

What Explains the Volatility of India's Catch-up Growth?

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March 2019**

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Abstract

Indian post reform growth rates have been higher but more volatile compared to transition periods for other comparable countries. The reasons are aggravation of shocks due to unaddressed critical bottlenecks together with pro-cyclical macroeconomic policy that compressed aggregate demand. Reform is required to relieve constraints, but traditional reforms may be neither appropriate nor achievable. Feasible reforms are discussed. Since diversity and resilience has increased and some constraints have eased, the paper argues sustained high growth is reachable with the relevant policy support.

Keywords: India; growth; volatility; resilience; reforms; shocks; pro-cyclical

JEL Code: O11, O23, H50, H77

Acknowledgements:

The paper was presented at a conference at IIM Calcutta. Extracts were presented as the Keynote at a conference at Vidyalankar and as the inaugural lecture for an Indian Statistical Service Training Programme at IGIDR. I thank participants for enthusiastic questions and feedback, Niranjana Rajadhyaksha, Partha Ray, Abhirup Sarkar and Anindya Sen for comments and Reshma Aguiar for secretarial assistance.

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1. Introduction

India's post-liberalizing reform growth rates have been higher but more volatile. It left behind the steady Hindu rate of growth of 4% for a higher growth¹ of about 7% in the 12 years since 2005-06, but the lowest rate of growth in this period was 3.1 and the highest 8.5.

China had fast and sustained growth after its Gross Domestic Product (GDP) per capita in purchasing power parity (PPP) terms crossed \$1747 in 1992. The experience of Japan and the US was similar. The volatility of growth rates reduced. After they cross a minimum threshold, multiple dispersed reinforcing growth foci normally allow low income countries to grow rapidly. India crossed PPP \$1800 in 1999. Although its growth since then was higher, it continued to be volatile. Why? The paper argues the reasons were reform inadequacies aggravated supply shocks. In addition macro policy tended to over-react to shocks rather than to smooth them. Policies were also sometimes not appropriate for the context.

Catch-up growth is normally faster than industrial country growth but it only defines a potential or trend growth rate. Savings generally rise with growth as firms get cash rich and tax revenues boom. China's savings rate reached the fifties. India's savings rate reached the thirties in the late 2000s, and together with an incremental capital output ratio of four, and a sustainable Balance of Payments current account deficit (CAD) of 2%, peak savings defined a potential growth rate of 9%. The savings rate has since fallen to 30, after a period of lower investment and growth, but there are signs of rising productivity, which reduces capital required for growth. Entrants to the labour force and transition to higher productivity jobs can provide the required labour inputs. But countercyclical macroeconomic policy has to maintain the actual rate of growth in the face of shocks, even while reforms continue to sustain the potential rate. In India's case this did not happen.

Openness, despite its contribution to diversification and catch-up was also a source of shocks—the reform years saw major oil and food price shocks, the East Asian crisis, the Global Financial crisis (GFC) (which, more correctly, began as a North-Atlantic financial

¹ Calculated with the back series from 2005-06 at the base 2011-12 released by the CSO on November 28, 2018: http://mospi.nic.in/sites/default/files/press_release/Press-Note-28Nov2018.pdf.

crisis), global slowdown and unconventional monetary policy. Too much macroeconomic stimulus after the GFC was followed by a reaction of too much tightening. The conservative response of fiscal and monetary policy meant there was no utilization of space available for stimulus. The focus remained on structural reforms even in macroeconomic policy despite an extended industrial slowdown after 2011. Industry growth was 3% lower in the period after 2011 compared to that before. Reforms themselves neglected critical bottlenecks. Possible counter arguments are, first, perverse reforms such as demonetization reduced growth. Second, essential land and labour reforms were missing. The first is inadequate because a one-off event cannot explain performance over time. Moreover, the slowdown preceded demonetization. Second, it is not very productive to hold to an unachievable reform ideal, while missing out on feasible reforms, many of which are in process.

It can be asked why sustained higher growth is required since India is already growing faster than any other country in the world. It will become a USD ten trillion dollar economy in 2030 from its 2016 level of 2.26 trillion if real growth rate is 7% per annum, assuming an inflation rate of 4%. If real growth rate is 9%, however, gross domestic product (GDP) will be 14 trillion. The faster rate of growth will therefore give it 4 trillion more of GDP, creating more employment and raise per capita GDP². But India only had brief growth peaks above 8%.

India's demographic dividend is both an opportunity to create more jobs and grow faster and a challenge to create the conditions for such growth. By 2020 its estimated average age of 29 and dependency ratio of 0.4 will be the lowest in the world. But finding jobs for 12 million young people entering the labour force each year, and millions transferring out of low productivity agricultural jobs is a major and continuing task. There is a controversy around measuring employment but no estimate is anywhere near these numbers. The inability to deliver as many good jobs as required is partly responsible for India's labour participation rate falling to around 50— one of the lowest in the world—the world average is 63. Women have dropped out of the labour force in large numbers.

World Bank estimates give 23.6% of Indian population, or about 276 million people, living below \$1.25 per day on purchasing power parity in 2011. The Rangarajan Committee's

² Dividing 0.7 by the rate of growth gives a rough estimate of the time required to double income. Therefore doubling time at 5% growth rate is 14 years ($0.7/0.05 = 14$), at 7% it shrinks to 10 years and further to 6.7 if the growth rate rises to a 9%.

(Planning Commission, 2014) estimate for the similar period was 363 million (29.5% of the population). Of course distribution of income also matters, but higher growth has been a major factor bringing down Indian poverty ratios, which were above 50% in the 1960s³. The inability to sustain high growth rates is therefore worrying.

Throwing a stone in a shallow pond causes large ripples, but hardly disturbs a deep lake. A diverse system has the capacity to absorb shocks, much as portfolio diversification reduces financial risks. Holding many types of assets means a loss in one has minimal effect on the total asset portfolio. Despite rising external risks the Indian economy as a whole is showing signs of having reached such a level of diversity. This was inadequate earlier despite crossing the PPP threshold because of agricultural bottlenecks and vulnerability to oil price shocks, which are now reducing. Reforms are lowering costs through the economy. Macroeconomic tightening was used instead of the required sectoral response to deal with the constraints, partly explaining why India's catch-up growth has shown so many ups and downs. Indian problems are often attributed to insufficient reforms but the standard liberalizing reforms can be inappropriate for India's structure. The chapter will first show this. Next it will examine sources of increasing resilience as well as continuing risks, and outline some feasible context sensitive reforms.

The remainder of the chapter is structured as follows: Section 2 shows why standard stabilization policies may not be appropriate in the Indian context; Section 3 discusses sources of improved diversification; Section 4 turns to external shocks and potential defenses against them, before section 5 concludes.

2. Implications for reform and for macroeconomic policies

India is often advised to reform in order to achieve sustained growth. But what exactly is the type of reform required? The standard Washington consensus advice on reforms for emerging markets (EMs) used to be “stabilize, privatize and liberalize.” This consensus was hammered

³ Examination of trends in poverty, as defined by the Tendulkar Committee, and based on NSS Consumer Expenditure data for the period 1983 to 2011-12, show that in the low growth pre-reform period, 1983 to 1993-94 poverty declined at 0.8 percentage points per annum, with the number of persons below the poverty line almost constant at 320 million. Post-reform poverty declined faster at 1.3 percentage points per annum, from 45.3% in 1993-94 to 21.9% in 2011-12. Over 1993-94 to 2004-05 it fell at 0.75 percentage points per annum, but fell faster at 2.2 percentage points per annum over the high growth period 2004-05 to 2011-12. Around 135 million people were lifted above the poverty line in the post-reform period (Rangarajan and Dev, 2018, <http://www.thehindu.com/opinion/lead/how-the-data-sets-stack-up/article23427619.ece>).

out in various programs designed for Latin America but even there it did not work well, imposing large growth costs and often ending in crisis. Stabilization is required when a country is spending more than it is producing, or is able to borrow and to service. There is excess demand, which has to be reduced. Reducing public intervention gives markets a greater role in price discovery. Getting prices right improves resource allocation. Liberalizing entry of foreign capital may expand the resource base as well as improve efficiency.

