

The Indian **ECONOMY**

A Macroeconomic
Perspective

Nilanjan Banik





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NILANJAN BANIK

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Preface

I earn my living by teaching economics. Most part of this book was written while teaching macroeconomics at Institute for Financial Management and Research and visiting Indian Institute of Management at its Indore, Ranchi, and Rohtak campus. In spite of my training in economics, there were instances when I did not have a ready answer for some questions asked in the class. Back to the drawing board, I realized that the problems were with the textbooks that I was using for teaching. In India, the standard practice has been to teach macroeconomics using textbooks that are written in context of the developed economies such as Western Europe and Northern American economies. These books put more emphasis on macroeconomic theories without explaining much about how macroeconomics works for any developing country. The way economy works for a developing economy like India is different and it certainly needs a different treatment. Part of the reason why I had to fend for myself without an impromptu answer is because the available standard macroeconomic textbooks have limited information about how macroeconomics works for India. Thus, the idea about writing a book developed that would showcase the application of various macroeconomic theories purely in the Indian context.

This book has been written keeping students in mind. My experience suggests that students are more interested in clearing their *fundas* (concepts). This book is for anyone who wants to clear their concepts on Indian macroeconomy. It will also be useful for the undergraduate and graduate students, as well as for any policymaker interested in economics. I have used data from various sources such as National Account Statistics, Planning Commission, Reserve Bank Bulletin, Economic Survey, etc. to explain various macroeconomic events in India. In this fashion, the readers will get familiarized with where to get the data from, how to interpret the data, and the limitation of using such data. I have also used various case studies which are mostly editorials that I wrote for popular business newspapers such as *The Financial Express*, *The Hindu Business Line*, and *The Economic Times*. Through these editorials/case studies, the readers can relate to real-world economics, using the theories mentioned in the book.

As my overarching objective is to address the need for someone interested

in understanding Indian macroeconomy, I consciously made a decision of writing this book on the principles of what/why/how. For instance, [Chapter 1](#) begins with, ‘What is demand management policy in macroeconomics? Why we should be worried about demand management policies? How demand management policies are formulated in India?’ Readers will be able to understand the reason for inflation and unemployment, and the relevance of monetary and fiscal policy to control them. In [Chapter 2](#), I have discussed three important but interrelated concepts: growth, development, and income distribution. Readers will be able to understand the concept of human development and the reasons for Naxalism (ultra-left movement) in India. [Chapter 3](#) deals with a detailed analysis of demand management policies, both fiscal and monetary, policy instruments that are used for formulating fiscal and monetary policies, and how national budgeting and monetary policy are done in India. Topical issues such as goods and services tax, and application of Taylor's rule in formulating monetary policy are discussed. [Chapter 4](#) is about the reason for food price inflation and jobless growth in India. In [Chapter 5](#), I have talked about reforms and their effect on five broad areas, namely, infrastructure, labour, corporate law, services, and judiciary. In [Chapter 6](#), I concentrate on India's trade pattern and how it has changed during recent times. In [Chapter 7](#), the discussion is about measuring the *correct* value of the exchange rate and the plausible explanation for a currency crisis. [Chapter 8](#) is about India and the World Trade Organization (WTO). Besides examining the WTO structure, I discuss, India's negotiating stance at the WTO and major negotiation milestones achieved at various WTO rounds.

The thought of writing this book was there in my mind for a while. But then you have to devote considerable time and energy to write as such. My thanks to Subhra—my wife—in particular, to be able to put up with the time devoted towards writing this book. A special thanks to Mr N. Unni Nair and Mr Vivek Mehra for having faith in this product and for taking it forward.

Nilanjan Banik
Hyderabad

CHAPTER 1

Introducing Macroeconomics

WHY ECONOMICS

In India, full-fledged economic reforms started in 1991. Reforms came in the form of liberalization and globalization. Liberalization essentially brought down interest rates and allowed private participation in the manufacturing and services sector, earlier mostly kept under government control. Globalization came in the form of lower tariffs and phasing out of non-tariff barriers (NTBs) such as quotas, essentially allowing foreign firms to invest in India.

