	280
October	345	330	280
1993			
January	360	350	330
April	353	350	330
July	385	350	330
October	412	350	330

Source: India, 1993a, *Agricultural Statistics at a Glance*, Ministry of Agriculture, New Delhi.

Table 2 Fertiliser production, imports and subsidy

	Production	Imports	Subsidy		
	(N+P) tonnes	(N+P) tonnes	Imported	Domestic	Total
1985/86	5,756	3,399	324	1,600	1,924
1986/87	7,070	2,310	197	1,700	1,897
1987/88	7,131	984	114	2,050	2,164
1988/89	8,964	1,608	201	3,000	3,201
1989/90	8,543	3,114	771	3,771	4,542
1990/91	9,045	2,578	659	3,730	4,389
1991/92	9,863	2,769	1,300	3,500	4,800
1992/93	9,743	2,986	996	4,800	5,796
1993/94	10,000	2,938	570	3,430	4,000

Notes: Figures for 1993/94 are budgeted. N=nitrogen, P=phosphorus.

Source: India, 1993a, *Agricultural Statistics at a Glance*, Ministry of Agriculture, New Delhi.

The average protection level given to agriculture has consistently been about half that given to manufacturing. There has been a significant and continuing anti-agricultural bias in the incentive system, even after allowing for the protection given to agriculture in the form of subsidies on tradable inputs used in agriculture (fertiliser, farm machinery, pesticides, herbicides and seeds), on agriculture's principal non-tradable inputs (canal irrigation water, electricity and credit), and the exemption of agricultural activities from income and corporation taxes (Gulati and Pursell 1993).

The basic objectives of industrial policy since 1955 have been to

- increase production and efficiency in priority sectors
- bring about regional dispersal of growth
- promote the small-scale sector
- prevent concentration of power.

Initially, these objectives were to be achieved within the framework of government regulation and protection from foreign competition. The public sector was to provide basic infrastructure and a leadership role for industrial growth, while the private sector was expected to play a complementary role. The two principal instruments for industrial policy were a system of industrial licensing and a system of import licensing designed to foster import-substituting industries. These policies led to a number of adverse consequences. Barriers to entry contributed to the building up of technical stagnation and inefficiency in major industries and also restricted the transfer of

resources from sick and inefficient industries to efficient industries. Limitations on firm size denied large business houses the advantages of economies of scale.

Economic performance

The reality of the post-independence economic performance with the structural policies above has been one of inadequate growth rates of total and per capita incomes (Table 3) (Bhagwati and Srinivasan 1993). Performance was well below Plan targets and expectations and India fell behind many other faster growing developing countries in Asia, particularly in East Asia.

Table 3 Real GDP growth rates by sectors in India, 1950-90

	1950-60	1960-70	1970-80	1980-90
Agriculture	2.7	1.5	1.7	2.9
Industry	6.0	5.5	4.7	6.6
Manufacturing	6.1	4.7	4.9	7.0
Services, etc.	4.1	4.4	4.6	6.5
Public administration and defence	5.2	7.6	4.9	7.9
GDP at factor cost	3.7	3.3	3.4	5.3
Population (in millions)	1.9	2.3	2.1	2.1
GDP per capita	2.1	1.2	1.2	3.4

Source: World Bank, 1991, *India: country economic memorandum, Volume 1: Policies for Adjustment with Growth*, 9412-IN, World Bank, Washington, DC.

It was only in the 1980s that the GDP growth rate exceeded 4 per cent per annum (Table 3). But with a rapid rate of population growth during the four decades from 1950, per capita GDP growth remained low and did not exceed 3 per cent until the 1980s. Two points need to be made here. At first sight, growth rates of industrial and manufacturing production appear sizeable throughout the period, but since they began from a relatively low base, agricultural growth rates dominated GDP. Also, higher growth in the 1980s came at an unsustainable fiscal cost which precipitated a crisis.

By 1990/91, fiscal imbalance had built up to the point where India was in danger for the first time of being declared uncreditworthy if drastic action was not taken by the government. Rising fiscal deficits (peaking at 8.4 per cent of GDP in 1990/91) had led to high levels of government borrowing from the Reserve Bank. These had an

expansionary impact on money supply and resulted in high inflation rates. High fiscal deficits also led to large current account deficit in the balance of payments and aggravated the problem of external indebtedness. Because a large proportion of national savings was channelled into supporting the budget, the economy was starved of funds for productive investment. This situation was reflected in high commercial interest rates which discouraged new investment and reduced international competitiveness.

Thus the immediate reform task was fiscal consolidation. The government was compelled to deal with the deficit problem as a central issue in the medium-term strategy developed to meet the country's economic problems. It committed itself to a reduction of the central government deficit from 8.4 per cent of GDP in 1990/91 to 5.0 per cent in 1992/93 and a target of 4.7 per cent in 1993/94.

Beyond achieving and maintaining macroeconomic stability, two other long-run imperatives were recognised. They could only be achieved through economic liberalisation: faster economic growth and international competitiveness. The sectoral reform process began in July 1991.

Economic reforms: a summary review to 1994

This section broadly summarises economic reforms introduced to date, from 1991 to 1994, including the latest reforms in the 28 February Budget for 1994/95. Details on key reforms are given in Appendix I.

Although India's economic reforms can be traced back to the 1970s, they gained little headway at that time. They were revived in the mid-1980s, but again were not sustained. The government set up a number of committees to examine Indian fiscal, monetary, trade and industrial policies in the 1980s, including the Hussain Committee (1984) reporting on trade policies, the Chakravarty Committee (1985) reviewing the workings of the monetary system. More committees were established in connection with the reform process from 1991. These included the Narasimham Committee (1991) on financial sector reforms, the Chelliah Committee (1992) on tax reforms, the Goswami Committee (1992) on industrial sickness and corporate restructuring, the Sengupta Committee (1992) to review the policy for public enterprises and the Malhotra Committee (1994) on reforms in the insurance sector.

Trade and exchange rate policy reform

India's trade and exchange rate regime was a major long-term obstacle to international competitiveness and faster economic growth. Protection was high and arbitrary owing

to a complex range of quantitative restrictions, nominal tariffs (averaging 117 per cent), exemptions and special schemes. The system taxed exports and raised the costs of intermediate and capital goods. Its effect was to raise the overall cost structure of Indian industry more than provide protection. It rendered both domestic production and exports uncompetitive without providing compensatory schemes of subsidy and protection.

Until 1991, imports were controlled through a licensing system. Administrative discretion was applied to imports of raw materials, components, intermediate goods and capital goods (a key criterion was whether these were produced locally). Imports of consumer goods were mostly prohibited. Licensing was supported by a system of customs tariffs, which were reputedly the highest in the developing world.

Consequently, India was isolated from the benefits of international trade. The insulation of domestic industries behind the protective wall bred inefficiency and high costs. Traded inputs were expensive, the scale of production was often uneconomic and exports had to be subsidised. Moreover, the rupee exchange rate was overvalued. The regime produced both a direct and indirect domestic bias against agriculture and in favour of industry. By 1991, this trade and exchange rate regime had effectively marginalised India internationally.

A sequence of reform steps commenced in 1991 and radically liberalised the trade policy regime by 1994 (Appendix I). The new exchange rate system gives powerful incentives for all exports and has greatly diminished the flow of foreign exchange to the illegal market. The removal of export subsidies has reduced delays and corruption, and has benefited agro-based exports which previously did not attract export subsidies. Also, many restrictions on exports have been removed.

India has moved towards a trade regime that is not biased against exports and is more uniform in the extent of protection afforded to different industries. It relies on price incentives rather than administrative interventions, and more on exchange rate adjustment than on import tariffs and export subsidies. The reforms imply elimination of the array of non-tariff barriers, including import licenses, bans, canalisation (when only one parastatal is allowed to import or export) and export controls, and a major reduction in tariff rates.

Industrial policy reform

Limited reforms in industrial policy, the other largest obstacle to growth and competitiveness, were introduced during the 1980s, but at the end of the decade, the manufacturing sector was still one of the most tightly regulated in the world. Up to

1991, relaxation of barriers to the entry of new enterprises were modest and piecemeal. The system was characterised by red tape, delays and duplicative controls. Most industrial investment projects had to obtain an industrial license and various other clearances before commencing operations. Large and foreign-controlled enterprises (with a foreign equity share over 40 per cent) suffered additional restrictions. For example, permission was needed to invest or expand, a requirement initially intended to regulate the concentration of economic power. Further rigidities were introduced by reserving certain activities and products for the public sector or for small-scale industry or for particular locations. Direct foreign investment was generally discouraged.

'Sick' companies (incorporated for seven years, with complete erosion of net worth, and two years of continuous cash losses) were encouraged. Administrative, regulatory and other barriers to exit (closing down) led to large numbers of sick companies absorbing resources and adversely affecting the stability of the banking system. Labour regulation was pervasive in the organised sector—excess labour could not be discharged and plants could not be closed without state government approval. Real wages of workers rose steadily in the organised sector, inhibiting new hiring and encouraging greater capital intensity and other methods of holding down labour costs, with confrontations such as lockouts and unauthorised closure of facilities.

These controls, whatever their original utility, became inefficient and dysfunctional. They led to protracted delays in decision-making, and often to inefficiencies in choice of scale, location and technology. The industrial policy regime protected established producers from the competition of new entrants and encouraged high costs. By the 1990s there was an overwhelming need to replace bureaucratic control with entrepreneurial decision-making, subject to the normal disciplines of market competition.

On 24 July 1991, the government introduced a Statement of Industrial Policy, signalling a radical departure from past regulatory practice (India 1991b). It included relaxation of barriers to entry (licensing), expansion (scale), diversification and modernisation (through foreign technical collaboration). Equity limits were eased and lifted and the requirement of progressive indigenisation of new projects was removed.

Foreign investment reform

While India has always recognised the importance of foreign investment in facilitating industrial development and permitted it in substantial areas of the economy, restrictive rules and procedures have generally deterred foreign investors. The inflow was so small by the early 1990s that it failed as a source of non-debt inflows, of new technology and of international inter-firm linkages.

In recognition of the advantages of foreign investment, of India's urgent need for it in view of scarce domestic capital resources, and of the heavy international competition for foreign capital, a new policy was initiated to bring rules and regulations in line with international norms, in order to make the terms attractive to foreign investors. Restrictions on equity holdings by foreign firms in priority industries in India were relaxed, and procedures for Indian firms to invest abroad were simplified.