As applications of this reform program disappointed it became clear that financial liberalization should be gradual, and be accompanied by deepening of domestic markets, strengthening of institutions and improvements in regulation. Crisis proofing was required. 1990s crises in Mexico, Brazil, East Asia, Argentina, and Russia implicated high short-term private debt, and outflows under full capital account convertibility. The focus only on demand and prices, in the privatize-liberalize mantra, neglected deeper drivers of productivity and of performance.

A new group convened for a rethink. Williamson (2003) summarized the modifications to the Washington consensus. One of the main messages was institutions and incentives matter. For example, just saying reduce fiscal deficit is not enough. It is necessary to create incentives to make it happen.

Compared to the above advice based on the experience of countries that had not done well, the Spence Commission (2008) sought to extract lessons from countries that had managed to lift growth rates sustainably. It examined 13 economies that, in the period after 1950, grew at above 7% for more than 25 years. Nine of these were from Asia. Their common characteristics included openness, macroeconomic stability, high savings and investment rates, and market allocation of resources. Governments were capable—pragmatic and flexible—rather than ideological. While willing to intervene in markets to promote exports through industrial policies, and to manage exchange rates (with the use of selected capital controls and reserve accumulation) they were flexible enough not to get locked into distorting policies, to anticipate and to change policies as required for growth. Labour market reform, competition, resource mobility and urbanization were all supported. Public investment in infrastructure was raised to 5 to 7% of GDP or more. Specific contextual interventions and microeconomic incentives were created. External drivers alone did not create growth. And openness did not imply blind application of market friendly reforms.

Despite this learning that the Bretton Woods institutions went through, their current advice to India continues with the dated message: stabilize, liberalize, privatize (see World Bank, 2018).

Stabilize: Despite pointing out that the rate of investment was subdued and needed to accelerate, with low market demand as a possible cause, the World Bank insisted there was limited room for countercyclical measures because of structural constraints. It was important to maintain hard-won macroeconomic stability (ignoring the possibility that growth sacrifice could be reduced).

Privatize: They saw the genesis of bank balance sheet stress in the period of exuberant bank credit growth over 2004–08, and ever-greening of loans after the GFC (ignoring the role of prolonged high interest rates, asset-liability mismatch and external shocks on infrastructure loans, of low demand and low growth in raising debt ratios). To revive banks and credit growth, besides recapitalization, they recommend a consolidation of public sector banks, making their incentives more market based, giving private banks a level playing field, and allowing more competitive entry (ignoring that private banks were not lending to industry, credit to which became negative).

Liberalize: For raising exports they wanted improvements in the competitiveness of Indian firms, largely through reforms to land, labor and financial markets. They saw continued integration into the global economy as essential for accelerating the growth rate (ignoring the necessity of building resilience against continuing external shocks and of possible political constraints on land and labour reforms).

Apart from ideology, this blinkered view may arise from an inadequate appreciation of how the Indian context differs from other nations that have undergone reform. The simple analytical framework below will be used to make a comparison across nations, and bring out nuances of differences in country growth paths.

2.1. An analytical framework for structural adjustment

In Fig. 1 drawn in the space of traded (Q_T) and non-traded goods (Q_N), the tangent of the price to the production possibility frontier gives the point of optimal production and its

tangency to the indifference curve gives the point of optimal consumption⁴. It can be used to demonstrate the process of stabilization and of structural adjustment. An EM needing adjustment could be consuming at point *a* but producing at point *b*. The production of non-traded goods equals its consumption, but there is excess consumption of traded goods financed through a current account deficit (CAD). If the latter is unsustainable, stabilization is required to reduce absorption (demand) shifting the budget line in parallel inwards so it becomes tangent to the production possibility frontier and the nation is not consuming more than it is producing.

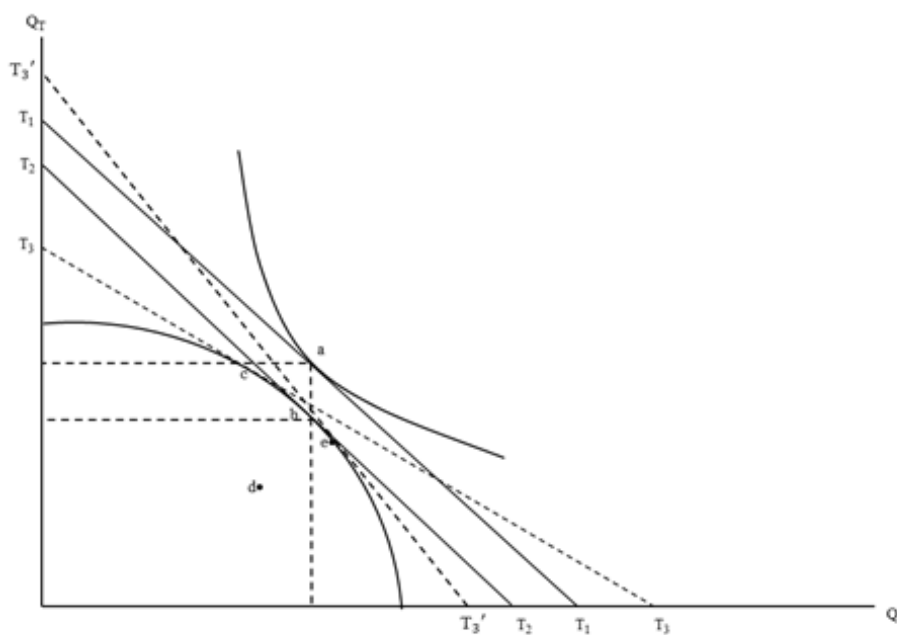


Figure 1: Country structure and growth paths

But typically excess demand for tradable goods would continue even after stabilization to *b* unless prices also adjust. The slope of the price line has to change to switch production towards tradable goods and reduce their consumption as they become relatively more expensive. Depreciation of the currency flattens the price line to reach a final equilibrium *c* where there is no excess consumption and the CAD is zero. Consumption of non-traded goods also falls, as does their production, while the production of traded goods rises compared to the earlier values. Since at the new price line, traded goods prices have risen relative to non-traded goods so less of Q_T can now be bought compared to Q_N . These are the adjustments required in the case of excess demand and full employment of resources. While

⁴ See Corbo and Fischer (1995) for such an application of the Swan Salter model.

consumption of both types of goods falls, there is a rise in the relative domestic production of traded goods.

If poor organization and unemployment wastes domestic resources, however, initial production could be at any point inside the production possibility frontier such as d . Consumption could also be at d or could be higher so that there still is a CAD. Consumption could increase as production shifts out to the frontier, or the expansion of domestic supply could remove excess demand and reduce any CAD. This illustrates the process of structural adjustment. Improvements in factor use and productivity can also shift out the frontier over time.

While some Latin American economies, where inflation was running at above 1000%, certainly required a reduction in demand, labour intensive economies such as China and India are better characterized as being at d , with underutilized resources. As long as reform facilitates utilization of these resources, a contraction of demand may not be necessary.

It is also possible the optimal move may be from d to e requiring a real appreciation as relative non-traded goods prices rise. This may be necessary to keep traded goods such as oil and food, which have a large weight in consumption and therefore second round effects on inflation, cheaper. Moreover, natural resource availability may constrain expansion in oil production. Consumption of both traded and non-traded goods rises but production shifts relatively more towards non-traded goods⁵. Or, as in China, under-valuation of the currency may aid a labour absorbing expansion in production of traded goods and of exports from d to a point such as c . If the path chosen is from d to e maintaining domestic demand is even more important, since foreign demand plays less of a role in absorbing labour. The choice between c or e would depend on domestic structure that affects inflationary processes. Traded goods may have to be kept relatively cheaper to restrain inflation.

