

On Economic Growth and Domestic Saving in India

Tarlok Singh

Introduction

Economic growth in India has been stimulated by the onset of mild economic reforms since the 1980s, and comprehensive reforms, with a paradigm shift in the stance of macroeconomic policies, since the beginning of the 1990s. The pre-reform economy has been characterised by low growth for a prolonged period until the 1970s. The numerically large shares and implied heavy dominance of agriculture and industry in aggregate output have been the major sources of regular disruptions to economic growth and time-inconsistencies in the savings plans of households, until services accelerated as a sector providing resilience, smoothing the amplitudes of economic fluctuations and virtually controlling the growth impulse of the economy since the 1990s. The growth of the agriculture and services sectors had been quite costly in terms of resources in the initial stages of development in India in the 1950s and the 1960s, since these sectors absorbed disproportionately large chunks of scarce capital. This study examines economic growth and domestic saving in India, and draws some policy lessons for a similar set of developing economies. The analysis is carried out using data taken from various issues of the Reserve Bank of India publication, *Handbook of Statistics on the Indian Economy*, and the Central Statistical Organisation publication, *National Accounts Statistics*.



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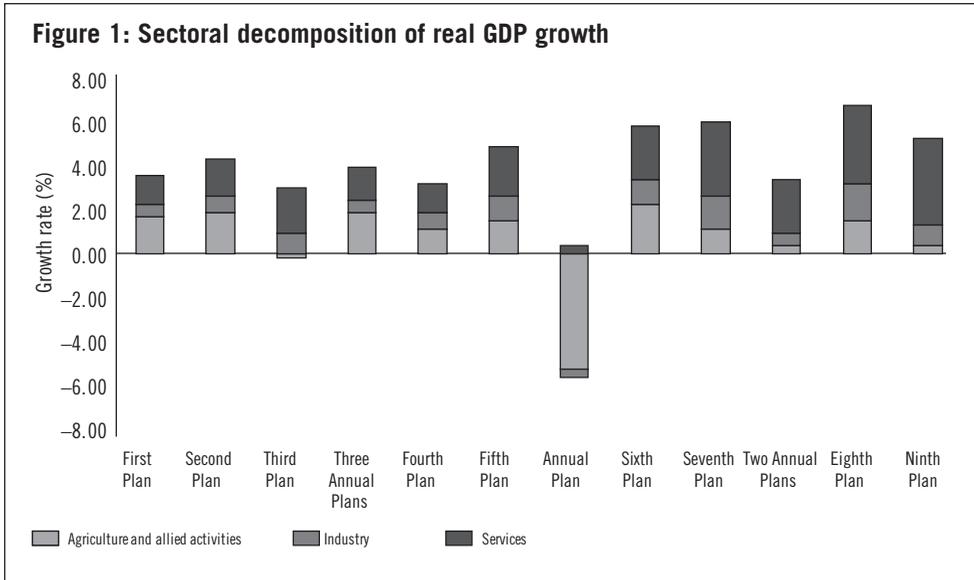
The study is organised as follows. The first section discusses economic growth in India and the terms of trade between the main sectors in the economy. After that, it assesses the strategies that have been used to induce the acceleration of savings and the accumulation of capital. Next, it examines the market distortions that tend to impinge on productivity and economic growth. Finally, it sums up the conclusions emerging from the study.

Economic growth and terms of trade

Economic growth

The Indian economy had been characterised by an odyssey of low growth for a prolonged period until the 1970s. This was also a period of a heavy reliance on state planning rather than liberalised markets as a means of promoting economic development. The heavy emphasis on the development of agriculture, which was the main characteristic of the First Five Year Plan (1951–56), was followed by the adoption of Mahalanobis' model and implied heavy emphasis on industrialisation in the Second Five Year Plan. Mahalanobis' model of economic development was to push for industrialisation in heavy industries as a precursor to a later emphasis on the production of consumer goods.

There was a reversal of emphasis back towards agriculture again in the Third and Fourth Five Year Plans. This, together with the onset of the 'Green Revolution', which raised agricultural productivity, from the mid-1960s, provided both supply-side and demand-driven impacts on growth. This was aided by the effects of the devaluation of currency in June 1966. The Green Revolution phase continued to drive the growth of agriculture until the mid-1970s. The positive effects of these policy parameters and economic efforts were, however, often negated by the adverse effects of stochastic weather shocks, forcing a mean-reverting tendency in economic growth for a prolonged period (Figure 1). The onset of gradual economic reforms from the 1980s provided some fillip to growth, and the momentum was carried forward through the adoption of a comprehensive structural adjustment programme from the beginning of the 1990s (July 1991 onwards). The process of economic growth proposed by many growth theorists is postulated to involve a monotonically decreasing share of agriculture and an increasing share of services in aggregate output (Kuznets