The effect of economic reforms is telling. In terms of economic well-being, the average Indian is now much better off in comparison with the pre-reform period. Also, compared to 1991, when Indian economy was on the verge of sovereign default, at present, the Indian economy is relatively better off. There has been an improvement, both from the perspectives of average individual well-being and national well-being. Individual economic well-being is measured in terms of personal income, ownership of consumer durables such as a house, cell phone, iPod, digital camera, refrigerator, etc., financial assets such as bank deposits, equities, mutual funds, etc., and a greater sense of security arising out of better governance. Likewise, national well-being is measured primarily in terms of the growth rate of gross domestic product (GDP) or gross national product (GNP), foreign exchange reserves, foreign direct investment (FDI), foreign portfolio investment, current account deficit (CAD), unemployment rate, and inflation rate.

A common man, however, is worried about his/her individual well-being and the factors affecting it. To him/her, the idea of economic prosperity can be encapsulated in a higher growth rate of GDP and lower inflation and

unemployment rate, since these are the factors which directly or indirectly affect his/her well-being. During periods of high inflation or high unemployment, not only does the purchasing power of money decline, but it also becomes difficult for an individual to find a job. On the other hand, people in general are happy when expected future earning opportunities are on the rise, and when they have to spend less money on goods and services. It is not surprising that politicians, policymakers, and the media always refer to inflation and unemployment rates while commenting on the state of the economy.

Add to this an environment of better governance, and ability to participate in the market (where firms are able to sell their goods and services, labourers sell their skill, and banks sell their capital) and you have the most perfect economy to settle in. So we need to understand what causes inflation and unemployment, and how to achieve a higher growth rate of GDP. A study of macroeconomics theory will help us do this; it will give us a better insight into the factors underlying economic prosperity and the way to sustain this prosperity. Therefore, we start our discussion with these two topics.

At this point, it is worth noting that while economic prosperity is a long-run concept, sustaining this prosperity by reducing fluctuations is a short-run phenomenon—something that needs to be achieved through demand management policies from time to time. What are demand management policies and why are they essential? This is something we will discuss next.

DEMAND MANAGEMENT POLICIES

As the name suggests, demand management is all about managing demand for a given supply of output. There are five components of demand, namely, consumption expenditure (C), investment expenditure (I), government expenditure (G), exports (X), and imports (M). Managing demand is important, because when there is a greater demand for output relative to its supply, it causes inflation. On the other hand, slack demand conditions lead to excess supply. Firms unable to sell goods and services do not hire, and may even retrench workers, leading to unemployment. Hence, demand management policies are important to curb inflation and unemployment.

The persistence of inflation and unemployment has to do with the mismatch between economy-wide demand and supply. Economy-wide demand and supply conditions are aggregation of all individual market

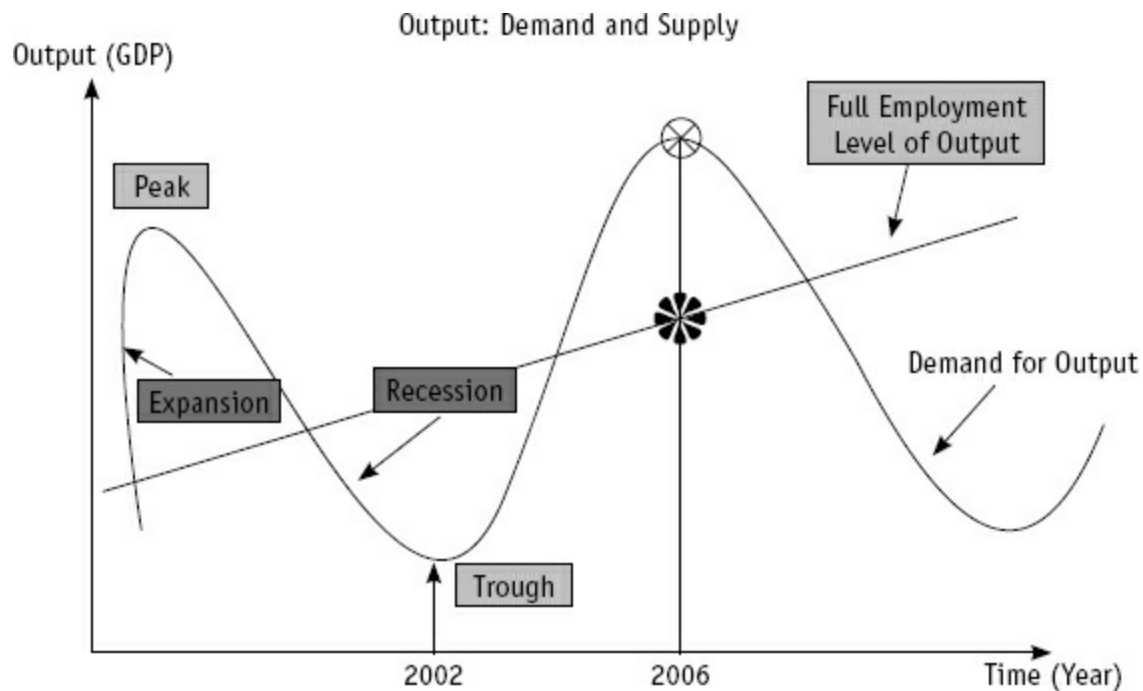
conditions. For instance, when we want to buy a product, we offer a price for it. We may be willing to pay a higher price when we believe that there are many others who want to buy the product and the supply of it is limited.