2.2. Country structure and reform strategies

A systematic comparison between the structure of Latin American and Asian growth (Table 1) helps to show that the relevant framework of analysis differs as argued above. Low macroeconomic volatilities and inflation, low government deficits and debt and higher

⁵ Non-traded goods price rise relatively more as in the Balassa-Samuelson effect but it is not due to higher productivity and wages in the traded goods sector (Goyal 2014).

domestic savings suggest excess demand may not be such a major issue in Asian economies. A more gradual approach to capital account convertibility (CAC) also reduced finance led overshooting and volatility. Export of secondary rather than primary goods, pragmatic governments focused on providing public goods such as infrastructure and education rather than on re-distribution, suggest smooth expansion of the supply-side to absorb surplus labour from a position such as d in Figure 1.

A majority of EMs that sustained high growth were from Asia. China’s transition is the most recent. India and China have many similarities. Both have one billion plus population, both had similar low per capita incomes when they followed a strategy of closed government led import substitution, but India’s opening out came about 10 years after that of China. Post-liberalization both countries followed pragmatic policies that differed from standard reform prescriptions. A gradual growth oriented approach gave the flexibility to respond to outcomes—like the conscious Chinese strategy of ‘crossing the river while feeling the stones’. For example, the Chinese public sector could shrink as the private grew, thus avoiding the wrenching social tensions of the sudden Russian privatization.

Table 1: Comparing Latin America and Asia

Region	Latin America	Asia
Fiscal and monetary policy	Budget deficit Credibility low	Budget surplus Credibility high
Macroeconomic outcomes	High volatilities: C, I, terms of trade, inflation	Low volatilities
Open Economy	Primary goods trade CAC first S nominal anchor	Secondary goods trade CAC later; large FX reserves S competitive
Finance	Close to US Dollarization GNS low	Relationship lending High debt/equity ratios GNS high
Supply behavior	M substitution G dominates supply G: Redistribution Inequality high W bargaining Liberalizing reforms Corruption Land surplus	Export competition G helps private sector G: Infrastructure, education Inequality low w flexible—food prices affect Productivity, regulations Connections Labour surplus

In terms of Figure 1, however, a systematic difference between Chinese and Indian growth strategies was that India neglected hard domestic reforms such as improving governance,

infrastructure, health, education, and making India one market, that would help it shift out from a point such as *d*, and use resources more effectively. The provision of public primary health and education facilities remained below Asian levels. Reasons include India's heterogeneity so that despite full political inclusion in a democracy politicians could ignore economic inclusion and yet win elections. Also the federal structure divided responsibility in many areas between the states and the Centre.

Low returns on past Government investments, and populist schemes, left the Government with positive deficits and a debt/GDP ratio which was higher than the Asian average. For example, after the seventies oil shocks increased costs, user charges were not raised for many public services. A deterioration in quality of services followed. The fiscal consolidation necessary to reassure mobile capital in a more open economy was achieved through a reduction in public investment. The government borrowed even for consumption—there were revenue as well as fiscal deficits. The neglect of investment in infrastructure further raised costs and created bottlenecks for private endeavour.

Unlike China, the government was not able to make long-term funds available to finance and implement an adequate expansion in infrastructure. Budgetary constraints led the government to invite private participation in infrastructure building. Public private participation (PPP) contracts resulted in renegotiation. They were held up in arbitration and payments due, often from government, were delayed. There were attempts to shift financing from banks to more transparent markets, in the wake of allegations of politically directed bank lending especially to infrastructure in the 2000s. Financing long gestation 30 year infrastructure assets with short-term deposits (of public sector banks) or 3 month commercial paper infrastructure (of non-banking financial institutions) is not viable, however. This financing conundrum is yet to be resolved. Infrastructure needs long-term patient money or government help. It is not surprising the Life Insurance Corporation of India was involved in bailing out many cases of troubled infrastructure finance. Private participation is difficult without a drastic improvement in procedures, since commercial viability is essential for it. A combination of better earmarked user charges, with government carrying the initial risks and resolving delays, and private participation used more in toll collection and maintenance in the later stages, shows promise. The government is also able to raise money for new projects by transferring ready projects to the private sector to operate.

A big advantage for China was it started its catch-up growth in 1978 with reform that raised agricultural productivity. Low relative food prices are essential for sustained low-inflation growth in populous countries where food has a large share in the consumption basket. Other major commodity imports such as oil, an essential intermediate good, also contribute to inflation. China used to export oil but became a net oil importer in 1993⁶. By 2006 it imported 47% of its consumption, and had begun building a large strategic oil reserve as domestic production was now only two-thirds of its needs. In 2013 it became the largest oil importing country. Even so, by the time it became a big oil importer its exports had grown enough to finance imports without materially reducing its current account surplus.

India is the 3rd largest oil importer. In 2009-10, crude oil imports amounted to 80% of its domestic crude oil consumption and 31% of its total exports compared to 14% for China. India is dependent on a wide range of primary energy imports. Figure 2 shows China started its reforms process with a very low share of oil imports, but in India this was high in the beginning of the nineties reforms. A rise in oil price raised the CAD, but depreciation in response further raised the import bill and was inflationary. This dependence on commodity imports implied limiting depreciation would help contain inflation.

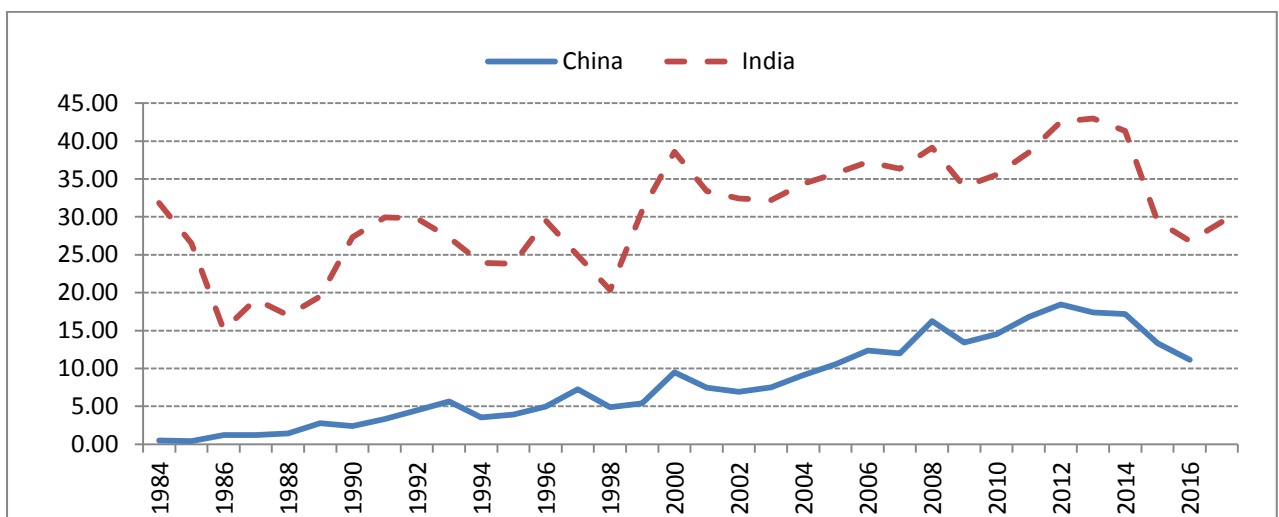


Figure 2: Fuel imports (% of merchandise imports) (USD bn)

This structure and hysteresis constrained and therefore explains further choices. China chose real depreciation and invited foreign direct investment (FDI), which contributed to a sharp

⁶ See Zhang (2018) and https://en.wikipedia.org/wiki/Petroleum_industry_in_China and https://en.wikipedia.org/wiki/Energy_policy_of_India.

rise in exports. A cheap currency increased foreign demand while FDI developed supply capabilities and created employment in labour-intensive low skill production. Since China had little domestic industry or trade unions, FDI could drive its opening and allow it to focus on manufacturing exports. India had more private domestic industry. Permissions for FDI, therefore, were slower in coming. Rigid labour and other laws together with poor infrastructure made expansion of manufacturing difficult at scale. India had faster growth in services than in manufacturing, partly because these constraints affected services less.