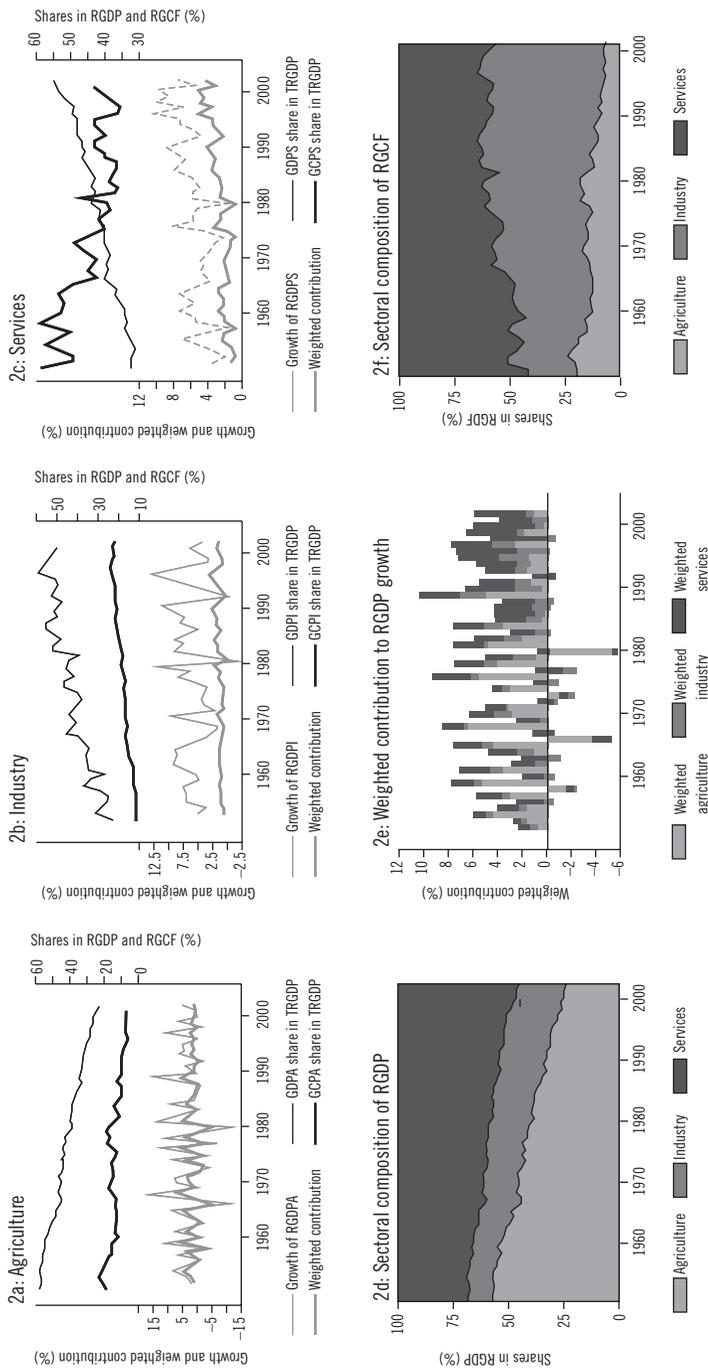


1966; Rostow 1971; Chenery & Syrquin 1975; Chenery 1979; Baumol *et al.* 1989; Echevarria 1997). Indeed, the sectoral substitution and structural transformation of the Indian economy embodied in the process of growth led to the theoretically predicted declines in the share of agriculture, and increases in the shares of industry and services in aggregate output (Figure 2d).

A sectoral decomposition of real GDP growth suggests that both agriculture and industry played dominant roles in determining the growth trajectory by virtue of their numerically dominant shares in aggregate output until the 1980s (Figures 1 and 2).¹ The vacillations in the growth of agriculture arising from exogenous weather shocks have been the major sources of non-linear disruptions in output and economic growth. The

1 The sectoral decomposition of real GDP growth is computed as the weighted sum of the growth coming from the constituent (agriculture, industry and services) sectors: $GDP(t) = [\omega_A(t-1) \times \dot{A}(t)] + [\omega_I(t-1) \times \dot{I}(t)] + [\omega_S(t-1) \times \dot{S}(t)]$; where $A(t)$ denotes agriculture, $I(t)$ industry and $S(t)$ services. The lagged weight of the i th sector in real GDP $\omega_i(t-1) \in \{0,1\}$ is computed as: $\omega_A(t-1) = \{A(t-1) / GDP(t-1)\}$, $\omega_I(t-1) = \{I(t-1) / GDP(t-1)\}$, and $\omega_S(t-1) = \{S(t-1) / GDP(t-1)\}$. The agriculture, industry and services sectors are defined, throughout the study, as follows: (1) agriculture sector includes agriculture and allied activities (forestry, logging and fishing); (2) industry comprises (i) manufacturing, (ii) mining and quarrying, and (iii) electricity, gas and water supply; (3) the services sector consists of (i) trade, hotels and restaurants, (ii) transport, storage and communication, (iii) financing, insurance, real estate and business services, (iv) community, social and personal services, and (v) construction.

Figure 2: Sectoral composition of growth and capital formation



adverse weather shocks frequently impacted agriculture and, contagiously, the industry and services sectors, given the theoretically postulated and empirically observed close linkages between these sectors particularly in the initial stages of development. The influence of weather shocks tended to decline over time with the diminishing dependence on agriculture and the increasing contribution of services to aggregate output, as embodied in the process of structural transformation of the economy. The services sector has recently emerged as the dominant sector, contributing more than half of the GDP in India and virtually dominating the impulse behind the growth of the economy. Since service industries are commonly viewed as more stable, compared to agriculture and industry, the transition from agriculture-biased growth to services-biased growth, since the 1990s, has reduced the vulnerability of economic growth to the vagaries of weather. The increased dominance of services has strengthened the resilience of the economy to stochastic weather shocks in agriculture, and helped smooth the amplitudes of fluctuations in aggregate output and economic growth.