Public enterprise sector reform

Pervasive inefficiencies and poor financial performance in public sector enterprises have remained a major obstacle to industrial development and international competitiveness. Inefficiency and lack of dynamism have resulted from cost-plus pricing and distribution controls. Many public sector enterprises have been *de facto* monopolies, protected from competition. A 'soft budget constraint'—easy access to budget funds and/or credit from the financial sector—has allowed sick public sector enterprises to survive. Ambiguous relationships with government supervisory authorities were not conducive to efficiency. These enterprises have also been constrained by multiple objectives, lack of managerial autonomy and overstaffing pressures in relation to operational needs. They have constituted a serious drain on government resources.

The public enterprise sector has fallen well short of expectations to generate surpluses for reinvestment. Overall profitability has been below targets, especially if the petroleum sector is excluded. The record is similar at the state level, notably for the state electricity boards, road transport corporations and irrigation works. This situation is unsustainable.

Fast track reformists argue for a far more concrete exit policy and for reforms to be undertaken at the state level where public enterprises are even less efficient and less profitable than at the national level, and where the effect on limited resources is more serious.

The reforms aim to increase efficiency and reduce the losses that so many public enterprises impose on the government budget, leaving unmet demands for education, health, and expenditures for the poor. It is recognised that the budget not only should not support sick enterprises, but it should not even provide the funds for expansion. Rather, these should come from their own funds or from the capital market.

The 20 December 1991 speech by the Prime Minister elaborated policy on the public sector following the July 1991 New Industrial Policy: 'The mixed economy will continue but no further nationalisation will be resorted to; there will be no budgetary support to sick or potentially sick PSEs [public service enterprises], with a view to eliminating

it as soon as possible, but with "sickness", hardship will be alleviated with the National Renewal Fund'.

Tax reform

Over the decades since the 1950s, the Indian taxation system became unduly complex, economically unjustifiable and unsatisfactory in many respects. Special exemptions and preferences abounded, nominal rates were high, evasion was widespread, and the burden across taxpayers was often unfair.

Revenue mobilisation has been high in India by developing country standards, and the tax/GDP ratio continued to rise in the 1980s (Central Statistical Organisation 1991). However, tax increases were narrowly based and distortionary, mainly involving customs duties, and to a lesser extent, national excise taxes. Direct taxes contributed nothing to the increases, and personal taxes fell significantly as a share of GDP.

National-state fiscal relations influenced tax trends adversely. On the one hand, customs duties have grown rapidly as they are totally retained by the central government, as was corporate profit tax. On the other hand, some 85 per cent of personal income tax goes to the states, which may explain its slower growth. The central government has used surtaxes widely, apparently to avoid having to share the proceeds with the states.

Customs duties are easy to collect, so there is an administrative factor involved, and the same is true of excise taxes from large producers. Many indirect taxes are set at a specific amount rather than as a percentage to avoid valuation problems, so collections tend to lag behind inflation. The personal income tax base has been kept narrow by pressure from organised sector employees for increases in the exemption level, together with difficulties in assessment and collection. Farmers have prevented any serious taxation of agricultural incomes by the states and the land tax has sharply declined as a source of revenue.

The devaluation of the rupee in 1991/92 buoyed customs duties and increased the dependence of the central government budget on this source. Sizeable increases in corporate tax rates are burdensome and distortionary and may not yield commensurate revenue growth, so there is strong pressure for reductions. Since the fiscal crisis has its origins on the expenditure side, it is argued that the remedy should be sought there.

Trade and tax reforms are closely related because reductions in tariffs need to be partly replaced by increases in collections from other sources. Broadly, reforms are envisaged to

- make excise rates more uniform
- introduce a form of VAT
- avoid high indirect taxes on capital goods because they are a serious obstacle to international competitiveness and should be lowered drastically
- strengthen personal income tax by holding exemption limits constant in nominal terms to widen the tax base
- raise taxes on fringe benefits, housing and vehicles
- rely more on income tax deduction at the source where appropriate
- broaden the tax base and increase revenue mobilisation at the state level.

The government has recognised the linkage between tax reform and any program of stabilisation. Macroeconomic stabilisation requires a reduction in the fiscal deficit. While some of this can be achieved by reducing low priority expenditure, much of the improvement has to come from higher tax collections. These are best achieved not by high taxation rates, which encourage evasion, but by systems that are simple to administer, are set at moderate rates, and have a broad base.

The Chelliah Committee recommended extensive reform in its Interim Report in August 1992. The government took several steps in this direction in the 1992/93 Budget, accepting the approach and the broad lines of reform advocated in the Committee's Interim Report (India 1991a) and agreeing with the recommendations in the Committee's Final Report (India 1992a). The 1994/95 Budget proposals closely followed the recommendations of the Committee, emphasising tax reforms aimed at simplifying the structure and continuing the process of shifting to moderate rates of taxation.

- *Indirect taxes.* Customs duties are to be further lowered to make key imported raw materials and capital goods available to Indian industry at reasonable cost and to reduce the high levels of protection to domestic industry. Reforms to the excise tax structure aim to promote growth of manufacturing output and employment; simplify tax administration and reduce the scope for misclassification, evasion and disputes; increase revenue elasticity; and pave the way for an eventual VAT.
- *Direct taxes.* The 1994/95 Budget followed the basic approach to tax reform: simplify the system, apply moderate rates, place much greater reliance on broadening the base and improve administration.

Finance sector reform

The banking system

At the time of the crisis in 1991, India had been successful in mobilising savings, but the financial system had been seriously weakened by government policies. Commercial banks operated at low margins due to obligations to provide credit at subsidised rates to government and priority sectors. Internal efficiency in commercial banks was low and administrative costs were high. Most alarming of all, bad and doubtful debts had built up on an already inadequate capital base. In 1991, 7 per cent of bank lending was to large and medium-sized sick companies (World Bank 1991). There was an urgent need to improve the prudential regulation of banks, and to undertake substantial restructuring and additional capitalisation in order to preserve solvency. Reforms were also needed to strengthen term lending institutions and to improve the workings of rapidly expanding capital markets.

Many of the problems stemmed from fiscal deficits and the Reserve Bank of India's attempts to counter the potential monetary effects of deficits by requiring commercial banks to hold extensive government debt at below market rates. Solutions depended to a large extent on regaining fiscal balance. Direct lending to priority sectors was also a problem and hurt the financial system in two ways.

- It imposed a tax on the banking system, since about half of lending occurred at subsidised interest rates.
- The need to meet government policy targets subjected banks to higher risk, leading to a substantial burden of bad debt.

One of the problems facing the banks in 1991 was that levels of statutory liquidity ratio (SLR) and cash reserve ratio (CRR) had been progressively increased over the years: the SLR, because of the desire to mobilise increasing resources through so-called market borrowings to support the national and state budgets. In the case of the CRR, it was because of the need to counter the expansionary impact on the money supply of the large budget deficits. Together, the SLR and CRR stipulation directed a large proportion of bank resources into low income-earning assets, reducing bank profitability and pressuring banks to charge high interest rates on commercial sector advances. The SLR and CRR were in fact a tax on financial savings in the banking system, encouraging distortionary flows in markets where this tax did not apply. The government decided to phase out this distortion. The SLR is to be reduced in stages from 38.5 per cent to 25 per cent, and the CRR is to be reduced to a level below 10 per cent.

The government initiated a number of short-term measures to improve the financial sector, and pave the way for future reforms.

- A high level committee, the Narasimham Committee on Financial Sector Reforms (1991), reviewed the structure, organisation, functions and procedures of the financial system.
- Interest rates on term loans and on the bulk of debt instruments in capital markets have been decontrolled, and deposit interest rates have been increased.
- Full statutory powers were given to the Securities and Exchange Board of India to regulate, promote and monitor Stock Exchanges in India.
- The private sector is now allowed to establish mutual funds.

The national government has been strongly influenced by the findings and recommendations of the Narasimham Committee on Financial Sector Reforms (1991), and by the securities scam. The government has recognised the sector as being over-regulated and under-governed. Also, the lack of transparency in accounting practices and non-application of international norms has meant that bank balance sheets have not accurately reflected underlying financial positions. In this situation, the quality of the advances portfolio has deteriorated and a culture of non-recovery has developed in many parts of the banking system. The government's aim is to restore the health and long-term viability of the system by 1998. A number of reform initiatives to cover bad debts and meet new capital adequacy norms were announced in 1994 and special arrangements are in train for the recovery of debt due to banks.

Capital markets

In addition to banking system reform, it was also necessary to reform the capital market, a need which had been evident for some time. While there has been impressive quantitative expansion, this has not been matched by qualitative improvements. Stock exchanges, for example, are characterised by long delays, lack of transparency in procedures, and vulnerability to price rigging and insider trading. To counter these problems the government moved to establish a Securities and Exchange Board of India in the 1987/88 Budget. It was first established as a non-statutory board, with the intention of giving it statutory powers, but this did not happen until January 1992.

Recommendations for reforms in the capital market were made by the Narasimham Committee (1991) and a series of initiatives were undertaken in 1991/92 and 1992/93 (India 1994a). The reforms are moving capital markets away from direct government control over volume and pricing of issues to a market-determined system regulated by an independent authority. The government has recognised that the process of reform in the capital market has only begun (India 1994a). Further reform is necessary to bring about speedier conclusions of transactions, greater transparency in operations, improved services to investors, and greater investor protection, while encouraging

the corporate sector to raise resources directly from the market at an increasing scale. Modernisation of the stock exchanges to bring them into line with world standards in terms of transparency and reliability is also necessary if foreign capital is to be attracted on any significant scale. A number of Indian companies have been successful recently in raising funds abroad through Euro-equity issues and foreign currency convertible issues.

Infrastructure sector reform

Physical infrastructure has been a high priority area in India's development strategies. Between 1984 and 1994 the infrastructure sector (power, transport, communications, irrigation and flood management, and water and sanitation) absorbed about 50 per cent of Plan resources (World Bank 1993). However, these expenditures have been thinly spread across a large number of programs and projects, and too little attention has been paid to the provision of services as opposed to provision of physical facilities. The prime consideration has been to provide basic services at the lowest possible charge, resulting in inappropriate pricing of public infrastructure services and little private sector participation. The outcome has been a pattern of growing supply-demand gaps, disappointing levels of efficiency and effectiveness, declining rates of cost recovery, and inadequate returns on investments. The infrastructure sector is now accepted as a priority focus for future reforms.

Transport

In transport, there was substantial reform by 1993 in three areas: domestic trucking, airline services and bus transport. Of these, only the airline services were consciously selected as a reform priority area since 1991.

Trucking in India has never been in the public domain, nor has it been subjected to tight government control. With growing demand for freight transport during the 1970s and 1980s, the railroads withdrew from haulage of privately owned goods in favour of haulage of public sector goods and passengers. In 1986, the central government removed the ceiling on national trucking permits and in one year the number of permits increased from 25,000 to 57,000 (World Bank 1993). Today there is no shortage of trucking capacity in India and services of various quality can be purchased by any user willing to pay. Deregulation and privatisation of trucking has shifted India from a rail-dominated freight market in the 1950s to a road-dominated market in the 1990s.