Both countries continued with some capital account controls. But liberalization of foreign portfolio inflows (FPI) was relatively faster in India. These contributed to financing the CAD and to development and reform of capital markets and financial services, in which its skilled manpower gave India a comparative advantage. It also led to real appreciation, which was excessive in some periods, despite reserve accumulation. Indian CAC favoured equity over debt flows—equity flows are volatile but are at least risk sharing, so that the rupee value of outflows during adverse shocks is lower. Indian opening out was also calibrated, but it did relatively too much of external liberalization and financial reform, since it was easier to do, compared to harder domestic reform. For example, lifting caps on debt flows without reducing interest rates led too much of inflows and real appreciation in 2017.

Chinese domestic savings were high, and rose further with growth. The Government successfully leveraged these for large infrastructure spending from the nineties, partly through low interest rates paid on deposits in the absence of alternative avenues for savings. Growth in Chinese shadow banking contributed to its post GFC credit boom. This, together with a large fiscal stimulus maintained Chinese growth during and after the GFC. Despite misgivings there was adjustment but no crisis until the date of writing.

India had a private infrastructure-finance led bank credit boom prior to the GFC, but then a long squeeze with negative credit growth for industry as non-performing assets (NPAs) grew in banks because of asset-liability mismatch, external shocks, macroeconomic tightening, and a failure of the administrative apparatus to gear up to providing clearances on the new scale required. Private investment also collapsed in 2009-10 helping aggravate the overall demand-led slowdown.

Table 2: Comparing China and India		
	China	India
Productivity: Shift from <i>d</i>	Health, Education; reached <i>c</i>	Constraints in reaching <i>e</i> : States: Division of responsibility; heterogeneity
Infrastructure	G support	More dependence on PPP
Commodities- oil, agriculture	Agricultural reform first. Oil imports rose long after exports	Agriculture as a bottleneck; signs of supply response 30 years after reforms began
Exchange rate	Depreciation	Appreciation
Capital flows	FDI: Production	FPI: Markets and financing
Exports	Rapid growth	Sectorial exports: required for intermediate imports—oil
Specialization	Manufacturing	Services
BOP	CAS	CAD
S-I	I led S; S leveraged for infrastructure	C rise; I slowdown
Credit growth	Boom	Slowdown
Macroeconomic policies	Counter-cyclical	Pro-cyclical (more risk averse)
Monetary-Fiscal	Coordination	From fiscal towards monetary dominance
Middle income trap	High per capita Y: Political repression	Freedoms: Innovation?

Indian domestic savings are high, although less than Chinese savings. They peaked at 36.7% of GDP in the high growth period but fell to 29.6 in 2016-17 despite higher real interest rates. Financial intermediation of household savings also remains poor, although there was some increase in both the share of financial savings and liabilities. High private savings compensate partly for government dissaving, but consumption is a much higher share of GDP than it is in China. It is also rising. Thus India followed a domestic consumption led growth strategy from a point such as *d* towards *e*. The complementary real appreciation was there, but despite some relaxation of key sectoral bottlenecks such as in agriculture by 2015, there was too much pro-cyclical macroeconomic tightening. It would have been appropriate if the economy was at a point such as *a* in Figure 1 but not for an economy ready to move up from a point such as *d*. the squeeze in domestic demand reduced investment, manufacturing capacity, exports and future expansion of the production possibility frontier.

The policy tightening was itself an over-reaction to too much stimulus as part of the international coordinated stimulus after the GFC. Outflows due to global risk-off and domestic vulnerabilities from large double deficits in 2011 led to fears that India was going the Latin American way. High inflation increased demand for gold imports and widened the CAD to unsustainable levels as savings in financial assets fell. A standard stabilization was imposed with a sharp rise in real interest rates. Inflation targeting adopted was flexible but was implemented strictly. Although inflation and macroeconomic vulnerabilities reduced, especially with the fall in oil prices in 2014, they reappeared, although more mildly, when oil prices rose in 2018, while industrial growth remained on average 3% lower after 2011 compared to the previous six years. Therefore, over-strictness also creates vulnerabilities.

There is more monetary-fiscal coordination in the Chinese system where the government dominates. In India the earlier fiscal dominance has shifted towards monetary dominance with the adoption of inflation targeting and the constitution of an independent MPC combined with pressure from foreign investors (Goyal 2018a). More co-ordination may deliver better results in an economy like India's where government policies affect inflation more and interest rates have a greater effect on demand than on inflation. Macroeconomic policy can use space available to stimulate demand, consistent with the current rule-bound framework, to the extent supply-side measures lower costs and allow better resource utilization thus shifting the economy towards the frontier in Figure 1.

Innovations in Internet and Communication Technology and the outsourcing wave allowed Indian firms to expand service exports that helped counter the large merchandise trade deficit. In terms of Figure 1 this was a better utilization of domestic resources. An export expansion in one sector helped finance imports in another. India needs to develop more such export-intensive sectors. Since import dependence on intermediate goods rules out an undervalued currency, other strategies, such as more domestic competition and reduction in business costs, have to be used to stimulate exports. The government is attempting such policies.

Given pervasive state interventions, China found it difficult to switch to a market- and domestic consumption-led system from an export-led system in the period after the GFC, although there was a steady fall in its current account surplus and a real appreciation of its currency. In the current climate of trade wars innovation and creativity in the service sector,

and in manufacturing that is becoming more like a service, may be a more feasible growth path for India. India's diversity and democracy gives it an advantage in innovation. But the latter needs to be supported by relieving critical bottlenecks and reducing business costs.

3. Sources of diversity

Although India persisted with inappropriate import-substitution for a long time, certain strengths were built up. For example, its skilled English-speaking educated labour allowed it to catch the outsourcing wave. The planning process did create a diverse economy—a major current strength that reforms enhanced. They added export demand to domestic demand, as some manufacturing became globally competitive. Networks of markets and associations became dense, reducing transaction costs, as learning occurred and quality improved. The changes add up to a critical mass.

If growth rates turned upwards in mid-2018 despite stranded assets, absence of any macroeconomic stimulus and continuing external stresses it points towards deep domestic growth drivers and growing resilience as critical bottlenecks are relived. Among other positive trends are: Allocation of labour is improving in areas where it is difficult to measure it. This partly explains why productivity growth continues to be positive in India despite a worldwide productivity slowdown. Moreover, productivity in the informal sector is growing at a higher rate compared to the formal sector. As a result, capital-output ratios reduce, allowing higher growth with lower savings and investment. The informal sector combines services of old and new types, and sometimes the old type converts into the new, for example, as Internet agencies provide drivers, maids and plumbers. Better training, certification and matching improve productivity and salaries as well as jobs. New technologies that leverage youthful skills and reduce prices to target low income masses give India a special advantage. Reforms that build on these trends will be feasible, even as they have to continue to relieve critical bottlenecks.

3.1 Agriculture

Prominent among growth drivers is a slackening of critical constraints in agriculture. A rise in agricultural productivity has to precede a growth surge for it to be sustainable in a populous country. This happened in China, while a jump in food inflation was also responsible for halting India's high growth phase in the 2000s.

Bottlenecks emerged after the high growth period in the late 2000s since agriculture reforms were inadequate. As a consequence double-digit food inflation raised wages and general inflation. The dominant share of employment continued to be in low productivity rural and informal sectors where wages are sensitive to food inflation. Wages, salaries and subsidies were a large share of government spending. This also raised demand for non- traded goods and sustained food inflation.

By 2018, however, India seems to have entered a period of agricultural surpluses, although the farmers' agitation is masking this. Farmer distress is due to over-production in relation to demand, which is keeping prices soft despite attempts to raise minimum support prices (MSPs).