The growth of the agriculture and services sectors was quite costly in terms of resources in the initial stages of development in the 1950s and the 1960s, in that these sectors absorbed disproportionately large chunks of scarce capital compared to industry (Figures 2a and 2c). Then the economy witnessed a steady diversion of resources from agriculture, and more particularly from services, to industry. The shares of agriculture and services in gross capital formation (GCF) declined over time with commensurate increases in the share of industry in GCF (Figure 2b). The deceleration in the proportion of GCF absorbed in services, in conjunction with the increased contribution of services to economic growth, points towards the improvements in productivity in the services sector. The development of the information technology subsector seems to have served as an added stimulus and contributed to the surge in services sector productivity since the mid-1990s. Given the theoretically postulated diminishing returns to the increasing use of capital on fixed (land) resources, and the vulnerability of agriculture to the vagaries of weather, the reduced proportion of GCF in agriculture seems to have released some capital resources from agriculture at no or negligible cost to industry. The increased absorption of capital in

industry has been accompanied by the reduced contribution of industry to economic growth, reflecting the slowdown in industrial productivity.²

Sectoral terms of trade

An issue that is related to the compositional pattern of economic growth, is the question of the terms of trade between agriculture, industry and services. The differences in productivity across sectors are eventually reflected in differences in the relative prices of agricultural industry and services – or the sectoral terms of trade. Several studies assessing cross-country cross-sector price structures have observed that services are cheaper in poor compared to rich countries (Kravis, Heston & Summers 1982; Bhagwati 1984). Obstfeld and Rogoff (1996) find a rising trend in the relative prices of services in industrial countries. Echevarria (1997) finds that services have become more expensive relative to manufactured goods, and that manufactured goods are becoming less expensive relative to primary goods in industrialised countries. While there have been several attempts to assess the relative price structures and compute the terms of trade between agriculture and industry in India, no attempt has been made, to date, to compute the terms of trade of these sectors vis-à-vis the services sector. Such an analysis becomes particularly essential given the increased dominance of services in aggregate economic activity and the implied surge in economic transactions of services with agriculture and industry.

This study computes the terms of trade (TOT) across agriculture (*A*), industry (*I*) and services (*S*) sectors in India, using the prices of agriculture, P_A , industry, P_I , and services, P_S , as measured in terms of the respective GDP deflators (base: 1993–94 = 100). The nominal GDP (at factor cost, at current prices) originating from agriculture, industry and services sectors is divided by the corresponding real GDP (at factor cost, at 1993–94 prices) from agriculture, industry and services to obtain the respective GDP deflators (prices) for the agriculture, P_A , industry, P_I , and services, P_S , sectors.

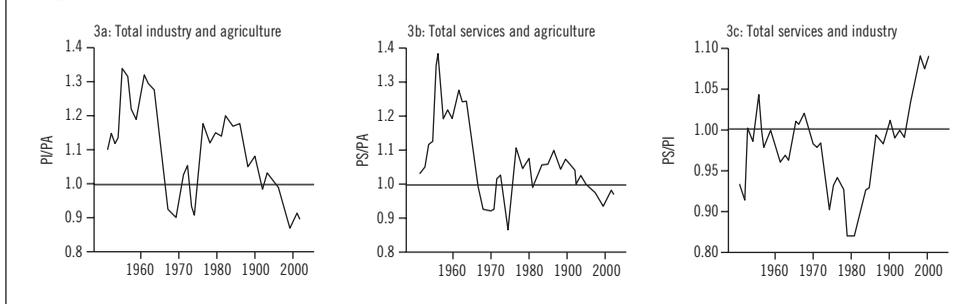
The use of sectoral GDP deflators to compute TOT across sectors is tenable on several counts. First, the GDP deflator is the most comprehensive measure of prices, as compared to consumer (CPI) and wholesale

² For a further discussion of industrial sector productivity in India, see Ahluwalia (1985, 1991).

(WPI) price indices. The coverage of CPI is narrowly restricted to the consumer commodity basket. While the WPI covers the prices of all the goods, it ignores the prices of services. The GDP deflator is more comprehensive compared to both CPI and WPI in that it takes an encompassing account of the prices of goods as well as services. Second, some of the previous studies have measured agricultural prices in terms of farm-gate prices and industrial prices in terms of WPI. However, farm-gate prices are not comprehensive in terms of their coverage of agricultural commodities and hence are not strictly comparable with industrial goods prices measured in terms of a more comprehensive measure: the WPI of industrial goods prices. The use of a common measure, with both agricultural and industrial prices measured uniformly in terms of the respective GDP deflators, essentially serves to provide a more robust comparison and an apt assessment of the relative prices. Third, a composite index on the prices of services is not directly available. The GDP deflator for the services sector is derived, as discussed previously, by dividing nominal GDP originating from the services sector by the corresponding real GDP from the services sector. The GDP deflator so derived for the services sector is used to surrogate the composite price index for the services sector. Fourth, by construction, the GDP deflator proxies the Paasche index and captures the effects of contemporaneous composition of both goods and services on prices, as compared to the Laspeyres index, which mimics the effects of a fixed basket of goods (held in the base year) on prices.