Pressure to introduce competition to Indian Airlines' control of domestic air travel resulted from poor service, financial deficits, declining traffic and redundant staff. After Indian Airlines' monopoly was removed in 1993, the largest privately owned airline in India has, in about one year, captured approximately 20 per cent of the

domestic intercity air travel market (World Bank 1993). A bill providing for repeal of the Air Corporations Act of 1953 was introduced into Parliament in 1994 and, if passed, will lead to more privatisation of domestic and international air services.

Pressure for reform in bus travel has come principally from financial problems, and there has been a steady shift towards privatisation of state bus monopolies. At the national level, public sector buses declined from 46 per cent of the national fleet in 1980/81 to 33 per cent in 1989/90 (World Bank 1993). Losses of state bus monopolies and services have been minimised by turning over the least profitable bus routes to the private sector which has managed to make a profit without fare increases.

Energy

About a third of total public investment resources are absorbed in developing indigenous energy resources, and almost 25 per cent of Public Investment Program funds are directed toward power. While energy is recognised to be critical to the success of macroeconomic reform, during the first two years of reforms, little attention has been paid to the development of this sector. Further, with energy demand outstripping supply, imports are expected to strain foreign exchange reserves, possibly slowing down overall economic development. The 1994/95 Budget recognised efficient and abundant infrastructure services to be a precondition for successful reform and for international competitiveness.

A Committee of the National Development Council is currently studying comprehensive reform of the power system, particularly the severe problems of the electric power sector (e.g. the viability of the state electricity boards). In the oil and gas sector, private investment is being encouraged in exploration, development, refining and marketing. For coal, modernisation is under consideration through revision of the policy framework for investment, pricing and distribution. New initiatives are under consideration for the telecommunications sector.

Irrigation

An infrastructural reform that has received little attention is the shift from public canal irrigation to private tube wells and low-lift pumps. Although portable motorised pumps were introduced in the 1950s, they did not become a prominent feature of irrigation in India for 30 years. By 1970/71, about 38 per cent of 31.1 million net irrigated hectares in India was from wells, most of which were motorised and privately owned. By 1984/85 the well share had risen to 48 per cent of the net irrigated area. The trend towards privatisation of irrigation was well advanced in the early 1980s as a result of irrigation technology allowing individual farmers and small farmer groups to pump water from the aquifer. On the deltas, farmers were also able to use portable low-lift pumps to raise water from drains and ponds to the fields.

According to the Eighth Plan document, there were 200,000 electric pumps in the country in 1950. By 1989/90 the number had grown to about 8 million. If the estimated 5 million diesel-driven pumps are added, the total number of irrigation pumps would be about 13 million for a national net irrigated land area of about 42 million hectares, or about one pump per 3 irrigated hectares. In light of these figures, what is usually termed 'minor' irrigation equipment becomes a major element of irrigation technology (see, India, 1992b: Chapters 3 and 8).

The shift from public to private irrigation technology in India is clear from the official statistics, but they tell only part of the story. Official estimates of irrigation command areas for large public canal schemes are invariably overstated while those for small-scale and private tube wells are usually under-reported. Furthermore, the productivity of well water is generally higher than that of canal water because farmers control quantities and timing. Finally, increasing conjunctive use of surface and ground water makes it difficult to separate out the effects of the two technologies and a major role of surface water in some areas is to recharge the aquifer for tube well use later in the year. As in the case of the shift in shares from rail to trucking technology, the shift in shares from public surface water technology to private ground water and low-lift technology has probably gone much further than the official statistics show.

Agricultural reform

The 1991/92 reforms reduced the share of international tradables subject to some form of quantitative restrictions from about 93 per cent at end of 1990 to about 75 per cent in May 1992. Almost all reform was in manufacturing, for which the share of value added subject to quantitative restrictions fell from 90 per cent to about 46 per cent. By contrast the change for agriculture and livestock subject to quantitative restrictions fell only from 94 to 93 per cent by May 1992.

All but a few agricultural imports and exports are subject to non-tariff controls including licensing, canalisation and minimum export prices. In imports, only pulses can be imported (and with a low import duty of 10 per cent).

Agriculture was not included in the trade liberalisation measures in 1991 and 1992 except for some export control relaxation. At the end of 1992, some 60 agricultural and livestock products were under an export control, as were about 46 manufactured products, mostly processed agricultural commodities. A further range of products was removed from the list in April 1993. Most products that are exported or have export potential, however, either remain on the restricted list or are subject to various other export controls, or were removed from the list but are now subject to *ad hoc* export controls announced in public notices.

The incentive structure has not changed much since 1991. The overall bias against agriculture is still in place. Measured manufacturing protection has fallen due to

- removal of quantitative restrictions on most intermediate and capital manufactured goods
- reduction in the maximum tariff in 1993
- the large number of non-traded manufactured goods resulting from continuing import bans or from redundant tariffs.

Despite this, the prices of manufactured goods have not risen as much as the devaluation. On the other hand, the domestic prices of wheat, rice and coarse grains have not risen by the full devaluation so agricultural prices have fallen relative to world prices.

The 1994/95 Budget does propose some significant reforms in the area of rural credit. The share capital of the apex body—the National Bank for Agricultural and Rural Development—is to be augmented to strengthen its leadership role. Also, measures are to be taken to strengthen the regional rural banks, improving flexibility and viability. Fifty of these banks are to be restructured initially so as to become models for the remainder. Moves are also to be made to strengthen the viability of rural credit cooperatives. On the front of agricultural exports, opportunities have opened up through the export processing zones and export-oriented units.

The response to reform

To date, the impact of the reforms has been encouraging. Fears of an expansionary wave of imports proved unfounded to mid-1993. Non-oil imports in 1992/93 were 15 per cent lower than in 1990/91, despite a rise of 5 per cent or more in GDP (India 1994a). Exports suffered a fall following the collapse of trading with the former USSR, but recovered by 1993, particularly within the General Currency Area.

The program of stabilisation and the economic reform measures helped restore economic growth to 4 per cent in 1992/93, brought down the rate of inflation to 7 per cent, restored the level of foreign currency reserves to US\$6.4 billion, and stimulated a strong recovery in exports towards the end of the 1993 financial year (Table 4). The most striking evidence of progress is in the external sector. In response to earlier changes in the exchange rate, the unification of the exchange rate system from March 1993, the liberalisation of trade policies and the strong fiscal deficit correction achieved in 1992 and 1993, export growth increased by 20 per cent in US dollar terms in the first nine months of fiscal year 1993/94, from negative growth in 1991/92 and weak growth of 3.8 per cent in the fiscal year 1992/93 (India 1994a and Table 5 below).

Table 4 Key indicators of reforms

	1990/91	1991/92	1992/93
GNP ('000 crore rupees) (at 1980/81 prices)	207.5 (4.7)	208.7 (0.6)	217.6 (4.3)
GDP ('000 crore rupees) (at 1980/81 prices)	211.3 (4.9)	213.6 (1.1)	222.1 (4.0)
Agricultural production (1969/70 = 100)	192.2 (3.0)	188.5 (-1.9)	195.8 (3.9)
Foodgrains production (million tonnes)	192.2 (3.2)	188.5 (-4.5)	195.8 (6.9)
Industrial production (1980/81 = 100)	212.6 (8.3)	212.5 (0.0)	216.3 (1.8)
Exports at current prices (US\$ million)	18,143 (9.2)	17,865 (-1.5)	18,537 (3.8)
Imports at current prices (US\$ million)	24,075 (13.5)	19,411 (-19.4)	21,882 (12.7)
Foreign currency assets (US\$ million)	2,236 (-33.6)	5,631 (151.8)	6,434 (14.3)
Exchange rate rupees/US\$)	17.94 [7.2]	24.65 [27.2]	28.96 [14.9]

Notes: GNP and GDP are at factor cost. Figures in parentheses are percentage changes over the previous year. Figures in brackets in the last row indicate the rate of depreciation of the rupee.

Source: India, 1994a, *Economic Survey, 1993*, Ministry of Finance, New Delhi.

Despite the earlier wide ranging liberalisation of import policy, imports declined by 1.3 per cent in US dollar terms in the first nine months of fiscal year 1993/94, partly because of the price-rationing effect of the unified, market-determined exchange rate system and also because of slow growth of production in organised manufacturing (Table 6).

The growth of private investment provides a better measure of the incentive effects of the new policies and has been fairly significant. Real private gross capital formation

increased by 15.1 per cent in the fiscal year 1992/93 after falling by 18.4 per cent in the previous fiscal year. A significant contributor to employment growth, the unregistered sector of manufacturing responded positively to the reforms. This sector had the fastest recovery, with growth rate climbing from -4.3 per cent in 1991/92 to 3.7 per cent in 1992/93. The consumer, basic and intermediate goods segment of the registered manufacturing sector had a growth rate of 4.6 per cent in the first nine months of fiscal year 1993/94, up from 1.9 per cent in 1992/93 (Table 7).

In industrial policy reform, delicensing is a major achievement. On the whole, the emphasis here has been on reducing reliance on physical controls and increasing the role of financial and fiscal incentives in promoting industrial development. Industrial policy reform in 1993 included

- removing licensing requirements in more industrial sectors
- reducing the areas reserved exclusively for the public sector
- relaxing the conditions of entry for large-scale units in export-oriented sectors (such as garments)
- raising the limit for consortium lending from 5 to 50 crore rupees
- lowering the minimum lending rate for the highest bracket to 15 per cent
- increasing the availability of bank credit for the commercial sector by lowering the statutory liquidity ratio and cash reserve ratio (India 1994a)

The general index of industrial production recorded a growth rate of 1.8 per cent during 1992/93 aided by growth of 1.5 per cent in mining and quarrying, 5 per cent in electricity and 1.2 per cent in manufacturing industries. Industrial production during the first nine months of fiscal year 1993/94 recorded a modest growth of 1.6 per cent. This growth rate resulted from a negative growth of 1.6 per cent in mining and quarrying, growth of 1 per cent in manufacturing and 6 per cent in electricity generation. Overall, it appears that the industrial sector has not yet responded vigorously to the reform measures.