Low food prices benefit low surplus marginal farmers as well as consumers. Rural incomes will ultimately rise from diversification to non-agricultural activities. Reducing the number of active farmers is essential to raising their incomes. There are many signs of this.

Non-agricultural rural employment is providing valuable support for rural incomes. The rural share of India's workforce may still be 70% but NSS surveys show agriculture accounted for only 59.4% of rural male employment in 2011-12. According to NABARD (2018) only 19% of rural household income came from cultivation. That FMCG companies report growing rural sales also suggests rural incomes are rising. To some extent business is also migrating to states and rural areas where the labour is. Unfortunately, the new rural non-agricultural employment is capital intensive—pointing towards a skills shortage that forces capital to substitute for labour.

There is evidence of rising productivity and diversification to horticulture, aquaculture etc. Sustained improvements in rural roads, electricity production and use of MGNREGA funds to strengthen irrigation and other infrastructure raised productivity, and allowed farmers to grow high value added crops⁷. States have a major role to play since agriculture is also a State subject. Change is, however, uneven across States.

⁷ For example the share of fruits and vegetables in gross cropped area rose from 1.9 over 1960-61 to 1968-69 to 6.5 over 2004-05 to 2014-15. The share in value of production rose from 10.6 to 18.8 (Dev 2018).

Even so, data from ministries websites⁸ show rural roads have been growing steadily since 2001 at an average per annum growth of 1.9% for total roads and 8.5 for surfaced roads. Over 2014-15 states with growth above the average in surfaced roads were Rajasthan, Chhattisgarh, Goa, Haryana, HP, J&K, Jharkhand, MP, Manipur, Sikkim, TN, UP, and Uttarakhand.

Water bodies showed an average 41% rate of growth between 1997 and 2017; states with a high share of completed water works in 2017-18 were AP, Jharkhand, TN, Telengana, WB, and UP. Above average performing states with completed water works under MGNREGA were Rajasthan, Chhattisgarh, Jharkhand, TN, MP, and UP.

Over 2009-10 to 2016-17 cold storage capacity grew above 50% per annum; units increased from 5381 to 7645. States with above the average share of 3% were AP, Telengana, Bihar, Gujarat, Haryana, MP, Maharashtra, WB, Punjab, and UP. Orissa, Rajasthan, and Uttarakhand had a low share but the rates of growth were above average.

There is a progressive element of competitive catching up that ranking of States encourages. Indirect indicators also point to improvements. It is widely reported that youth do not want to farm, and farmers cannot get hired labour—but then they must turn to income raising mechanization.

Much further improvement is required, however. Granular market-facilitating changes, for example in good quality grading and sorting is essential for integrating e-markets; removing irritants like export bans, stock limits and the Essential Commodity Act is necessary for improving private sector participation in storage, processing and value chains; improved land records, tenancy laws and producer organizations are required for overcoming fragmentation in production.

The 2018 export policy that promises uninterrupted exports of organic and processed foods needs to be extended to other food crops, as an effective way of giving farmers higher price realization. They would still need insurance against global price volatility, however. As a consequence of strong farm lobbies, MSPs normally rise with international prices, so farmers

⁸ Some of these sites are <http://www.mospi.gov.in/> , <http://mofapp.nic.in:8080/economicsurvey/> , <https://www.india.gov.in/>. I also thank the EAC PM secretariat for providing some data.

have benefited from international price rise. But international food prices softened after the sharp rise in 2007.

If the aim is to cover most crops it is better to switch from MSP to income transfers to small farmers. This could be linked to crops cultivated using satellite data. A Telengana type Rythu Bandhu transfer needs to be preceded by a cleaning up of land records. Non price distorting transfers are also WTO compatible, offering a way out of the US WTO action against India. But they should be limited so that they do not reduce incentives to work. An India approaching middle-income status needs to switch to the advanced economy way of subsidizing agriculture.

3.2. Industry

Government has been acting on reducing costs of doing business in India. Some of the more traditional growth drivers are also there. As sectoral capacity limits began to bite there was some expansion in investment, and finally some growth in credit to industry since 2018. The infrastructure –led investment boom of the 2000s will not recur soon, however. Government spending on road building and low cost housing partly explains the revival in steel and cement since 2017. Government support for low income housing (whose share in housing loans has doubled in the last 3 years) is helping revive labour-intensive construction activity. Some fine-tuning in the schemes is required, however, to better estimate demand from different income levels. When world trade slows down, investing in non-tradables is good policy. Figure 1 suggests non-tradables goods prices can be expected to rise relatively on India's growth path. India's experience corroborates this.

On-going structural reforms will begin to deliver efficiency and scale economies for all industry. For example, the GST will remove cost increasing distortions such as multiple company warehouses across States. Real estate regulation has stabilized, allowing its positive effects to kick-in. With the first few resolutions under NCLT and a revival in growth there are finally signs of a turnaround in NPAs. Indian industry has long suffered from the absence of easy exit. The IBC and stricter RBI guidelines on provisioning and resolution are leading to a change in credit markets. Borrowers are repaying loans since they stand to lose their assets. Lenders are monitoring more carefully since they have to make provisions as soon as repayment stops.

Backdated GDP series (2011-12 base) confirm a sharp slowdown in the secondary sector after 2011. Some growth recovery in 2015-16 despite lower investment points to improvements in productivity. The use of a much larger MCA21 database of 5 lakh firms better captures the complexity of the Indian economy. The number of registered firms is expanding very fast. GSTN has 10 million firms, since it creates incentives for small firms to register so that they can claim input tax credit for their purchases from large firms. The formalization and data trails created in turn allow them access to cheaper credit. At the same time, tighter regulation and corporate governance norms are cleaning out shell companies. There is an argument that short-term costs associated with some of these reforms are responsible for the slowdown in growth. Some reforms did impose short-term costs but the slowdown started in 2011 before these reforms. A brief investment revival in 2015 had petered out in early 2016 under a high real interest regime, since Repo rates were not cut although oil prices crashed in 2014. Demonetization, one of the stringent actions against corruption, started later in November 2016.

An export revival since early 2018, as well as survey responses, suggests problems small exporters were facing from GST have tapered off. But, as the analysis in Figure 1 suggests, it is necessary for India to expand more export sectors. Consider textiles, a labour intensive sector with good export potential. Since quotas were phased out under WTO in 2005 Indian textile exports have grown at 6.8% pa and were at US \$ 17.1bn in 2017. India has 5th rank among global exporters. But its share was only 4.27% in 2016 compared to 1st ranked China's 39% (Mukerjee et.al. 2018). Developed country textile tariffs are high, and competitors like Turkey, Vietnam and Korea benefit from free trade agreements with the major importing regions, US, EU and UAE. The EU gives tariff reductions to help developing countries. India benefits under its standard generalized system of preferences with 20% lower tariffs, but a less developed country such as Bangladesh gets duty-free entry under EU's everything but arms (EBA) scheme.

The WTO bans industry specific subsidies as trade distorting, but developing and Least Developed Countries, with per capita incomes of \$1000 (in constant US 1990 \$) are allowed exemptions. India crossed the threshold in 2017. Central and State governments provide over 60 different types of subsidies to textile exporters, but results are not that good and there are complaints about delays and distortions. This is the time for the government, in consultation with exporters, to shift to other supporting policies some of which can specially benefit

textiles. These include export infrastructure, logistics, technology upgrading and skilling. Although India has a labour cost advantage over China it lacks in skills and technology especially related to synthetic fibers and high value added products. Obstacles to economies of scale also need to be removed.

3.3 Services

The services sector has been the engine of growth for the economy. Differing sub-sectors took the lead in different time periods in response to policy changes e.g. bank nationalization in the seventies, financial services and outsourcing in the 1990s, telecom and construction booms in the 2000s etc. As industry slowed after 2011, much of India's growth came from services.