The ratio of the prices of services to the prices of agriculture, P_S/P_A , and that of the prices of industry to the prices of agriculture, P_I/P_A , remained above unity for most of the period, suggesting unfavourable TOT for agriculture (Figure 3). The unity grid in Figure 3 mimics the sectoral price parity in that it shows the equality of the prices corresponding to two given sectors. One of the reasons for the adverse TOT for agriculture has been its own growth. The increases in the growth of agriculture and the resulting increases in the relative supplies of agricultural commodities lower the prices of agricultural commodities relative to the prices of industrial goods and, inter alia, lead to the declines in terms of trade for the agricultural sector. The non-durable nature and implied impossibility of deferred sales often weakens the bargaining power of farmers and reduces the relative prices of most of the agricultural commodities and, thus, the incomes of the farmers – the so-called ‘paradox of plenty’. The institu-

Figure 3: Sectoral terms of trade



tion of minimum support price system, with the prescription of floor price levels for some of the commodities, helped prevent agricultural prices fall below prescribed floor levels. Although remaining above unity, both P_S/P_A and P_I/P_A ratios have tended to display intertemporal declines. The ratio of the prices of services to the prices of industry, P_S/P_I , remained below the unity grid for most of the period (Figure 3). The P_S/P_I tended to show increases since the beginning of the 1980s and became more than unity by the mid-1990s. While services remained cheaper compared to industrial goods, and expensive compared to agricultural commodities, the prices of services have shown a tendency to increase over time. The rationing of the prices of some of the basic commodities through the institution of the public distribution system (PDS) notably impinges on the market mechanism and impedes the market-driven configuration of TOT. The effects of PDS, however, have been dimensionally minimal, given the limited coverage and scope of the system.

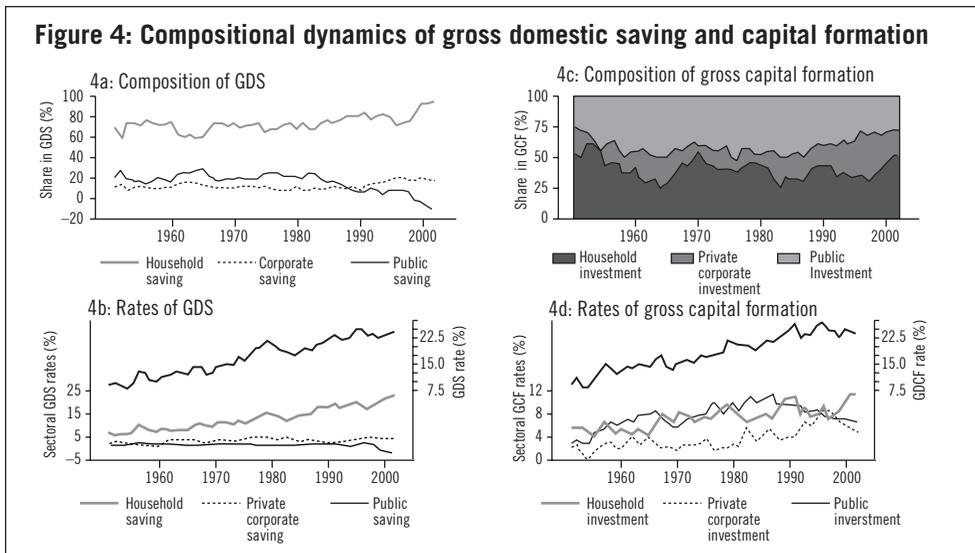
Mobilisation of saving resources

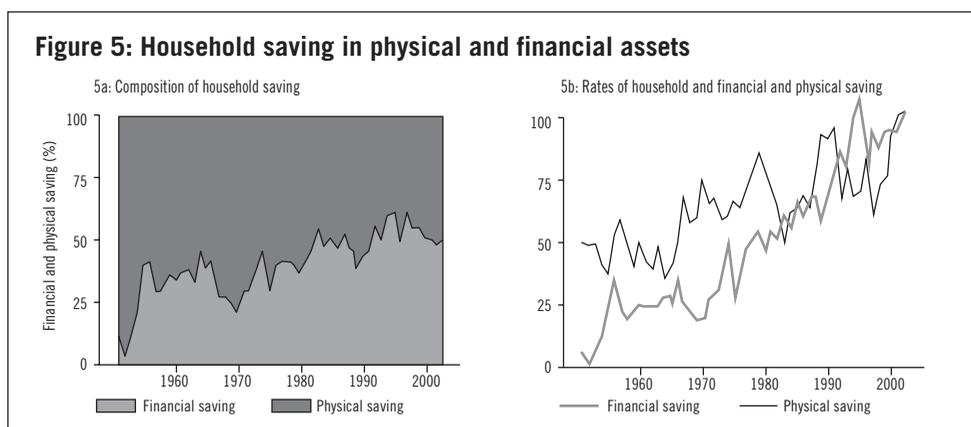
The acceleration of output and economic growth in a developing economy hinges heavily on the acceleration of investment and the improvements in factor and total factor productivity. Investment is the source of capital accumulation in both neoclassical and post-neoclassical models of long-term growth and a component of aggregate demand in the Keynesian models of short-term business cycle fluctuations. Saving serves as a conduit for trading present consumption against future consumption and, thus, helps smooth the time trajectory of consumption. The crucial concerns remain the mobilisation of domestic saving for financing investment