The newly launched Apple iPhone is an example. Neither Apple Incorporation which launched iPhone nor carrier AT&T Incorporated could figure out how many iPhones would be available at the launch, but all indications pointed to a shortage. There were queues on the roads of the United States of America (USA) days before the iPhone went on sale, and the product attracted a huge premium on online trading sites like eBay. People were willing to pay a higher price due to the excess demand for this product.

Just like the market for iPhone, in any economy there are hundreds of other such markets, such as markets for teachers and bankers (service providers), rice and wheat (agricultural produce), and automobiles and apparel (merchandise goods). Aggregating all the market conditions leads us to the economy-wide demand and supply situation. Problems arise in the form of inflation and unemployment whenever there is a mismatch between demand and supply.

The concept of demand management can be explained further through [Figure 1.1](#). The total value of goods and services, that is, GDP is measured on the vertical axis, and time is measured on the horizontal axis. The demand-side component of output is represented by the swivelling line, while the supply-side component or full employment level of output is represented by the straight line. It is, however, not necessary for the supply-side component to be a straight line—the supply function is shown to be linear only to simplify our explanation. The difference between the demand and the supply of output is known as ‘output gap’.

Figure 1.1 Demand Management



The output gap is positive when the demand for final goods and services is higher than supply. When there is an excess demand, the economy experiences a rise in price or inflation. The opposite takes place when there is recession—a condition representing excess supply and marked by a rise in the unemployment rate. Managing demand is essentially about how policymakers can minimize the output gap by using fiscal and monetary policies.

Going by our example, during 2006, the output gap was positive and the economy experienced a rise in price as a result of excess demand. Similarly, during 2002, the output gap was negative and the economy experienced an excess supply of output. Both these situations call for demand management, or fiscal and monetary policies to minimize the output gap.

Remember, when we refer to the growth rate of any economy, *it is the growth rate of real GDP*. Nominal GDP is not considered as a measure of the growth rate of any country as GDP numbers can be inflated by inflation. Nominal GDP is evaluated at current market price and includes changes in market price that have occurred during the current year due to inflation. Real GDP is evaluated at the market price of some base year. If 2005 is taken as the base year, then real GDP for 2010 is calculated by taking the quantities of all goods and services purchased in 2010 and multiplying them by their 2005

price. In 2011, the size of the Indian economy was US\$ 1.85 trillion measured in current (2011) price.

When the real GDP grows for two consecutive quarters, the economy is said to be in an expansion stage. Expansion is marked by a spurt in economic activity, industrial production, employment, and real income. A recession, on the other hand, is marked by a significant decline in economic activity. Generally speaking, recession is a condition where the real GDP has declined for two consecutive quarters.

It is worth noting that persistence of expansionist and recessionary phases are not similar. An end to expansion and a start of recession is marked by *peak*, whereas a *trough* marks the beginning of expansion and an end to recession. *Cycle* refers to fluctuations in demand for GDP for a given supply.