But provision of public services remains poor. This hurts the less well-off the most since they cannot compensate with paid private services as the rich often can. Poor quality of basic public goods such as air and water quality are responsible for poor health and nutrition outcomes. It becomes difficult for marginal groups especially to make use of the new opportunities growth creates. Then 'active inclusion', defined as inclusion that creates conditions for the many to contribute to and participate in growth (Goyal 2012), does not happen. This absence of true economic inclusion, despite full political inclusion, is the biggest failure of Indian democracy.

Acemoglu and Robinson (2012) argue a democracy tends to have inclusive institutions, which encourage the creative destruction and innovation that sustains wealth, and therefore create the best conditions for the success of a nation. At independence India had full political inclusion but it is a puzzle that it did not lead to the full economic inclusion which is necessary for a nation to succeed. Indian democracy started with full adult franchise, which is quite rare in history, and politicians do tend to deliver what voters demand. But structural aspects such as caste heterogeneity and poverty made it possible for them to create caste and community-based vote banks, side-stepping public service delivery. Today with more awareness, the electorate is demanding governance, development and economic opportunity, which promises well for creating more economic inclusion.

Moreover, at independence the then dominant ideas of government planning boosted central controls given an already centralized Indian civil service inherited from the British. A

multiplicity of agencies arose from superimposing a centralized planning structure on a constitutional structure. There was a tendency to start new programs and create new bodies without a clean exit from old ones. With multiple agencies there is no clear accountability. Controls create discretion and corruption. Harassment in permissions, licenses and certifications hinders private activity. Overlaps, conflicts and delays result. What kind of reforms can change this?

3.4. Feasible reforms

Structural reforms are required to transform a high cost economy. But given entrenched political resistance in an unwieldy federal structure, rather than the straightforward privatization and liberalization of land and labour markets the World Bank wants, opportunistic reform by stealth that intensifies and uses trends at the margin may be more feasible. Some examples of this are given below.

Intractable governance reforms can be achieved using India's success in climbing up the World Bank's ease of doing business ladder as a trigger. To help India rise up the list can motivate better coordination⁹. For example, a special logistics cell has been set up to reduce India's costs of exporting. These costs are much higher than its peers partly because of multiple authorities involved. Clear allocation of responsibilities and of accountability among government departments will help, and use of appropriate software for co-ordination. Delays must be recorded and penalized even in public sector banks. Together with changes in the Prevention of Corruption Act (Goyal 2018b) so that evidence of disproportionate assets is required before bringing a case against a government servant, this should improve decisiveness over time.

Competition among States, and good publicity for best practices, as through the smart cities website, is an example of reform by stealth. This can overcome political constraints that block land and labour market reforms. Better data enables further opportunistic reform—digital land-title records can be built and shared. Federal co-ordination is improving as the fast response time of the Inter-State GST Council demonstrates. The next stage of devolution

⁹ In 2017 India climbed to 100 on this index and in 2018 reached 77—showing that speedy improvement is possible, and the index does focus efforts of government departments. There is an argument that focusing on this ranking, based on a narrow data base, can lead to a neglect of other necessary reform. It is good, however, to begin somewhere and get results. NITI Aayog could create its own more inclusive rankings.

of power and funds to 3rd tier municipalities and panchayats requires more attention, however.

There are some improvements in public services, for example from the use of private contractors in city cleaning and garbage collection, but a steady deepening of democracy is also helping counter the under-provision of public goods we continue to suffer from. Horizontal social networks are complementing the vertical state hierarchy or substituting for it. A recent example of this was the Kerala floods relief effort in 2018 where civil society rose to the occasion valiantly. Social media is facilitating spontaneous organization in response to calamities or to orchestrate a viable response to long-term problems. The law on corporate social responsibility is forcing firms to contribute. They are financing many NGOs active in local capacity building and governance.

Technology is also improving public services. For example e-metering and pre-paid mobile cards can considerably reduce electricity pilferage, and the human interface that delivers free electricity at the cost of a reduction in its quality and viability. Even the poor are willing to pay for uninterrupted electricity supply.

Full inclusion in a country of more than a billion people increases the market size for mass consumer goods and induces innovation. New technologies can reduce prices of mass goods in a virtuous cycle. An example is how Non-Banking Financial Companies are able to lend to small enterprises based on cash flow data rather than the collateral banks demand. This is part of the ongoing formalization in the economy.

Diversity and demography, together with migration to new and hopefully better planned cities all support innovation. India's urbanization is also proceeding faster than measured or recorded. Rapid growth in so-called census towns, again suggests a rapid pace of non-rural employment growth. States have to give the final urban status but they delay because of tax and municipal service provision issues. Towns themselves do not want to lose rural development funds. One reason public services are so poor is that facilities tend to be cut to match funds available, rather than raising funds to provide a uniform level of services. Tax regime changes in octroi and GST could be used for a proper devolution of funds that removes such dis-incentives. Land-value appreciation with development can be more

systematically used to finance facilities; user charges tied to more accountable provision and quality of public services, as part of wider fiscal consolidation and tax reform.

A recent worldwide puzzle is the slowdown in productivity growth after the global financial crisis. But India has somehow avoided it. Unorganized sector compound annual productivity growth (7.2%) over 2011-2016 exceeded that in the organized sector (3.2%) (CSO 2017). There is a long way to catch-up, however, from our current levels of about 45 compared to the US frontier at 100. But the story of ICT in India from the body-shopping associated with Y2K at the turn of the century to the creation of value-added products at Koramangala demonstrates this possibility.

The rapid spread of smart phone use and the mobile Internet is sparking many kinds of inclusive innovation—for example taxi services and ride sharing. This unleashing of natural creativity and innovation is not only raising growth today but may help India avoid the middle income trap while sustaining services-led employment and growth.

3.5. Employment: Jump to the future

Productive employment is increasing and can increase further if one looks beyond the traditional labour intensive manufacturing where India lags, since technology and the structure of employment is also changing. Measures that will enable the country to jump to the future can be divided into short-, medium- and long-term. Progress is occurring under each of these.

Shorter-term measures address current skill shortages. They can be flexibly adapted to the nature of the workforce and to industry requirements. While three month training equips first generation literate rural school leavers for retail malls, three month nano degrees can re-train and equip industry workers with new skills linked to clear standards set in industry. Short-term training can provide quality ladders, allowing workers to improve from whatever their level is and industry to find the required skills.

But for this to happen two major bottlenecks have to be removed. First, the completion certificate government programs require is difficult to get from informal sectors—this seriously reduces the programs contribution in general and to up skilling the informal sector in particular. There is a fear that government funds will be misused without formal

certification. Flexible big data and Aadhaar and mobile-based verifications should be designed and accepted. Second, industry training programs are less effective because industry bodies do not agree on common standards. Standards tend to vary with their foreign collaborators needs. Regulators must ensure standardization so that in-house technical industrial training in one industry is relevant in another. As more formalization of the economy raises the tax base, the government will be able to spend more on training, which is specially required for the MSME sector.

For medium-term employment expansion, India could refocus its attempts to develop labour-intensive manufacturing on a few sectors with potential.

Estimates for the 2000s show employment elasticity in Indian manufacturing was only 0.09 compared to a world average of 0.3. This is unacceptable for a populous country. For change to occur, labour laws that induce industry to substitute towards capital need to be modified. Second, relatively low-skill labour intensive industries could be encouraged. These include textiles, electronics, chemicals and food processing and are sectors where export potential exists. The government has given incentives such as tax deductions and provident fund contributions for new employees and skilling support as well as allowed fixed term employment in some labour intensive sectors. Issues around textile exports were examined in the industry section.

Apart from manufacturing, construction has a higher employment elasticity of 0.19. Stimulus to low income housing, and revival of construction in general, will improve job creation.