requirements, accelerating the accumulation of capital, keeping current account trade deficits in manageable bounds, and generating the virtuous circle of high saving and high economic growth. The household sector in India has persistently been a net saver. It has been the financial deficits of the private corporate and of the public sectors that have overwhelmed the household saving surplus, creating current account deficits (CADs). The CADs, however, have been kept manageable and minimal, and a predominant (insignificant) proportion of investment has been financed by domestic (foreign) saving (Singh 2008). The acceleration of domestic saving tautologically hinges on the acceleration of the savings of the private (household and private corporate) and public sectors.

Private saving

The household sector makes the major contribution to private and resultantly to gross domestic saving (GDS) in India (Figure 4a). Several factors seem causal to the level of household surplus, such as self-imposed debt aversion, borrowing and liquidity constraints, precautionary accumulations induced by uncovered uncertainties in incomes, intertemporal smoothing of consumption, intergenerational altruism, and aversion to debt bequests. The inter- and intra-annual incomes of the rural households were prone to stochastic weather shocks impacting on agriculture in the 1950s and the 1960s. While the influence of these exogenous shocks has tended to sub-



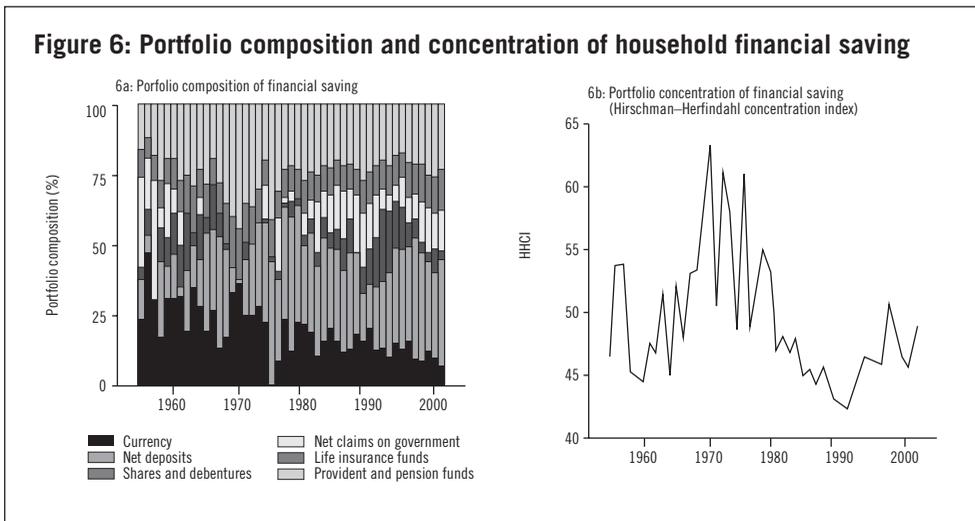


side with the diminishing dependence on agriculture, these shocks still remain the influential sources of nonlinear disruptions in rural incomes and of dynamic inconsistencies in the savings plans of households. The insurance market remains sluggish in urban areas and virtually non-existent in rural areas. The unknown probability distributions of future incomes juxtaposed with inadequate insurance have been among the key catalysts underpinning the need for precautionary saving and the creation of a buffer-stock of assets for risk-averse households with binding borrowing and liquidity constraints. The removal of credit constraints and the implied increased access to credit markets is unlikely to generate unambiguously positive effects on saving in that it is as likely to induce saving indirectly through stimulus to investment and growth, as reduce saving directly through the increase in borrowing and financial liabilities.

Saving schemes (compulsory and voluntary) and the resultant increases in after-tax (net) investment returns helped to motivate household preferences towards the acquisition of tax-favoured financial instruments. The increased preferences for financial assets impacted on the distribution of household portfolios between two major asset classes (physical and financial). The share of saving held in physical assets fell from a high of three-quarters in the 1950s to around a half of household saving by the early 2000s, while that of saving in financial assets rose commensurately from a low of one-quarter and converged to around half of the household saving over the same period (Figure 5a). Saving schemes and the incentives aimed at motivating saving are beset with a typical problem in that the provision of incentives and tax concessions on a particular saving

instrument may incite only a reshuffling and rebalancing of the existing portfolios by switching the saving towards tax-favoured instruments, without inducing any change in the net accumulations of saving. The saving incentives and returns augment saving only when the substitution effect is stronger than the income effect, and when the contributions are financed through the abstinence from consumption and an increase in labour supply, rather than through the reshuffling of existing portfolios towards high-return instruments.