A major setback took place in investment and capital goods production. The capital goods segment of manufacturing was recovering strongly in the first three quarters of 1992/93, but was derailed by the communal disturbances of December 1992–March 1993. For a number of reasons, the growth in this sector has remained weak and has pulled down overall industrial performance. The annual growth rate for capital goods was 8.5 per cent in the first three quarters of 1992/93, but fell to -17.8 per cent in the fourth quarter, and to -8.8 per cent in the first nine months of fiscal year 1993/94 (India 1994a). This in turn reduced the performance of the entire manufacturing sector

during the last four months of fiscal year 1992/93 and the first half of 1993/94. The response of the industrial sector to the liberalisation measures warrants urgent attention.

Table 5 Composition of India's exports (percentage shares)

	1991/92	1992/93
Agriculture and allied products	17.9	16.4
(of which)		
Tea	2.8	1.8
Tobacco	0.1	0.2
Oil meals	2.1	2.9
Sugar and molasses	0.4	0.2
Processed fruits and juices	0.2	0.2
Cotton	0.7	0.4
Ores and minerals	5.2	4.0
(of which)		
Coal	-	0.1
Manufactured goods	74.6	76.3
(of which)		
Leather	7.1	6.8
Gems and jewellery	15.3	16.5
Plastic products	0.6	0.8
Metals	2.7	3.2
Transport equipment	2.8	2.8
Iron and steel	0.8	1.6
Readymade garments	12.3	12.9
Handicrafts	4.7	4.6
Crude and petroleum products	2.3	2.6
Other and unclassified items	-	0.7
Total	100	100

Source: India, 1994b, *Handbook of Industrial Statistics, 1993*, Ministry of Industry, New Delhi.

In contrast, the performance of the agricultural sector (which has not been subject to direct reform measures) has been satisfactory with some gain in rice and wheat output and stability in most other farm products (India 1994a). The Ministry of Agriculture claims that there is a distinct possibility that foodgrain output in 1993/94 will equal or even surpass the record level of 180 million tonnes achieved in 1992/93

(*The Economic Times*, 18 February 1994). The ratio of the index of manufactured products as a per cent of the index of agricultural products remained at around 86 from August 1992 to December 1993.

In 1990/91, before the current reform phase, the government cleared 151 foreign investment proposals valued at over US\$5 million. In the following year, these figures had risen to 569 and US\$65 million. For 1992/93, there were 726 foreign investment proposals worth over US\$240 million. Of the total investment flow during the two years of reforms, around 90 per cent is going to the core sector: including 22 per cent to power, 19 per cent to fuels and oil refineries, 12 per cent to food processing industries, 7 per cent to chemicals, 7 per cent to electrical equipment and electronics and 6 per cent to metallurgy.

In the area of public sector enterprises

- The system of monitoring has been strengthened with Memorandums of Understanding—23 public sector enterprises signed up in 1991/92.
- Thirty-one companies were selected for disinvestment of shares, varying between 5 and 20 per cent of equity between December 1991 and February 1992 (8 very good, 12 good and 11 not so good). Shares were offered to selected financial institutions and mutual funds. Total shares disinvested in 1991/92 were 8 per cent of the total government share holding in the 31 public sector enterprises. Disinvestment is continuing.
- Ninety-one sick industrial companies were referred to the Board for Industrial and Financial Restructuring by December 1992. A further 71 companies were effectively registered (38 national and 33 state), with the aim of restructure or closure. This is being examined now with the National Renewal Fund.
- The 1991/92 national budget earmarked US\$67 million for the National Renewal Fund. The International Development Agency promised over US\$166 million during 1992/93 and the same amount in 1993/94. The National Renewal Fund is expected to provide assistance to firms undertaking modernisation and technological upgrading of existing capacities to cover the costs of retraining and redeployment of employees. The Fund would also provide compensation to employees affected by restructuring or closure of industrial units in both the private and public sectors. A social safety net would be provided for workers through allocating funds to finance employment generation schemes in the organised and unorganised sectors.

Table 6 Composition of India's imports (percentage shares)

	1991/92	1992/93
Food and allied products	2.2	3.2
(of which)		
Cereals	0.4	1.5
Pulses	0.5	0.5
Edible oils	0.6	0.6
Fuels	29.8	30.1
(of which)		
Coal	2.2	2.2
Petroleum, oil and LNG	27.6	27.9
Fertilisers	4.9	4.5
Paper board and newsprints	1.0	0.8
Capital goods	21.8	20.4
(of which)		
Transport equipment	1.9	2.1
Project goods	7.6	5.5
Others	23.6	24.1
(of which)		
Chemicals	7.8	7.4
Pearls and precious stones	10.1	11.1
Iron and steel	3.6	3.3
Professional instruments and optical goods	2.1	2.3
Unclassified items	16.6	17.0
Total	100.0	100.0

Note: LNG = liquid natural gas.

Source: India, 1994b, *Handbook of Industrial Statistics, 1993*, Ministry of Industry, New Delhi.

Sectoral performances and the overall macroeconomic situation raise several important questions concerning the liberalisation process. Why is the performance of the industrial sector, which should enjoy the benefits of the reform measures directly, poorer than the performance of the agricultural sector which, at best, has enjoyed only indirect gains from the reform process? What is the economic relationship between the agricultural sector and the industrial sector? What is the contribution of the industrial growth rate to the overall economic growth rate? Is the agricultural growth rate contributing more to economic growth rate than the industrial growth rate? Has

Table 7 Industrial sector growth rates (per cent)

	Weights	Fiscal year 1992/93	Fiscal year 1993/94 (April–December)
Basic goods	39.4	3.7	2.9
Capital goods	16.4	9.0	-8.8
Consumer goods	23.6	0.0	1.4
Durables	2.6	-3.8	14.3
Non-durables	21.0	0.8	-1.6
Intermediate goods	20.6	4.0	10.4

Source: India, 1994a, *Economic Survey, 1993*, Ministry of Finance, New Delhi.

the liberalisation process in India overlooked the necessity to maintain and nurture structural links between industry and agriculture, or is this not a priority?

To begin to address these questions, the remainder of this paper is structured as follows. The next section examines the economic relationship between industrial, agricultural and overall economic growth rates. The following section explores whether the Indian industrial sector has the potential to respond quickly to the post-July 1991 reform measures. A final section draws some conclusions from the analysis.

Models for Indian economic development: some perspectives

Comparisons between the Chinese and Indian experiences are inevitable. The success of economic reforms in facilitating higher real GDP growth has been impressive in China when compared with that of the East European countries (Garnaut 1991). The structural composition of the Chinese and Indian economies was similar before the reforms in both countries. However, during the first three years of the Chinese reform period (1979–81), the average annual growth rate of real GDP was about 6.4 per cent, compared with the first three fiscal years of the Indian reform period 1991/92 to 1993/94 when the corresponding growth rate was only 3.6 per cent, despite the fact that India had a well developed institutional framework to implement and enforce the reform measures. Although India was successful in achieving economic stabilisation within two years of the reforms, it still is not able to 'leap forward' within its structural adjustments programs to realise a higher growth rate. This suggests that it is necessary to identify the factors influencing the performance of different sectors and to analyse the effectiveness of reform measures in improving performance.

Although both India and China have adopted the incremental approach to reform (in contrast to the Eastern European approach), the sectoral emphasis has differed.

While China commenced reforming agricultural and light industries before heavy industry, India concentrated on heavy industry and to a lesser extent on light industry. Agriculture was not directly subject to reform measures. Are there any special reasons why India should choose industrial reform first rather than agriculture?

One view on this issue is that the initiative for agricultural reforms should originate from the states according to the provisions of the Indian Constitution. The provisions of the Constitution dealing with the assignment of functions to the central and state governments have three lists: the union list, the state list and the concurrent list. Agriculture appears in both the state and the concurrent lists, but not on the union list. Some of the reform measures initiated by the central government directed at trade, foreign exchange and the industrial sector certainly would produce some indirect effects on agriculture. For example, trade and exchange rate reforms have the potential to reduce the bias against agriculture, and future tariff reductions should further improve the terms of trade for agriculture. In the context of industrial reform, agriculture can also benefit greatly from more rapid development of food and agro-processing industries where there is enormous potential. Thus it can be argued that macroeconomic and industrial reforms will encourage an acceleration in agricultural production.

Increasing infrastructural facilities and services could also improve agricultural performance but this would require a shift in the allocation of public expenditure away from existing input subsidies, especially for water, electricity and fertilisers. In this context, the impetus for effective policies will need to come from the states, as they have greater responsibilities in these areas.

Another view holds that, compared to industrial reform, agricultural liberalisation and reform is more difficult precisely because it is primarily a state concern, and state-level action is more difficult to mobilise. Such a view is frequently reinforced by the argument that agriculture's performance has been relatively satisfactory so there is no urgent need for reform in the sector.

Finally, as discussed earlier, India shifted its development policy emphasis to industry from agriculture at an early stage after independence. This emphasis has persisted to the present and may also help to explain why an industry-first approach was chosen for reform. This could imply that there has been no shift in strategic thinking away from the sectoral priorities of the Mahalanobis model, and that the prevailing view may be that high GDP growth rates may be achieved by reversing the balance between public and private ownership, and opening up industry to foreign investment, international trade and competition, so that industry will perform as the leading sector. This view ignores the possibility of a leading role for the agricultural sector, and ignores the East Asian experience.

There are other reasons why the industrial sector has been the first priority in the reform process. First, reform should be undertaken in those areas where the fiscal damage due to the existing economic policies continues to be relatively severe. According to this argument, the industrial sector deserves more attention. Second, given the constitutional structure of India, it may be relatively easier to undertake reform in those areas where the central government has more responsibilities. Industries predominantly appear in the union list so by this argument too, industrial reform is assigned first priority.

It can be argued that the demand side stimulus from agriculture to industrial growth and vice-versa, and the supply side stimulus from agriculture to industrial growth should not be ignored. Empirical examination of these relationships in the Indian context has produced controversial results. Rangarajan (1982), using data from the period 1960–75, concluded that agriculture exerts a reasonably strong positive influence on industrial growth. His simulations showed that a one per cent growth rate in the agricultural sector could by itself generate a 0.5 per cent growth in the industrial sector. On the other hand, Ahluwalia (1985), using data from 1960–80, found that the contribution of agricultural growth to industrial growth was not significant. Although both used a more or less similar time period, they differed in their methodologies and conclusions. In the light of the above debate, further empirical study is necessary to test these growth link hypotheses in the Indian context, given that it has been shown that they played a crucial role in the early stages of growth of East Asian economies (Oshima 1987).

To contribute to the question of which sector should lead at this stage of India's economic development, these growth link hypotheses are tested below in the Indian context, using a methodology which differs from those used in Rangarajan (1982) and Ahluwalia (1985), and using data covering a longer period (1950–90).