Service industry will continue to be a major employer. Health and education services are severely under-provided in India. Their expansion at all levels will improve the capability of the work-force even while providing jobs. There are attempts to reform the Indian Medical Council that creates entry barriers and chokes the expansion in the supply of doctors and nurses. New teaching facilities can be judged on the basis of accreditation and outcomes rather than infrastructure, and competition encouraged. Primary health centers with Centre-State and private partnership under Ayushman Bharat are a good initiative.

In the long-term the quality of primary education needs to improve. At present schools are not even teaching the basics effectively when they now have to prepare students for flexible

lifelong learning, giving them a thorough grounding in code languages and the ability to pick-up and work with the new technologies that are coming. This requires government schools to be freed from state control, and allowed to compete and to innovate in response to community needs while being subject to community discipline.

It is feared automation will destroy jobs especially low-skill ones. For example, robots are being developed to cut cloth, so that textile production may also be automated. Answering robots are already replacing workers in call centers. But historically, although technological change made some occupations obsolete, it also created new jobs, and raised income levels. Mechanical jobs get taken away, but new complex tasks are created. Rising quality and levels of education are essential for mastery and creation of new highly productive jobs that should define the India of tomorrow. Availability of social insurance encourages risk-taking. The Right to Education (RTE) Act needs to be modified and based on outcomes, not on inputs such as infrastructure.

India's informal employment structure is well-suited to align with worldwide changes towards the so called 'gig-economy', where skills are made available to multiple employers through the Internet, in lieu of formal 9 to 5 jobs. For example, Internet agencies standardize and better match a range of services, thus improving their quality and salaries. India has, however, to position itself for this by creating skill ladders for different levels of training and capability.

4. Diversity and external shocks

India's opening out has coincided with a large number of external shocks and these risks are ongoing. QE and near zero interest rates in AEs after the GFC led to capital flow surges into EMs in search of yield. Global more than domestic factors were responsible for these risk-on inflows. Risk off periods of outflows normally coincided with US financial tightening¹⁰. In 2018 US political actions such as sanctions against Iran provoked a rise in oil prices while its large tax-cut based fiscal stimulus raised growth, interest rates and strengthened the dollar, provoking outflows from EMs. An EM such as India, whose CAD rises with oil prices, is particularly vulnerable. The CAD widened and there was rupee volatility.

¹⁰ Inflows to EMs over July 2009-June 2014 were \$2tn. In 2017 \$160bn came in. In the 9 largest EMs outflows over 2008/09 were \$0.5tn; in 14/15 \$1tn flowed out. Estimates for EM outflows over 2018 as QE exit occurs go up to \$100bn.

The IMF recommends a flexible exchange rate, reduction in government deficits and a last resort to cautious and temporary capital flow management measures as ways for EMs to deal with these risks. But a floating exchange rate can be too volatile or appreciate too much, while productive government expenditure is replaced by FPI funded real estate bubbles.

A global risk often flagged is large EM corporate dollar debt taken in the period of low interest rates¹¹. In India, however, caps on corporate foreign borrowing kept corporate dollar debt low. Its gradual and sequenced approach to capital account convertibility was responsible for this mitigation of external shocks¹². Therefore continuing with careful and gradual liberalization is one way for India to manage external risks. There were large fluctuations in foreign portfolio flows and a rise in the share of debt flows as caps on these were relaxed, while Indian interest rates remained too high relative to world rates. As debt inflows flocked in, there was real appreciation and export growth stagnated in 2017 despite a rise in world trade. Debt inflows, however, gained from the appreciation. Swap of foreign for domestic securities from sterilization of reserve accumulation increased yields on government securities.

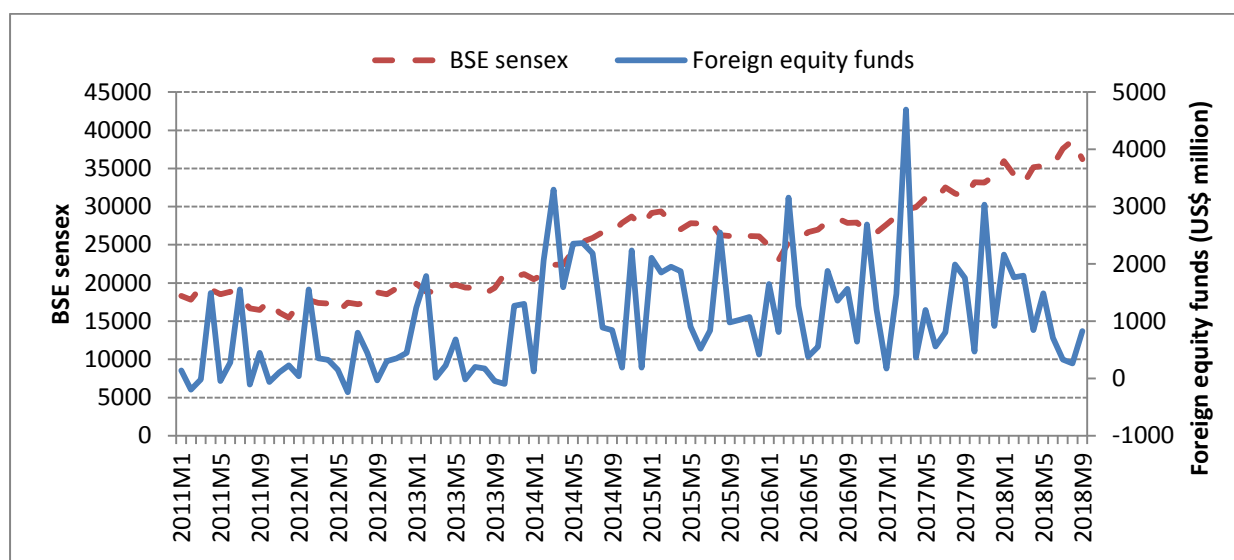


Figure 3: Monthly foreign equity flows and the BSE Sensex

¹¹ IIF 2017 estimates non-financial corporate debt grew from \$5tr 2005 to \$21tr 2016.

¹² In India foreign holders accounted for less than 5% of debt, compared to 38% in Indonesia during the taper tantrum.

Foreign equity flows are also volatile but despite exit of foreign investors stock prices continued to boom for much of the period as Indian households adopted the mutual fund investment route. Figure 3 shows a steady rise in stock indices despite volatility in foreign equity flows. There was sufficient diversity in views about the economy for different types of investors to come in and buy on dips. A similar expansion of domestic retail debt markets should be a pre-condition for further liberalization of foreign debt inflows. The pace of capital account liberalization, which has reduced external risks for India, must therefore continue to be slow.

Oil price shocks are a major risk for an economy dependent on large oil-imports. Political tensions did raise global oil prices above US\$ 80 in 2018 but the long-term trend is toward softening, as OPEC shows signs of fissures, shale oil provides an alternative and there are trends towards substituting away from oil towards renewable fuels. By November the Indian oil basket was at \$65. A middling oil price range between 60-70 suits both oil importing and exporting countries, while maintaining future oil supplies and reducing the future volatility. The political economy of oil pricing is likely to maintain this range.

India's oil intensity has been falling since 2005, because of the larger share of less-energy intensive services output, and the thrust on renewables. More pass through of oil price increase since 2012 is adding to it. Long-run security can improve as these trends towards reducing oil intensity continue. Renewable energy can itself be a growth area. Specific competitive sectors must still be encouraged, however, for the export expansion required to cover the oil import bill. India gains from rising export demand and non-resident remittances if oil prices do rise. This is another example of resilience from diversity. It is also a major exporter of refined oil.

The US reached the peak of its post GFC recovery in 2019, and global growth is slowing. The US Fed has turned dovish. Not only are more rate rises unlikely, but it has said it will maintain its balance sheet, so liquidity does not shrink. As a result risk-off will reduce for emerging markets. India's large domestic economy insulates it somewhat from US-China trade wars. It may even stand to gain if it participates in developing emerging market trade, captures export markets China vacates and relocates FDI and production towards itself by cleaning up its industrial environment.