However, in India, the financial services sector, comprising financial institutions, instruments and markets, has served to increase the importance of saving schemes, and contributed to both increased thriftiness and higher household preferences for financial assets (Figure 5b). The financial services sector helped households channel a perceptible proportion of their savings into investment indirectly through financial intermediaries. The financial saving portfolio of the household sector remains concentrated in a relatively safe and risk-free vector of financial assets, such as deposits, currency, government securities, small saving, life fund and provident fund (Figure 6a). Within total financial saving, the deposits and provident funds have remained the most favoured instruments. Saving in the form of currency assets has tended to display theoretically predicted declines in the wake of financial development in the economy. Saving held in the form of corporate shares and debentures constitutes only a small proportion of total household financial saving. The Hirschman-



Herfindahl concentration index (HHCI) delineates these dynamics and cross-validates the observed concentration of the financial saving portfolio of households (Figure 6b).³ Rural savings remain particularly concentrated in bank deposits, as many of the non-bank financial instruments are not very popular with rural households. Compulsory saving instruments, such as provident funds, remain restricted to the organised sector of the economy and do not encompass resources from self-employed households in the unorganised informal sector of the economy. Given the weight of rural demography in India, an increase in financial literacy and the geographical dispersion of non-bank financial instruments will help rural households make more informed asset choices and hold optimally diversified portfolios of financial assets. Savings in the corporate part of the private sector have remained perennially low and persistently inadequate to finance even its own investment requirements (Figures 4a & 4b). The main sources of funds for corporate sector investment have been internal saving (retained earnings) and long-term borrowing from financial institutions. The reliance on bank-dominated indirect finance comes as a result of the less-developed corporate bond and stock markets, and the resultant inadequacy of direct finance raised through marketable debt and equity securities in the past. The household sector has persistently held an abysmally low proportion of corporate bonds and stocks in its saving portfolios. The lackadaisical participation of households in capital markets and the observed 'equity premium puzzle' arise mainly from the aversion to risk, inaccessibility to capital market securities in rural areas, and the problem of asymmetric information (Akerlof 1970). The acceleration of corporate saving, however, is essential to finance the investment requirements and to strengthen the balance sheets (net worth and internal saving) of firms.

Public saving

The effects of budget deficits on saving and on fiscal policy remain theoretically unresolved and empirically inconclusive. The neoclassical paradigm postulates that budget deficits raise the total lifetime consumption of finitely lived and farsighted individuals by shifting taxes to future generations, and lead to a decline in saving and a rise in interest rates. The Keynesian antithesis of consumer myopia contrarily predicts that the budget deficits have positive second-order effects on saving and on capital accumulation (Bernheim 1989). Consumers are unable to envision future

tax liabilities arising from current deficits. Therefore, budget deficits stimulate aggregate demand and real output, and lead to the increase in both consumption and saving. In contrast, the Barro-Ricardian (BR) equivalence theorem with consumer foresight suggests that the budget deficits and public debts have no effects on consumption, saving and interest rates (Barro 1974, 1989). Forward-looking optimising agents anticipate the rise in future tax liabilities and equivalently increase their saving to pay for future taxes in response to the rise in budget deficits and public debts. The BR equivalence postulates that the 'supply of government bonds creates its own demand', analogous to Say's Law, and a decline in public saving (rise in budget deficits) is offset by an equivalent increase in private saving. The decreases (increases) in public saving have the positive (negative) effects on private saving. The lack of ubiquitously unambiguous support for BR equivalence and the imperfect offsets between public and private saving underlines the need to reduce budget deficits (increase public saving) to avoid the accumulation of public debts (and implied increases in interest rates) and the possible resorts to seigniorage. The need to reduce budget deficits is well recognised in the International Monetary Fund (IMF)-supported structural adjustment programmes prescribed for the (developing) countries seeking IMF financial assistance and undertaking economic reforms.

The observed dynamics of GDS in India suggest that the declines in public saving have generally been accompanied by more than offsetting increases in private saving in that the trajectory of overall GDS rate has tended to sustain its upward slope (Figure 4b). The more-than-offsetting increases in private saving seem to have been engendered by uncovered uncertainties in incomes and saving incentives, rather than the BR behaviour of households. The profits of public enterprises are another source that contributes to public saving. The potential of these profits, however, remains limited given the public utility characteristics and the welfare orientation of most enterprises. It is nevertheless essential to enhance the contribution of public enterprises to public saving through the improvements in productivity of these enterprises. The major problem in developing economies is that it is difficult to raise adequate tax revenues (due to low incomes) to finance higher developmental expenditures and expansionary fiscal policies, and this leads to public borrowing, which increases interest rates, and eventually (or concurrently) to seigniorage, which

induces inflation. The foreign borrowings of the developing countries are almost always denominated in foreign currencies. The currencies of the developing countries are often prone to depreciations (devaluations), and these depreciations increase the value of the loan liability in terms of the domestic currency (of developing countries), and potentially lead to financial calamities and foreign debt crises. The devaluations used to improve trade balance and reduce CADs concurrently increase the value of their foreign loans (in terms of domestic currency), given that these loans are denominated in foreign currencies. The positive effects of exchange rate depreciations (devaluations) in terms of the improvements in trade balance, as such, are partially offset by unintended negative effects in that the depreciations concurrently raise the loan liabilities in terms of the domestic currencies of developing countries.