Tests of relationships

The East Asian link hypothesis—that growth in the agricultural sector fuels growth of the industrial sector in the critical early stage of development—is tested here in the Indian context. The following model was estimated using Indian time series data at constant prices (1980/81) covering the period 1950/51 to 1990/91.

$$\text{Real GDP growth rate} = 1.8401 + 0.3983 \text{ AGR} + 0.1766 \text{ IGR} \quad (1)$$

$$(0.3096) \quad (0.0238) \quad (0.0483)$$

where AGR = agricultural growth rate

IGR = industrial growth rate.

In the above model, all the coefficients are significant at the 1 per cent level and serial correlation has been corrected using Cochran-Orcutt procedures. The result shows that the agricultural growth rate influenced the GDP growth rate more than the industrial growth rate. (The figures in parentheses are standard errors of the estimates.)

The next important test of the hypothesis is whether there is any unidirectional causality running from agricultural growth rate to industrial growth rate as in the case of the East Asian economies. The analysis of causality in econometrics is traditionally linked with the determination of predictability. A direct test for unidirectional causality in Granger's sense can be formulated using an autoregressive equation involving both the growth rates. Based on Granger's definition of causality, given two time series $x(t)$ and $y(t)$ and the hypothesis ' $x(t)$ causes $y(t)$ ', the tests reported in this paper can be symbolically described as

$$y(t) = f\{y(t-1), x(t-1)\} \quad (2)$$

and H_0 : the coefficients of x are jointly different from 0.

Empirical results indicate that different studies of the same relationship, using different methods of testing, often report conclusions which are not in conformity with one another (Hsiao 1979). Such conclusions suggest that different methods of causality testing should be applied to the same data set. Accordingly, besides the above one-sided distributed lag method implied by Granger, a two-sided distributed lag approach formulated by Sims (1972) is also used to examine causalities between the growth rates. For Sims' model, there exists a practical statistical test for a unidirectional causality by regressing y on past, current and future values of x . If causality runs from x to y only, then the coefficients of the future values of x in the regression should be insignificant as a group. The test is

$$y(t) = f\{x(t-1), x(t), x(t+1)\} \quad (3)$$

and H_0 : the coefficients of $x(t+1)$ jointly = 0.

The empirical evaluation of causality depends on certain data characteristics, in particular, on autocorrelation in time series, or the interdependency among individual observations which, when not accounted for, may complicate the causality test. (See Kalirajan and Shand 1992 for details of the methodology of causality testing.) Although sectoral growth rates are used to induce stationarity, it is still important to evaluate the autocorrelation properties of these series. The test results indicate no problems in

the series. Since the non-stationarity of time series may contribute to the problem of spurious regression, it can significantly alter tests of hypotheses concerning the causal relationships between the sectors (Engle and Granger 1987). The test statistics show that both the series exhibit stationary behaviour. The program MICROFIT provides all the above testing procedures and the causality regressions.

The results of both Granger's (1969) and Sims' (1972) tests indicate consistently that there is neither unidirectional causality running from agriculture to industry ($F = 0.98$ and $F = 0.41$) nor from industry to agriculture ($F = 0.93$ and $F = 0.58$).

From the above results, which are in conformity with the findings of Ahluwalia (1985), it may be concluded that the agricultural sector influences growth more than the industrial sector and that there is no significant link between the sectors. If we consider the current reform period in India as a new initial stage of growth and if India is to follow the East Asian model, policy needs to emphasise the creation of the growth link between agriculture and industry. This would mean that agricultural reform should also be given priority along with other sectoral reforms. In the absence of direct agricultural reforms, the effects of other sectoral reforms on growth may not be as anticipated. Further research and data are necessary in this direction.

A preliminary analysis of Chinese data (Kalirajan et al. 1994) indicates no causal relationship between agricultural and industrial growth rates during the pre-reform period. This characteristic of the Chinese economy in the pre-reform era reinforces the view expressed earlier that the structures of the Chinese and Indian economies were more or less similar. However during the post-reform period, the analysis shows a bi-directional positive causality between the agricultural growth rate and the industrial growth rate in China. The existence of such a relationship in the post-reform period indicates that China is trying to emulate, or is following, the earlier East Asian growth model.

There is a strong case for arguing that initiating reforms in the agricultural sector first has contributed significantly to establishing a bi-directional causality between agricultural sector and the industrial sector in China. In this connection it should be noted that China has been successful in creating and encouraging an intermediate sector—rural industry. It appears that the positive relationship between the agricultural and industrial sectors has been strengthened by the establishment of the rural industrial sector. Although it may be argued that India should follow the Chinese model to achieve higher growth rates, this argument is based purely on economic grounds, and neglects a highly important influence on the structure of the Indian economy—its political institutions. Further consideration of this aspect is given below in the conclusions.

Why is the performance of the industrial sector disappointing?

What factors are responsible for the continuing poor performance of the industrial sector? There are several ways to define production performance and accordingly many methods to measure the performance. Ahluwalia (1985) used total factor productivity measure as a tool to analyse the performance of the industrial sector. But, total factor productivity stems from the combined effects of both technical change (progress) and technical efficiency. Although the importance of technological change in bringing about improvement in productivity cannot be denied, the growth of productivity emanating from technological change is also determined by the way in which the chosen technology is used, which is otherwise known as technical efficiency. In the Indian context, the issue unquestionably is technical efficiency.

Examining the status of technical efficiency requires testing whether the industrial sector obtains the maximum possible (frontier) output from a given set of inputs and technology. This method is particularly useful in the case of developing countries because, if industries are not able to achieve the maximum possible output, scarce resources are being wasted.

The literature indicates that a firm obtains its frontier output by following the 'best practice' techniques of production, given the technology. In other words, frontier output is determined by the method of application of inputs, regardless of the levels of inputs. Empirical evidence shows that, with the same level of inputs, different levels of actual output are obtained by following different methods of application. This implies that different methods of applying various inputs will influence output differentially. This in turn means that diversity in individual decision making behaviour leads to variations in production response coefficients, including not only the intercept term as in the conventional frontier production function approach (Aigner et al. 1977), but also slope coefficients across units (Kalirajan and Shand 1994). As the methodology has been explained in detail in Kalirajan and Obwona (1994), only a brief discussion is given here. A general (Cobb-Douglas) formulation is used.

$$y_i = \sum b_{ij} x_{ij} + e_{ij} \quad \text{and } i = 1, 2, \dots, n \text{ (observations)} \quad (4)$$

where y_i is the logarithm of output of the i^{th} firm

x_{ij} is the logarithm of the j^{th} input used by the i^{th} firm (an intercept is included in this model by considering $j = 1$)

b_{i1} is the intercept of the i^{th} firm

b_{ij} , when $j \neq 1$, is the slope coefficient concerning the i^{th} input used by

the i^{th} firm

e is the statistical disturbance term.

The above model implies that production response coefficients are specific to each observation. Unfortunately, the above model cannot be estimated because the number of parameters to be estimated exceeds the number of observations. This necessitates imposing certain restrictions on the structure of the model. One method to reduce the number of parameters is to follow the analysis of variance approach which means imposing the following restrictions.

$$b_{ij} = \bar{b}_j + u_{ij} \quad \text{and} \quad j = 1, 2, \dots, m \quad (\text{intercept and inputs}) \quad (5)$$

where u_{ij} denotes cross-sectional variation of the production coefficients b_{ij} 's.

With the assumption that u_{ij} 's are random variables, equation (5) can be transformed into the random coefficients framework and following the estimation procedures suggested by Hsiao (1986) and Griffiths (1972), the individual response coefficients of the frontier function can be obtained.

$$b_j^* = \max_j \{b_{ij}\} \quad (6)$$

where $j = 1, 2, \dots, m$ (inputs)

$i = 1, 2, \dots, n$ (observations)

Now the maximum possible output a firm can obtain from its set of inputs is given by

$$y_j^* = \sum b_j^* x_{ij} \quad (7)$$

where $i = 1, 2, \dots, n$.

The ratio of the actual output observed to the concerned maximum possible output provides a measure of performance which is referred to in the literature as technical efficiency.

The program TETRAN was used to estimate technical efficiencies of 23 major industries using production data for the period 1988/89 given in the *Annual Survey of Industries* (Central Statistical Organisation 1989). The following Cobb-Douglas type of frontier function was estimated.

$$\log VA = -1.5011 + 0.3506 \log PC + 0.4825 \log W + 0.1803 \log TM \quad (8)$$

(0.3689) (0.1635) (0.2356) (0.0893)

where VA = value added
 PC = productive capital
 W = workers
 TM = technical/management.

Figures in parentheses are standard errors of estimates. All the coefficients are significant at the 5 per cent level and diagnostic tests showed no adverse effects of the chosen model.

Table 8 Industry-specific technical efficiencies, 1988-89 (per cent)

Electricity	29.31
Chemicals and chemical products	53.28
Basic metals	48.44
Food products	65.39
Rubber	85.14
Electrical machinery	58.16
Transport	33.78
Non-electrical machinery	45.69
Cotton textiles	39.05
Non-metallic minerals	36.13
Metal products	60.14
Paper	37.86
Woollen textiles	42.38
Beverages	82.39
Repair services	45.34
Textile products	87.62
Jute textiles	53.69
Other manufacturing industries	56.78
Leather	69.19
Wood	58.97
Water works	56.87
Cold Storage	30.94
Gas	62.15
Mean technical efficiency	57.38

Source: Authors' calculations.

Table 8 shows industry-specific technical efficiency for the period 1988/89. Mean technical efficiency was 0.5738 and there was a wide variation in technical efficiencies across industries. The rubber, beverages and textile products industries appear to be technically efficient. Electricity generation, cold storage and transport appear to be the most inefficient industries. These results corroborate a recent productivity trend of negative growth rates in 1992 and 1993 in these capital goods industries.

A limitation of this analysis is that it is done at an aggregated level. If individual firms within each industry were used, the results could be more effective. Nevertheless, the present results can be interpreted as the mean technical efficiency measures of the individual firms within each industry. It is imperative to identify the causes for the variations in technical efficiencies, so that industrial reform measures can be fine tuned to improve productivity in the industrial sector.

Which path for the future?

In attempting to accelerate the growth rate of India's economy, there are three paths: the first is to reform existing institutions, the second is to change priorities, and the third is to undertake both of these. In reviewing the steps taken by the Indian government from 1990/91 to 1994, it appears that the first path has been chosen—the assumption is that planning priorities are basically sound, and that sluggish past economic performance can be rectified by shifting from an autarchic or closed economy to an open and globalised economy, and by reducing and redirecting the role of the public sector in favour of the private sector, whilst retaining the concept of a mixed economy.