SUPPLY MANAGEMENT POLICIES

Supply of output is determined by the availability of factor endowments such as labour, capital, organization, and technology in the economy. Every economy wants to achieve a higher standard of living and this can be achieved through higher per capita provisions of goods and services. Per capita income is a broad way to represent the average economic well-being of a nation—‘average’ because we divide the relevant economic indicators by population. For instance, per capita Indian GDP for any particular year means GDP divided by population figures for that year in India.

In absolute terms, during 2011, India's GDP was the 11th largest in the world. In terms of purchasing power parity (PPP), that is, when GDP value is measured correcting for differences in cost of living across countries, our GDP is the third largest in the world after USA and China. Do we really need to be excited about this? Not really. In terms of per capita income, we are very close to falling into the category of low-income countries.

The World Bank classifies countries into three groups: low-income, middle-income, and high-income. High-income countries are those with a per capita income more than US\$ 12,746 per annum in 2013. Middle-income countries are the ones with per capita income more than US\$ 1,045 per annum and less than US\$ 12,746 per annum in 2013. Countries with per capita income less than US\$ 1,045 per annum in 2013 are classified as low-income countries. As [Table 1.1](#) indicates, during 2011, India's per capita income (measured in current US dollars) was US\$ 1,843 per annum, putting

us barely in the lower middle-income category. Even if our income is measured in terms of PPP, we would belong to the middle-income category. The word ‘current prices’ means the figures are not inflation-adjusted. For India to belong to the category of ‘developed’ countries, there is a need to increase the value of per capita full employment level of output. Now you can check yourself by looking at the World Development Indicators, the World Bank Database, as to which countries were classified as high-, middle-, and low-income countries, during any particular year.

But achieving such an increase in the value of per capita output is a time-consuming process and cannot happen overnight. It takes time for technology and endowments, in the form of labour of requisite skill and quality (L), and capital stock (K) to increase. For instance, inventing a new product or a process takes time. Similarly, an increase in the availability of capital and skilled labour cannot happen overnight. Creation of skills or human capital requires time, and creation of capital requires resources—something the economy can create through a sustained period of growth. So, policymakers have little or no control over as to how much an economy can produce in the short run. But they can at least influence the future availability of output—by allocating funds for developing technology (research and development (R&D) activities), education (human capital), health, institutions (school, post offices, hospitals, and prisons), and infrastructure (transportation, communications systems, water, and power lines). Hence, supply management deals with policies that augment the future availability of a country's per capita output.

Table 1.1 Level of Well-being

Countries	GDP (2011) (Current in Billion US\$)	PPP GDP (2011) (Current in Billion US\$)	GDP Per Capita	
			2009 (Current US\$)	2010 PP Estimate (Current US\$)
Low-income Countries				
Bangladesh	115	282.5	608	1,700
Burundi	1.7	3.6	163	400
India	1,843	4,400	1,140	3,700
Nicaragua	7	1	1,088	3,200
Middle-income Countries				
Brazil	2,282	2,518	8,251	11,600
China	6,989	11,290	3,749	8,400
Malaysia	247.6	447	6,902	15,600
South Africa	422	554	5,733	11,000
High-income Countries				
Austria	425.1	351.4	45,638	41,700
Singapore	266.5	314.2	37,790	59,900
USA	15,050	15,050	45,793	48,100
United Kingdom	2,250	2,480	35,129	35,900

Source: World Development Indicators Online, World Bank (2013).

RECONCILING DEMAND AND SUPPLY MANAGEMENT

Policymakers have two important roles to play. First, managing demand where the objective is to control inflation and unemployment. Second, increase the long-term availability of per capita output (see [Box 1.1](#)). Demand management policies, that is, fiscal, monetary, or combination of both, are quite effective in the short run. For instance, in response to a high level of inflation (wholesale price index [WPI]) of about 6.6 per cent during March 2007, Reserve Bank of India (RBI) followed a contractionary monetary policy by raising interest rates.¹ The objective of bringing down inflation was achieved within a quarter. During July 2007, inflation rates were down to around 4.6 per cent.²

Box 1.1: Essence of Macroeconomics

Why Macroeconomics?