Productivity and market distortions

Productivity

A single emphasis on the acceleration of savings and a deepening of capital stock, without parallel attention to the unleashing of productivity gains, is unlikely to generate a sustainably high growth trajectory. The incentives to induce saving tend to become susceptible to diminishing returns, if these are unaccompanied by an acceleration of economic growth and returns on investment. Incentive-based strategies to induce the motivation to save (reduce present consumption) need to be supported by measures to accelerate income and economic growth, and strengthen the capacity to save. The capital-scarce developing economies paradoxically have high capital–output (K/Y) ratios, mainly due to high capital–labour (K/L) and/or low output–labour (Y/L) ratios and implied low productivities of labour.³ The low productivity and implied lack of competitiveness of exports has implicitly been one of the factors underpinning the latent need for tariff and non-tariff restrictions on

3 The capital–output ratio (COR) is defined as: $COR = [K/Y] = [K/L] \times [Y/L]^{-1}$; where (K/Y) is the capital–output ratio, (K/L) the capital–labour ratio and (Y/L) the output–labour ratio. The low (high) output–labour (Y/L) ratio and implied low (high) productivity of labour leads to high (low) capital–output (K/Y) ratio and implied low (high) productivity of capital. By taking first-difference transformation of K/Y and then dividing through by Y , the COR can be represented in terms of the incremental capital–output ratio (ICOR) such that $ICOR = [\Delta K / \Delta Y] = [\Delta K / Y] / [\Delta Y / Y]$. The ICOR can be further represented as $ICOR = [I / \Delta Y] / [\Delta Y / Y]$; where $[I / \Delta Y] \times 100$ denotes the rate of investment. The ICOR, thus, is the ratio of the rate of investment measured as $[I / \Delta Y] \times 100$ to the rate of growth of output measured as $[\Delta Y / Y] \times 100$.

imports, so as to retain CADs in manageable bounds. While the near-autarky of imports helped minimise CADs and accumulations of external debts, it stifled competition and spread X-inefficiencies across Indian industry that were transmitted to consumers in the form of higher prices.

Strategies to raise the rates of saving and investment, as such, need to be supplemented by strategies to accelerate productivity so as to: (i) increase exports and mitigate the latent need for restrictions on imports, and (ii) reduce the implicit stress on the deepening of capital. Foreign direct investment (FDI), liberalisation of trade, and the globalisation of goods and financial markets all have well-documented merits. These merits mediate through demonstration and diffusion effects, competition effects, productivity and spillover effects, and linkage effects. The effects of trade on output and growth are also transmitted through several channels, such as provision of high-quality and less expensive intermediate inputs, an efficient allocation of resources, an increase in capacity utilisation, the generation of economies of scale, the creation of positive externalities for the non-export sector, an increase in specialisation and the transfer of technology. Many new ideas are embodied in the imports, and the creation of competition with domestic industries results in a Schumpeterian environment of 'creative destructions'. The accrual of the gains of FDI and trade is itself contingent on the acceleration of productivity to a threshold level where the firms can effectively compete for market share in both domestic (with FDI) and international markets.

The micro-theoretic models of trade that came into vogue from the mid-1990s lend dominant support to the exogenous effects of productivity on trade, rather than the effects of trade on productivity. These models test two mutually reinforcing hypotheses to explain higher productivity and the levels of X-efficiency of exporters compared to non-exporters: these are the *self-selection* or *market-selection* hypothesis, and the *learning-by-exporting* hypothesis. The self-selection hypothesis suggests that it is only the most productive and above-average firms that are likely to cope with sunk costs and be able to face fierce competition abroad – in other words, self-select themselves into exporting. The patterns of entry, survival and exit in export markets are related to firm-level productivity differentials. Melitz (2003) shows that exposure to trade will induce only more productive firms to enter export markets, and will simultaneously force the least productive firms to exit. The exporting firms are exogenously more produc-

tive from the outset, and exporting contributes to productivity only when the productivity premium of already productive firms improves after their entry into the export market. Studies supporting the self-selection hypothesis numerically overwhelm studies supporting the learning-by-exporting hypothesis. The dominant support for the effects of productivity on trade underlines the need for improvements in productivity in the developing economies to effectively access the gains of trade and globalisation of goods and financial markets. Globalisation is unlikely to take developing economies out of low-level equilibrium traps and underdevelopment, if it is not accompanied by the institutional reforms, development of adequate infrastructures, the unleashing of productivities, the development of an efficient financial sector, and the improvements in the competitiveness of import-competing industries in the domestic and export-orientated industries in the international markets. The development of domestic institutions and infrastructure and in-house economic reforms are indispensably inevitable for developing economies. Since no economy intends to restrict exports, the liberalisation of trade is synonymous with the liberalisation of imports. Such liberalisation (of imports), without matching increases in exports, would amount to (equi-proportionate) increases in CADs, implied accumulations of external debts and, eventually, the periodic rounds of devaluations or market-driven depreciations of exchange rate.

An issue akin to the acceleration of productivity is the control of inflation and the implied stability of the internal (in terms of goods) and external (in terms of foreign currency) value of the currency. Low productivity and high inflation lead to the depreciation of the exchange rate, which makes imports more expensive and, in turn, feeds into inflation and a further depreciation of the currency. The effects of devaluations (June 1966, July 1991) and the market-induced depreciations of the exchange rate on inflation in India remained dimensionally small, because of near import autarky and an implied small proportion of imports in GDP. Inflation, indeed, does not have unambiguously adverse effects on saving. While inflation erodes the real value of wealth held in financial assets and reduces private saving, the uncertainty arising from inflation may entice precautionary saving and offset the inflation-eroded decline in saving. The Barro-Ricardian (BR) equivalence rendition of an inflation tax would suggest that inflation would induce an equivalent increase in saving to pay for any future inflation tax and perfectly offset the inflation-eroded

decline in saving. Although, therefore, the effects of inflation on saving remain ambiguous, the uncertainty arising from inflation is likely to be unambiguously disruptive for financial planning and destructive for economic growth. An explicit nominal anchor and the targeting of inflation would help curb both inflation and inflationary expectations.