This appears to imply expectations that the transition to rapid growth will be achieved by the injection of foreign capital and modern technology, together with a predominantly market-driven approach which will raise the efficiency and productivity of firm performance to the level of international competitiveness. What is missing is any debate as to whether the relative sectoral emphasis of the past is optimal. Here, the main issue is whether the past emphasis on industry as the lead sector (rather than agriculture) needs to be reassessed. So far, over the first three years, reforms have been directed towards invigorating industry, with agriculture regarded as healthy and requiring no new higher priority.

The need to invigorate industry is undeniable. It has been shown to be inefficient, particularly in the public sector. There is little doubt that the private sector has been stifled by restrictions and regulations in the past, with its contribution to the overall growth of the economy well below potential. But a nagging question remains: Now that restrictions are being lifted, will the industrial sector emerge as the engine of fast

growth as supporters of the Mahalanobis approach have assumed since the Second Plan? East Asian experience suggests otherwise. China, for example, followed much the same path as India up to 1978. But from that point, China chose to stress agriculture and the rural sector (including rural industries) as the lead sector and has been successful in so doing. In India, there has been no such revision of policy despite a tendency in India to look towards East Asian experience.

Perhaps it is simply a matter of time. Initially, the problem should be to rid the economy of those elements which are a drag on it. This essentially means restructuring loss-making enterprises which are a fiscal burden and modernising industry to raise productivity and competitiveness. These problems are certainly concentrated in the industrial sector. But, beyond this, should there not be a debate on the longer term optimal strategy?

There may be some complacency about the agricultural sector. There is an historically familiar view that if it is performing satisfactorily, why give it extra priority? Some may even argue that agriculture has not been ignored in reform policies. Restrictions on agricultural exports have been removed. Encouragement is being given to exporting processed agricultural products, and expectations are high. Also, there is less indirect discrimination against agriculture than previously. The exchange rate has been adjusted, and the high levels of protection given to industry are being rapidly removed—a benefit to the agricultural sector. But the impression remains that reform policy has not yet focused on the role the agricultural sector could and should play in the achievement of improved economic performance.

The results of this study show first, that while the agricultural sector contributes more to economic growth than the industrial sector, there is no interrelationship between growth in the two sectors. Second, there are serious, if not unexpected, inefficiencies in the industrial sector. These may provide grounds for serious concern about the residual effects of past policy priorities on the capacity of the Indian economy to accelerate growth on a sustained basis, and in particular, without the underpinning of faster and more equitably spread growth in the agricultural/rural sector.

The success of economic reform in achieving improvements in productivity and growth depends not only on the appropriateness of economic policies, but also on the feasibility of implementing the chosen economic reform measures. Past experience in India has shown that reform measures should be implemented with minimum sociopolitical disturbance. In this context, the institutional structure of the government plays a major role. History indicates that initiating any change to replace the existing established socioeconomic system is a delicate process under a democratic framework. It is this valued institution of government which may hamper India if it chooses to

follows the East Asian model. In the short run, early and substantial implementation of direct agricultural reform measures in India runs the danger of adversely affecting small farmers, which in turn may lead to difficulties in implementing other reform measures and in maintaining overseas investor confidence. Reformist India is already evolving its own pattern in terms of the sequence and pace of reforms, and this may well become a unique paradigm. But it is yet to be demonstrated that high economic growth rates can be achieved and sustained without the creation of significant linkages between agriculture and industry. If such linkages are necessary, reform measures for agriculture will have to be given priority in the next few years.

Appendix I

Economic reforms: 1991 to 1994

Trade and exchange rate policy reform

1. The rupee exchange rate was adjusted downward by about 20 per cent in July 1991, and is now determined by market forces in foreign exchange markets. This has been successful in that the exchange rate has remained fairly stable and the premium on the illegal market has fallen from 25 per cent to about 8 per cent.
2. In March 1992, the Liberalised Exchange Rate Management Scheme was introduced. Under it, 40 per cent of foreign exchange earnings from goods and services must be surrendered at the official exchange rate. These earnings finance imports of essential items such as petroleum, fertilisers and life-saving drugs. The other 60 per cent could be sold in the market and finance all other imports. In the 1994/95 Budget speech, the Finance Minister further relaxed these rules. The dual market exchange rate was eliminated in favour of unification, so that all exporters as well as other foreign exchange earners can convert 100 per cent of their earnings at the market rate.
3. The import licensing system has been virtually abolished, apart from consumer goods. Almost all capital, intermediate, raw material and component goods are now freely importable, subject only to customs duties.
4. Customs duties have been progressively reduced in stages, with the maximum duty lowered to 125 per cent in July 1991, to 110 per cent in February 1992, to 85 per cent in February 1993 and to 65 per cent in February 1994. Duties on capital goods have been reduced to a range between 25 and 35 per cent for many categories, and even lower for export schemes and certain project imports.
5. The government dispensed with a number of export incentives including cash compensatory support for exports.
6. Imports of gold and silver were liberalised to reduce the incentive for smuggling.

The 1994/95 Budget moved on from the unified market-oriented exchange rate system to current account convertibility.

Industrial policy reforms

1. Abolition of industrial licensing for all new, expansion and diversification projects regardless of size except in 15 designated industries (Appendix II) and except

for projects within 25 kilometres of 23 large cities with populations of over one million. Licenses were not required within this radius if industries were designated non-polluting (e.g. electronics, computer software and printing) or where they were located in designated industrial areas. More flexibility was permitted in cities which were industrially depressed.

2. Capital goods imports for delicensed projects are automatically cleared if foreign exchange requirements are made available from foreign equity investment, or if the requirement is less than 25 per cent of the total value of plant and equipment, up to a maximum of US\$800,000.
3. All pre-entry clearance requirements in the Monopolies and Restrictive Trade Practices Act, which applied to large or dominant firms, were abolished, and the Act was restricted to focus on policing of monopolistic, restrictive or unfair trade practices as well as consumer protection.
4. Automatic approval was given for projects involving foreign equity investment up to 51 per cent in high-priority industries, provided the foreign exchange for imported capital goods is met from foreign equity and repatriation of profits is covered by export earnings.
5. Foreign technical collaboration is permitted in high priority industries up to a lump sum payment of US\$400,000, 5 per cent of domestic sales or 8 per cent of export sales, subject to an overall limit of 8 per cent on total sales in the 10 years after approval or seven years from the start of operations.
6. The requirement to enter into a Phased Manufacturing Program whereby producers were required progressively to indigenise production of parts and components over time, was eliminated for all new projects.
7. The mandatory convertibility clause in term loans from financial institutions (conversion of a portion of loan value into equity) was abolished for new projects.
8. The list of industries reserved for the public sector was reduced from 17 to 6 (Appendix III). Additionally, private sector participation is now allowed even in industries on the reserved list.

Foreign investment reforms

1. Foreign investment approvals up to 51 per cent of equity in a specified list of 34 priority enterprises was made automatic, subject only to registration with the Reserve Bank of India.

2. Investment of over 51 per cent equity was also approved on a case-by-case basis by the Foreign Investment Promotion Board which was made responsible for expeditious processing of government approvals.
3. The procedure for Indian companies to invest abroad and develop global linkages was simplified and streamlined.
4. The Foreign Exchange Regulation Act was amended to remove constraints previously applicable to firms with foreign equity operating in India and also to make it easier for Indian businesses to operate abroad.
5. India signed the Multilateral Investment Guarantee Agency (MIGA) Convention, becoming a member of MIGA along with many other developing countries keen to promote foreign investment.
6. In the 1994/95 Budget
 - foreign direct and portfolio investment policies have reduced reliance on foreign borrowing. Much of the direct investment has been in infrastructure, and the government is currently negotiating bilateral investment treaties with several major investor countries.
 - consequently, external debt is growing more slowly. Also the recent increase has been more than offset by the increase in foreign exchange reserves. The government will retire some of past high-cost debt, viz \$US1.4 billion to the International Monetary Fund due this year.
 - the retention allowance for exporters and other foreign exchange earners will be lifted from 15 per cent of foreign exchange receipts to 25 per cent; to 100 per cent for export-oriented units and units in export processing zones; and for units in technology parks, the retention allowance increases up to 50 per cent.

Public enterprise sector reforms

In the 24 July 1991 Industrial Policy Statement, the new Rao government announced major changes.

1. Priority areas for public enterprise sector development would be essential infrastructure, oil and mineral resource exploitation, technology and manufacturing development in key areas where private investment is inadequate, and strategic activities (defence).
2. The existing portfolio of public sector enterprises would be reviewed in light of new priorities on strategic areas, high technology and essential infrastructure.

3. The reserve list of public sector enterprise activities was reduced from 18 to 8 in 1991 and to 6 in March 1993. Those remaining include arms and defence, atomic energy, coal, petroleum, certain mining, and railway transport; those removed included iron and steel, heavy castings and forging, heavy electrical equipment, air transport, ship building, telecommunications equipment and electric power.
4. All loss-making public sector enterprises are to be referred to the Board for Industrial and Financial Reconstructions (BIFR), in keeping with the Goswami Committee's Report on Industrial Sickness and Corporate Restructuring, for restructuring or closure.
5. A social security scheme, the National Renewal Fund, will be created to protect workers affected by restructuring, retrenchment or closure.
6. Selected public sector enterprises, particularly those in competitive-market areas, will be fully or partially divested. Some public sector enterprise equity will be sold to mutual funds, financial institutions, the general public and workers.
7. The system of Memorandum of Understanding was introduced in 1988/89 on the recommendations of the Committee to Review the Policy for Public Enterprises, chaired by Dr Arjun Sengupta. The Memorandum of Understanding contains the details of the mission, objectives and annual targets set for an enterprise. Target achievement is based on a five-point rating ranging from excellent to poor.
8. Efficiency measures for existing public sector enterprises were also announced.
 - boards are to be given more powers and are to be staffed more by professionals
 - greater emphasis is to be placed on the Memorandum of Understanding to enhance managerial accountability and autonomy
 - Memorandums of Understanding between government and public sector enterprises are to be placed before Parliament.
9. Budgetary support as non-Plan loans to loss-making public sector enterprises are to be phased out after 1994/95.
10. Public sector equity is to be disinvested up to 49 per cent in selected profit-making enterprises for budgetary reasons, but also to broaden the base of ownership and to commercialise management.
11. Public sector enterprises can form joint ventures and raise fresh equity to finance expansion. Profitability will be allowed to expand.
12. The Sick Industrial Companies Act was introduced to bring public sector

undertakings under the jurisdiction of the Board for Industrial and Financial Reconstruction, which can decide if these units should restructure or close down.

13. To overcome losses from pricing decision inflexibility, many pricing decisions, especially for steel, petroleum and coal, are to be taken more flexibly, since it is recognised that survival, let alone prosperity, of units will depend on performance.