Although household savings ratios have reduced, the share of financial savings has increased. This will also moderate the CAD. A CAD also implies investment exceeds domestic savings. Financial savings largely fund investments involving goods that are tradable, while physical savings are invested more in non-traded goods, such as in real estate. Estimates of physical savings in the household sector are identical to those of investment in the unorganized sector. It follows, then, that if organized sector investment exceeds financial savings, it will have to be financed by foreign savings that is, by running a CAD.

In recent years the savings GDP ratio has fallen to about 30 as growth slowed. But it is household physical savings that have fallen, while household financial savings have recovered from a low of 8 per cent in 2011-12. Savings of non-financial corporations that are held in financial assets have risen. This better financial intermediation of domestic savings also reduces the CAD and dependence on volatile foreign capital inflows.

During external stresses, however, domestic demand cannot be neglected, and is an important smoothing mechanism. Low growth lasted for only one year after the 2008 GFC but persisted after 2011 because macroeconomic policy was countercyclical after 2008 but not after 2011. Smart and content-sensitive macroeconomic policy can act counter-cyclically with a complementary combination of supply side actions, feasible reforms and capital flow management. There is space for such action consistent with flexible inflation targeting implemented by an independent monetary policy committee. Depth and diversity is now sufficient to allow moderation of external shocks.

5. Conclusion

Indian catch-up growth was volatile because of aggravation of shocks due to unaddressed critical bottlenecks while pro-cyclical macroeconomic policy compressed aggregate demand. Policies were also sometimes not appropriate for the context. Diversity has built sufficient resilience, however, for policy to be able to smooth shocks.

Inappropriate policies came from incorrect macroeconomic stabilization understanding. In a populous country with underemployed labour, sectoral bottlenecks and price shocks result in inflation. For example, a CAD does not necessarily indicate excess demand, but points to an inability to adequately expand export sectors. India's CAD tended to be smallest in periods of highest growth, suggesting it did not come from excess demand but from oil shocks that

reduced growth¹³. The large share of intermediate goods imports implies that an undervalued exchange rate would add to cost pressures and end in real appreciation. Therefore the Indian growth path requires a constant or mildly appreciating real exchange rate with focused sectoral and general supply-side measures to improve exports, unlike the Chinese undervalued real exchange rate that helped its export push. A policy demand squeeze can be counter-productive and self-fulfilling if it reduces export capacity. As appreciation reduces foreign demand, if domestic demand is not maintained it can hurt domestic production creating the over dependence on imports seen in India since 2017.

Apart from critical bottlenecks in agriculture and energy India has to grow out of poor public services, health, nutrition and education quality, congestion and pollution, failures in land, labour and financial markets, failures of market integration and of fiscal federalism that give heterogeneous quality of life in the States. These are the structural reforms that can transform a high cost economy, and shift it to fuller and better utilization of resources. There is progress. But given entrenched political resistance in an unwieldy federal structure, rather than the straightforward liberalizing land and labour reform the World Bank recommends, opportunistic reform by stealth that intensifies and uses trends at the margin may be more feasible. The latter include use of technology to improve public services and land records; generating competition, coordination and convergence across States; and psychological triggers such as India's move up the ease of doing business ranking to improve coordination across multiple government agencies. This would be contextual and feasible and therefore pragmatic reform much as the countries that managed to sustain high growth undertook.

If land and labour reforms remain inadequate even 30 years after liberalizing reforms began, there are probably intractable political hurdles complicated by India's federal structure and division of responsibilities. The reform mantra of stabilization, liberalization and privatization by itself would also hurt domestic industry and investment making the economy too consumption and import dependent. Recent years show such trends, which need to be reversed to achieve a more balanced path. Change has reached a critical mass especially because of relief in major bottlenecks. With appropriate reforms that build on the changes, sustained high growth is possible.

¹³ Goyal and Kumar (2018), in a careful empirical estimation, find the CAD to be countercyclical in India. A fiscal deficit shock raises the CAD, but high impact growth shocks and large variance oil shocks lead to overall divergence of the deficits. There is some evidence of the impact of aggregate demand on outcomes, but it is moderated by supply shocks and compositional effects.

References

Acemoglu, D. and J. Robinson. 2012. *Why Nations Fail: The Origins of Power, Prosperity and Poverty (1st)*. 1st ed. New York: Crown, 529.

Corbo, V. and S. Fischer. 1995. 'Structural Adjustment, Stabilisation and Policy Reform: Domestic and International Finance', chapter 44 in J. Behreman and T.N. Srinivasan (eds.) *Handbook of Development Economics*, Vol. 3: 2845-2924, North-Holland, Amsterdam: Elsevier.

Dev, M. 2018. 'Transformation of Indian Agriculture: Growth, Inclusiveness and Sustainability', Presidential Address at the 78th Annual Conference of the Indian Society of Agricultural Economics, November 1-3, New Delhi.

Goyal, A. 2009. 'Swan Diagram', in Ramkishen S. Rajan and Kenneth A. Reinert (eds.), *Princeton Encyclopedia of the World Economy*, Princeton University Press.
[\\192.9.13.155\e-library\coursemat\961.pdf](https://192.9.13.155/e-library/coursemat/961.pdf)

Goyal, A. 2012. 'An Appraisal of Five Year Plans and the Future', in *Yojana, special issue on 'An Approach to 12th Five Year Plan– Issues and Challenges'*. January.

Goyal, A. 2014. 'Purchasing Power Parity, Wages and Inflation in Emerging Markets', *Foreign Trade Review*, 49(4).

Goyal, A. 2015. 'Sustaining Indian Growth: Interests Versus Institutions', *India Review*, 14(3): 330-351, July-September.

Goyal, A. 2018a. 'The Indian Fiscal-Monetary Framework: Dominance or Coordination?' *International Journal of Development and Conflict*, 8(1): 01-13.

Goyal, A. 2018b. 'Indian Banks and the Prevention of Corruption Act: Freedom and discipline,' *IGIDR working paper* no. WP-2018-021. Available at <http://www.igidr.ac.in/pdf/publication/WP-2018-021.pdf>

Goyal, A. and A. Kumar. 2018. 'The Effect of Oil Shocks and Cyclicity in Hiding Indian Twin Deficits', *Journal of Economic Studies*, 45 (1): 27-45.

Mukerjee, A., A. Paul, A. P. Sarma and S. Sinha. 2018. 'Trade, Trade Agreements and Subsidies: The Case of the Indian Apparel Industry', *ICRIER Working Paper* no. 365. Available at <http://icrier.org/publications/working-papers/>. Accessed on November 2018.

NABARD. 2018. All India Rural Financial Inclusion Survey 2016-17. Available at https://www.nabard.org/auth/writereaddata/tender/1608180417NABARD-Repo-16_Web_P.pdf. Accessed on October 15, 2018.

Government of India. 2014. Report of the Expert Group to Review the Methodology for Measurement of Poverty. (Chair: C. Rangarajan). Planning Commission. Available at http://planningcommission.nic.in/reports/genrep/pov_rep0707.pdf. Accessed on October 2018.

Rangarajan, C. and M. Dev. 2018. 'How the Data Sets Stack Up', *The Hindu*, April 4. Available at <https://www.thehindu.com/opinion/lead/how-the-data-sets-stack-up/article23427619.ece>.

Williamson, J. 2003. 'The Washington Consensus and Beyond', *Economic and Political Weekly*, 38 (15): 1475-1481. April 12.

World Bank. 2008. *The Growth Report: Strategies for Sustained Growth and Inclusive Development*, Commission on Growth and Development. Washington, DC: World Bank. Available at <https://openknowledge.worldbank.org/handle/10986/6507>.

World Bank. 2018. *India Development Update – India's Growth Story* (<http://documents.worldbank.org/curated/en/814101517840592525/>)

Zhang, Z. X. 2018. 'Energy Price Reform in China', in Ross Garnaut, Ligang Song and Cai Fang (eds.), *China's 40 Years of Reform and Development: 1978–2018*, China Update, ANU Press.