Tariff rates

The Indian economy remained characterised by distinctively high tariff and non-tariff restrictions on imports until the beginning of the 1990s; tariff rates were significantly higher compared to those of many other countries. The maximum tariff rate of 250% and the import-weighted tariff rate of 87% were, in fact, not only the highest, but also more than double the tariff rates in countries such as Brazil, Indonesia, Korea and Mexico (Ahluwalia 1996). The mean tariff rate was 128% for the economy as a whole. The highest protection was accorded to consumer goods industries (the mean tariff rate on consumer goods being 142%) followed by the protection to intermediate goods industries (with a mean tariff at 133%), capital goods industries (the mean tariff at 109%) and agro-industries (the mean tariff at 106%) in 1990–91 (World Bank 1995, Table 1.18, p. 31). A retrospective assessment and an archival account of the policy regimes in India suggest that the passive export policy regime of the 1950s (especially the period 1956–62) was followed by an export subsidisation regime (1962–66) that, after an abortive attempt at liberalisation (1966–68), was succeeded by a more restrictive regime (1968–75). The selective relaxation of controls (1975–85) was succeeded by a more systematic approach towards liberalisation (1985–91), and then by a paradigm shift in the stance of macroeconomic and microeconomic policies since the beginning 1990s (July 1991 onwards). The tariff restrictions in India had been supplemented with quantitative quota restrictions through the introduction of an import licensing system. These import restrictions protected domestic manufacturing from competition and sheltered inefficiencies, and inflicted an in-built bias against export-orientated industries.⁴ A phased reduction in import tariffs marked one of the major thrust areas of economic reforms initiated since the beginning of the 1990s. These wide-ranging economic

⁴ The inefficiency in import-intensive industries was passed on in the form of higher domestic prices. This resulted in a rise in the general cost structure of industry, and exports actually suffered a negative effective protection (Ahluwalia 1996).

reforms and the liberalisation of trade played a catalytic role and contributed to the acceleration of economic growth.

Small-scale industries

Another factor creating market distortions and low productivity has been the so-called infant-industry protection measures taken within the economy. Large industries with low average costs and implied economies of scale (and scope) are predicted in theory to out-compete small industries, and emerge as natural monopolies. The policy support given to small-scale industries in India through the provision of subsidies and the reservation of commodities protected these industries from competition, and indeed helped induce their growth and proliferation in the industrial sector. Such support, however, contemporaneously led to moral hazard problems. Subsidies provided unintended disincentives to these (small-scale) industries to expand their scale of operation (so as to remain small and, thus, be eligible for subsidy) and to improve their efficiency. These inefficiencies and implied high costs and prices impinged heavily on the economic welfare of consumers in India.

Conclusions

This study has examined economic growth and domestic saving in India. The economy remained characterised by low growth for a prolonged period until the 1970s. The onset of gradual economic reforms since the 1980s provided some fillip to growth, and the momentum was carried forwards through the adoption of a comprehensive structural adjustment programme from the beginning 1990s. Both agriculture and industry played a dominant role in conditioning the growth trajectory by virtue of their dominant shares in aggregate output until the 1980s. Stochastic weather shocks frequently impacted upon agriculture and then, contagiously, on the industry and services sectors and, thus, have been the major sources of disruption in output and economic growth. The influence of these exogenous shocks, however, tended to decline with the diminishing dependence on agriculture and commensurately the increasing contribution of services to aggregate output, as embodied in the process of structural transformation of the economy. The services sector has emerged as the dominant sector providing resilience, smoothing the amplitudes of economic fluctuations, and virtually controlling the growth impulse of the

economy. While services remained cheaper compared to industrial goods and expensive compared to agricultural commodities, the prices of services have shown a tendency to increase over time.

The acceleration of growth and the sustainability of the accelerated growth trajectory depend heavily on the accelerations of saving and investment and upon the improvements in productivity. The economic reforms focused on the external and domestic financial sectors, but parallel attention is required for the development of infrastructure to induce distortion-free and market-driven increases in private investment. The existing strategies to accelerate saving and investment need to be supplemented by means of accelerating productivity growth so as (i) to increase exports and mitigate the latent need for restrictions on imports, and (ii) to subsidise any implicit stress on the deepening of capital. While foreign direct investment, liberalisation of trade and globalisation of goods and financial markets have well-documented gains, the accrual of these gains is contingent on the acceleration of productivity to a threshold level where firms can compete effectively for market share in both domestic (with FDI) and international markets. Globalisation is unlikely to take developing economies out of low-level equilibrium traps and underdevelopment if it is not accompanied by institutional reforms, the development of adequate infrastructure, the unleashing of productivity growth, the development of an efficient financial sector, and improvements in the competitiveness of import-competing industries in the domestic market and export-orientated industries in the international markets.

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