Tax reforms

Direct taxes

1. Reform was initiated in the 1992/93 Budget, with the maximum marginal rate of personal income tax reduced to 40 per cent, while removing certain exemptions.
2. Wealth tax was abolished on all productive (financial) assets, including shares, securities, bonds and bank deposits. Wealth tax will be levied on non-productive assets at one per cent, but with a rise in the tax exemption limit.
3. A system of presumptive tax was introduced for small traders and retailers on an optional basis as a beginning to the process of broadening the tax base.

Indirect taxes

4. The measures introduced for indirect taxes were a first step towards promoting competitiveness in Indian industry through a major thrust to reduce the high cost of imported inputs and to moderate the excessive protection for domestic industry.
5. The level of import duties was lowered to that of similar developing countries. Reference has already been made to reductions in maximum tariff levels. To reduce the cost of new investment, the duty on project imports was reduced from a maximum of 80 per cent to 35 per cent. It was reduced to 30 per cent for capital goods for coal mining, power projects and petroleum refining.
6. A process of simplification of excise duties was commenced in the 1993/94 Budget, with a moderation of the high duty rates on some commodities and some reduction in the scope of exemptions. There is recognition that the structure should be progressively converted to a value added tax, however, excise taxation is an area needing more attention, which it was given in the 1994/5 Budget.
7. In relation to tax administration, a National Court of Direct Taxes was proposed to ensure litigation in direct tax matters is settled expeditiously. This and other measures are designed to improve tax compliance and simplify administration.

Future tax reforms

The 1994/95 Budget proposes to accelerate the reform and modernisation of the tax system started two years ago.

Indirect taxes

- simplify the structure and move towards moderate tax rates
- further reduce the peak rates of customs duty
- substantially reduce duties on key raw materials
- reduce customs duties on capital goods to boost investment, with
- other incentives to help domestic capital goods industry
- reduce or remove anomalies caused by import duties on raw materials and components being higher than on finished products
- unify rates on similar products
- prune notifications, including end use exemptions to about half the present number, thus reducing discretionary power and possibilities for disputes.

Encourage greater availability of capital goods by

- further reducing the basic customs duty on project imports and general capital goods from 35 per cent to 25 per cent
- reducing import duty on parts (as original or as spares) from 25–85 per cent to 25 per cent and continuing fertiliser projects and power projects at nil and 20 per cent
- applying a countervailing duty on imports of capital goods equal to the domestic excise duty on domestic capital goods
- extending the benefit of MODVAT (modified value added tax) to capital goods so full credit of excise duty paid on domestic capital goods or countervailing duty paid on imported capital goods will be available at one time
- reducing the varying rates of 40 per cent, 60 per cent and 80 per cent on machine tools to between 35 per cent or 45 per cent only
- reducing the customs duty on steel from 75–85 per cent to 50 per cent, as it is a key component of imported capital goods

- reducing duties on all ores and concentrates to 10 per cent for domestic metal producers, and for the secondary steel sector, from 12.5 per cent to 10 per cent on melting scrap, and on iron ore pellets from 15 to 10 per cent
- for the leather industry, reducing rates on machinery and raw materials from 25 to 50 per cent down to a uniform 20 per cent without countervailing duty
- for electronics and telecommunications, reducing computer parts from 80 to 50 per cent; on application software from 85 to 20 per cent; for non-electronic parts for telecommunications, from 50 to 40 per cent and on optical fibre from 85 to 40 per cent
- on domestic machinery, reducing duties from 50 to 25 per cent; and on certain components from 70 to 50 per cent to 25 and 20 per cent
- reducing medical equipment to 15 per cent if specified, with other rates varying
- supplying coal and crude petroleum at 35 per cent as against 1,500 rupees per metric tonne and 85 per cent respectively; coke from 85 to 25 per cent; LPG and other petroleum gases at 15 per cent
- reducing chemicals at peak rate from 85 to 65 per cent for finished and 15 per cent for basic feedstocks
- reducing pharmaceuticals from 85 to 50 per cent to 50 per cent or 25 per cent
- ensuring against dumping at artificially low prices.

Central excise

Major reforms comprising

- extension of MODVAT to capital goods and petroleum products
- shift in bulk of excise taxation from specific to *ad valorem* rates to build in greater buoyancy of revenues
- reduce total number of *ad valorem* taxes to about half
- introduce low rates where unduly high
- apply uniform rates for similar products where possible
- remove the complicated price list procedure
- reduce the number of special exemptions by about half

Items of special interest

- in 1988, items left out of MODVAT included petroleum products, textiles, matches, tobacco products and capital goods. Now MODVAT is extended to capital goods and petroleum products and specific duties on the latter are changed to *ad valorem* taxes (10 per cent) except motor spirits (20 per cent)
- cotton: now changed to *ad valorem* of 5,10 and 20 per cent
- fibres and yarns: changed to a uniform duty of 20 per cent (5 per cent only for cotton yarn)
- metals: 15 per cent on all except aluminium (20 per cent rather than 25 per cent)
- on a variety of other products, uniform rates rather than variable rates; some reductions where too high, e.g. cosmetics and personal care products
- remove the registration requirement for exemptions for smallscale units or concessions
- the service sector was previously exempted, but the Chelliah Committee disagreed, so 5 per cent is to be charged on telephone bills, on net premium charged by insurance companies, and on brokerage of stock brokers.

Direct taxes

The basic philosophy is to move to a simpler system with moderate rates, and greater reliance on broadening the base and better tax administration.

- raise the exemption limit to 35,000 rupees (no tax for salary or wage earner of 50,000 rupees)
- adjust tax brackets
 - 1st from 30,000 to 50,000 rupees at 20 per cent now to 35,000 to 60,000 rupees at 20 per cent
 - 2nd from 50,000 to 100,000 rupees at 30 per cent; now to 60,000 to 120,000 rupees at 30 per cent
 - maximum above 100,000 rupees at 40 per cent; now 120,000 at 40 per cent
- eliminate surcharge of 12 per cent on non-corporate income
- companies were at 45 per cent if widely held, 50 per cent if other.; now a single rate of 40 per cent
- tax on companies incorporated abroad and earning in India at 65 per cent;

now 55 per cent

- reduce the capital gains tax on domestic companies to 30 per cent from 40 per cent to assist restructuring by divestment of dormant assets or to benefit from potential value
- rationalise the taxes of investment on non-residents depending on the tax status; now a uniform 20 per cent on all non-resident companies and individuals
- resident status for non-resident Indians raised from 149 to 181 days for non-loss of status
- assistance on loans for students from financial institutions
- assistance on investment in pension funds if self-employed, e.g. with Unit Trust of India
- deductions for contributions to a National Laboratory; now to all universities, Indian Institute of Technology and some departments
- tax relief for truck owners based on size and turnover
- 5-year tax holiday for new industrial investments in specified states extended to backward districts in other states, will later apply to large scale investments in backward states
- exemption for exports of computer software profits for one more year
- for tourists, expenditure tax in hotels to be reduced from 20 to 10 per cent
- high exemption for gift tax on marriage.

The central and state governments will suffer a net loss in net direct taxes but simplification and rationalisation will help to compensate. Also, with tightening up, evasion will be lower.

The tax structure is now seen to have moved a long way towards modernisation, with moderate rates and compliance. It is expected to give a strong stimulus to new investments, economic revival and international competitiveness. The medium-term objectives of the Chelliah Report are now seen to be clearly within reach.

Finance sector reforms

Banking system reforms

1. New accounting and prudential norms related to income recognition, provisioning and capital adequacy in line with international standards, were

implemented during 1992/93. These will ensure the books reflect their true financial position, a pre-requisite for effective monitoring and improving performance.

2. The proportion of bank funds pre-empted through the SLR (statutory liquidity ratio) has begun to be reduced. There will continue to be an average statutory liquidity ratio of 25 per cent over the next 3 years greatly increasing the volume of bank funds available for trade, agriculture and industry.

3. Implementation of the new norms will mean considerable impairment of capital in some of the nationalised banks and these will have to be recapitalised. Funds were being made available in the 1993/94 Budget. Management systems are being revamped to avoid recurrence.

4. To minimise the burden of recapitalising on the Budget, the State Bank of India and the healthy nationalised banks will use the capital markets to mobilise equity funds from the public. The government will retain 51 per cent equity and remain in control.

5. Existing private banks can expand and new private sector banks can be established.

6. The supervisory system of the Reserve Bank of India is being strengthened with a new board for Financial Bank Supervision within the Reserve Bank of India.

7. The regulated interest rate structure is being rationalised and simplified. Bank deposits have been deregulated subject to a ceiling rate. The number of lending rates has been reduced from 6 to 3 of which 2 are concessional and there is a floor rate for all advances over 200,000 rupees.

8. The government has also increased the interest rates offered on its own market borrowing to levels closer to market rates. This will reduce the burden on banks and smooth the transition to creating an active market for government debt, which is essential.

Capital markets

Over recent years, a number of steps have been taken to improve the functioning of the capital markets.

10. The Securities Exchange Board of India (SEBI) prepared rules and regulations for the stock market and intermediaries operating within it to improve trading practices, rules for disclosure etc.

- private mutual funds can operate subject to SEBI rules

- a National Stock Exchange is being set up as a model exchange providing nationwide screen-based trading and electronic clearing and settlement systems
11. Foreign institutional investors, such as pension funds, mutual funds etc. can invest in the capital markets, subject to SEBI regulations (India 1994a). Steps were taken in 1991/92 and 1992/93 by the government and the SEBI to introduce improved practices and greater transparency in capital markets in the interests of capital market development.
- The SEBI was authorised to conduct inspections of various mutual funds with corrective steps to be taken wherever remedial action is required.
 - The SEBI has a program to inspect stock exchanges.
 - The process of registration of intermediaries (stockbrokers and brokers) has been provided under the Securities and Exchange Board of India Act, 1992.
 - Companies issuing capital in the primary market are now required to disclose all material facts and specific risk factors associated with their projects.
 - Merchant banking has been brought under the regulatory framework of the SEBI. Merchant bankers must now be authorised by the SEBI, and will have to adhere to stipulated capital norms.
12. The government has given formal approval to the establishment of the National Stock Exchange of India (NESI) by financial institutions and banks, with the Industrial Development Bank of India as the nodal agency. The NSEI is expected to serve as a model exchange, integrating the stock markets across the country by providing nationwide stock trading facilities and electronic clearing and settlements.
13. In matters relating to the public issue of capital, the SEBI has advised stock exchanges to collect, from companies making public issues, a deposit of one per cent of the issue amount which could be forfeited in case of non-compliance with the provisions of the listing agreement and non-dispatch of refund orders and share certificates by registered post within the prescribed time.
14. Regulations on insider trading under the provisions of the Securities Exchange Board of India Act have been notified.
15. The Reserve Bank of India has liberalised the investment norms involved for non-resident Indians by allowing companies to accept capital contributions and issue shares or debentures to non-resident Indians or overseas corporate bodies, without prior permission.
16. The government has allowed foreign institutional investors such as pension funds, mutual funds, investment trusts, asset or portfolio management companies

etc. to invest in the Indian capital market provided they register with the SEBI.

17. The SEBI has issued guidelines for its composition in order to make the governing body of a stock exchange more broad based.
18. Trading in stock exchanges is now for three hours instead of two and a half hours.
19. The SEBI has set up an advisory committee for primary and secondary capital markets to provide wider consultation with the investors.
20. The Capital Issues (Control) Act was repealed in 1992 and the Office of Capital Issues was abolished as companies no longer needed permission to approach and access the capital market. Indian companies can access international capital markets through Euro-equity issues to mobilise capital for modernisation and improvements. Several companies have taken advantage of this new access to capital.

The 1994/95 Budget aims to consolidate and deepen progress made in restoring health to the banking system.

Banking

- Restructure the banking system for full financial viability by providing additional capital to nationalised banks and by allowing these banks access to capital markets (as with State Bank of India). The government is also providing another sum as government bonds.
- The Reserve Bank of India is setting up a Board for Financial Supervision for banks and other financial institutions.
- For rural credit see agricultural financing.

Capital markets (to be efficient and viable under the SEBI)

- Funds mobilised in the capital market with public and rights issues have expanded after the securities scam was cleaned up.
- A number of firms have raised funds abroad through Euro-equity issues and Foreign Currency Convertible Bond Issues.
- A model Stock Exchange with screen-based trading will begin by the middle of the year. Also a depository system of scriptless trading is an objective.
- Additional powers are to be given to the SEBI.
- A sum is being allocated for concessions to farmers on decontrolled fertilisers.

Insurance

- An objective is to implement the recent Malhotra Report to deregulate the insurance sector, to operate efficiently and more competitively under an independent regulatory authority.

Infrastructure sector reforms

The 1994/95 Budget directly addresses the question of reforms for infrastructure. Abundant and efficient services are seen a necessary precondition for success of other reforms and international competitiveness. Electric power is recognised as having severe problems.

- State electricity boards are slated for major changes in operations, tariffs, restructuring of responsibilities for generation, transmission and distribution. The Committee of the National Development Council is looking at such reform and hard decisions must be made.
- Oil and gas now have private investment in exploration, development, refining and marketing. This is to be intensified and deepened.
- In coal, the government is reviewing the policy framework for investment, pricing and distribution.
- In telecommunications, new initiatives are under consideration.

Reforms to agricultural financing

The 1994/95 Budget introduced some direct reforms affecting the agricultural sector, notably for the improvement of credit supply. The objective is to provide adequate rural credit in the long term.

- The National Bank for Agriculture and Rural Development (NABARD), is being given 100 crore rupees to augment share capital and the Reserve Bank of India will be given the same sum.
- Regional rural banks mostly show losses, equity and reserves have been wiped out and in some cases losses are eating into deposits. Fifty of the 196 banks are to be restructured, balance sheets cleaned up, and fresh capital is to be infused. This experience will be used to guide restructuring of the rest after 1994/95.
- The cooperative credit structure will be strengthened by expansion of lending, but organisational and structural changes will be introduced to ensure viability.

- Memorandums of Understanding between NABARD and State and District Cooperative Banks will implement State-specific action to revamp the cooperative system.

Other reforms include removal of restrictions on domestic movements of grains to achieve a unified national market. Producers will become increasingly free to export.

Appendix II

List of industries requiring industrial licensing

1. Coal and lignite.
2. Petroleum (other than crude) and its distillation products.
3. Distillation and brewing of alcoholic drinks.
4. Sugar.
5. Animal fats and oils.
6. Cigars and cigarettes of tobacco and manufactured tobacco substitutes.
7. Asbestos and asbestos-based products.
8. Plywood, decorative veneers, and other wood based products such as particle board, medium density fibre board, block board.
9. Raw hides and skins, leather and patent leather.
10. Tanned or dressed fur skins and chamois leather (removed from this list in early 1993).
11. Motor cars (removed from this list in early 1993).
12. Paper and newsprint except bagasse-based units.
13. Electronic aerospace and defence equipment of all types.
14. Industrial explosives, including detonating fuses, safety fuses, gun powder, nitrocellulose and matches.
15. Hazardous chemicals.
16. Drugs and pharmaceuticals (according to Drug Policy).
17. Entertainment electronics (VCRs, colour TVs, CD players, tape recorders).

18. White goods (domestic refrigerators, domestic dishwashing machines, programmable domestic washing machines, microwave ovens, airconditioners) (removed from this list in early 1993).

Note: The compulsory licensing provisions would not apply to the smallscale units taking up the manufacture of any of the above items reserved for exclusive manufacture in the smallscale sector. Only 15 industries are now under compulsory licensing.

Appendix III

Proposed list of industries to be reserved for the public sector

1. Arms and ammunition and allied items of defence equipment, defence aircraft and warships.
2. Atomic energy.
3. Coal and lignite.
4. Mineral oils.
5. Minerals specified in the Schedule to the Atomic Energy (Control of Production and Use) Order, 1953.
6. Railway transport.
7. Mining of iron ore, manganese ore, chrome ore, gypsum, sulphur, gold and diamond. (Dereserved in March 1993).
8. Mining of copper, lead, zinc, tin, molybdenum and wolfram.

References

- Ahluwalia, I.J., 1985. *Industrial Growth in India*, Oxford University Press, New Delhi.
- Aigner, D.J., Lovell, C.A.K. and Schmidt, P., 1977. 'Formulation and estimation of stochastic frontier production function models', *Journal of Econometrics*, 6:21-37.
- Bhagwati, Jagdish, 1993. *India in Transition: freeing the economy*, Clarendon Press, Oxford.
- and Srinivasan, T.N., 1993. India's economic reforms, Paper prepared for the Ministry of Finance, Government of India, New Delhi.
- Central Statistical Organisation, 1989. *Annual Survey of Industries 1988-89*, 15 Volumes, Ministry of Planning, Government of India, Calcutta.
- , 1991. *National Accounts 1991*, Government of India, New Delhi.
- Engle, R.F. and Granger, C.W.J., 1987. 'Cointegration and error correction representation, estimation, and testing', *Econometrica*, 55:251-76.
- Garnaut, R.G., 1991. Economic reform and industrialisation: China's experience in the international context, Paper presented at the 19th Pacific Trade and Development Conference, Beijing, 27-30 May.
- Ghosh, A., 1972. *Indian Economy: its nature and problems*, World Press, New Delhi.
- Granger, C.W.J., 1969. 'Investigating causal relations by econometric models and cross-spectral methods', *Econometrica*, 37:424-38.
- Griffiths, W.E., 1972. 'Estimation of actual response coefficients in the Hildreth-Houck random coefficient model', *Journal of the American Statistical Association*, 67:633-5.
- Gulati, A. and Pursell, G., 1993. Trade policy, incentives and resource allocation in Indian agriculture, World Bank, Washington, DC (mimeo).
- Hsiao, C., 1979. 'Causality test in econometrics', *Journal of Economic Dynamics and Control*, 1:321-46.
- 1986. *Analysis of Panel Data*, Cambridge University Press, Cambridge.
- India, Government of, various issues. *Economic Survey*, Ministry of Finance, New Delhi.
- , 1956. *Second Five Year Plan*, Planning Commission, New Delhi.
- , 1988. *Seventh Five Year Plan*, Planning Commission, New Delhi.
- , 1991a. *Interim Report of the Tax Reforms Committee*, (Raja J. Chelliah, Chairman), Ministry of Finance, New Delhi

- , 1991b. *Statement of Industrial Policy*, Ministry of Commerce and Industry, New Delhi
- , 1992a. *Final Report of the Tax Reforms Committee*, (Raja J. Chelliah, Chairman), Parts I and II, Ministry of Finance, New Delhi.
- , 1992b. *India: Eighth Five Year Plan 1992–97*, Volumes I and II, Planning Commission, New Delhi.
- , 1993a. *Agricultural Statistics at a Glance*, Ministry of Agriculture, New Delhi.
- , 1993b. *Economic Reforms: two years after and the task ahead*, Discussion Paper, Ministry of Finance, New Delhi.
- , 1994a. *Economic Survey—1993*, Ministry of Finance, New Delhi.
- , 1994b. *Handbook of Industrial Statistics*, Ministry of Industry, New Delhi.
- Jalan, B. (ed.), 1992. *The Indian Economy: problems and prospects*, Viking, New Delhi.
- Kalirajan, K.P. and Obwona, M.B., 1994. 'Frontier production function: the stochastic coefficients approach', *Oxford Bulletin of Economics and Statistics*, 56:87–96.
- and Shand, R.T., 1992. 'Causality between technical and allocative efficiencies: an empirical testing', *Journal of Economic Studies*, 19(2):3–17.
- and Shand, R.T., 1994. 'On estimating technical efficiency with non-neutral shift of the frontier', *Journal of Applied Statistics*, 21.
- , Shand, R.T. and Huang, Yiping, 1994. A comparison of intersectoral linkages in the development process of China and India, The Australian National University, Canberra (mimeo).
- Mahalanobis, P.C., 1955. 'The approach of operational research to planning in India', *Sankhya: The Indian Journal of Statistics*, 16: Parts 1 and 2.
- Malenbaum, W., 1971. *Modern India's Economy*, Charles E. Merrill Publishing Company, Cincinnati.
- Narasimham Committee, 1991. *Report on the Financial System*, Standard Book Company, New Delhi.
- Oshima, H.T., 1987. *Economic Growth in Monsoon Asia: a comparative survey*, University of Tokyo Press, Tokyo.
- Rangarajan, C., 1982. *Agricultural Growth and Industrial Performance in India*, Research Report 33, International Food Policy Research Institute, Washington, DC.

- Sims, C.A., 1972. 'Money, income and causality', *American Economic Review*, 62:540-52.
- Tyagi, D.S, 1990. *Managing India's Food Economy: problems and alternatives*, Sage Publications, New Delhi.
- World Bank, 1989. *India: an industrializing economy in transition*, Country Study, World Bank, Washington, DC.
- , 1991. *India: Country Economic Memorandum. Volume 1: Policies for Adjustment with Growth*, Report No. 9412-IN, World Bank, Washington, DC.
- , 1993. *India: progress and challenges in economic transition*, Report No. 11761-IN, World Bank, Washington, DC.



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