Demand Side: $GDP = C + I + G + X - M$

Supply Side: $GDP = f(L, K)$

Demand Management Policy: To Minimize Output Gap

Supply Management Policy: To Increase Long Term Availability of Per Capita GDP

However, any policy measure to increase the supply of output requires time. For India to double its per capita income per annum, its GDP has to grow at an average annual rate of 9 per cent for the next ten years. So managing supply-side components is not that effective in the short run; however, in the long run, components such as investment in education, healthcare, and physical infrastructure will have an influence over the availability of future supply of output. It is important to note that while government formulates fiscal policy, it is the central bank or RBI which formulates monetary policy. The two policy variables in fiscal policy are government expenditures and tax rates, whereas in monetary policy, the policy variables are money supply and interest rates. These issues will become clearer once we start discussing monetary and fiscal policies in greater detail.

In literature, the supply-side component of output is known as trend component or full employment level of output. Likewise, the demand-side component of output is referred to as the transitory or cyclical component. In countries like India, for operational reasons, the Twelfth Finance Commission's macroeconomic framework added another component called the 'potential' component, as the 'full employment' level or trend component of output was not achievable because of structural constraints.³ In crude form, structural rigidities refer to the difficulties of doing business in India. The World Bank in its 'Doing Business 2012 Report', places India in the 132th position out of a sample of 185 countries, which is far worse than China (91st), Sri Lanka (81st), Bangladesh (129th), or Pakistan (107th), when it comes to the convenience of doing business in India.⁴ Removing these structural rigidities will actually increase the supply or trend component of output in India. As the essence of understanding macroeconomics is about understanding demand management policy, in the next section, we look at various theories that have evolved over time suggesting how to control the output gap.

CONTROLLING OUTPUT GAP: AN ECONOMIST'S PERSPECTIVE

Demand management policies would not have been important if there was no fluctuation in demand, taking the output away from the full employment level

of output. As to why demand fluctuates and the output gap persists, there are various theories.

Under the classical assumption, if the economy is not under full employment level of output, then price flexibility of both input and output will ensure that the economy moves towards full employment level of output. There is no necessity for government intervention. The economic system self-corrects through price mechanism, and input and output markets return back to equilibrium without government intervention. The classical school of economists (particularly, the Austrian school of economists led by Hayek, Robbins, and Schumpeter) believed that recession should be allowed to run its course, as it is a result of excess investment during an economic boom. Policymakers should not intervene to increase aggregate demand as this would only make things worse. The choice is between depression at present without government intervention and future depression with inappropriate government intervention. The classical school of thought is more concerned about future growth rather than worrying about short-term instability in the market.

But markets always do not work perfectly as suggested by the classical economists. If the classical assumption of perfect wage–price flexibility was regarded as correct, then the world would not have experienced an event such as the Great Depression. The Great Depression was a severe worldwide economic depression that started in 1930 and continued until the middle of the 1940s. Keynes tried to explain the occurrence of an event like the Great Depression through his notion of effective demand. Effective demand is the quantity of goods and services that consumers buy at the current market price. According to Keynes, economic agents (be it consumers or firms) behave like animals—all of a sudden becoming optimistic or pessimistic about the future. When on average, economic agents become pessimistic about the future, then consumers start spending less money, firms cut down their production, and the economy enters into recession. In Keynesian model, the emphasis is on demand-side factors.

One example illustrates this point. In pre-reforms India (before 1991), graduate students in general found it difficult to get jobs in the organized private sectors. However, things are different now. Economic opportunities that followed reforms have made it easier for young graduates to get jobs. Generally speaking, young people are more optimistic about their future compared to their counterparts during the pre-reforms period.

According to the Keynesian school of thought, to bring an economy back to normalcy and out of recession, there is a need for active government intervention through demand management policy. The government needs to spend money to prop-up aggregate demand, and the central bank follows an expansionary monetary policy so that the cost of capital falls, leading firms to invest more. Keynesian economics advocates a mixed economy—predominantly private sector, but with a significant role for the government and public sector. Because decisions by economic agents (such as coordination failure in case of firms) can at times lead to inefficient macroeconomic outcomes, it requires active policy responses on part of the government (through fiscal policy) and the central bank (through monetary policy) to bring the current level of output back to the full employment level.

Let me explain coordination failure with an example. If there is an expectation that recession is forthcoming and in response to it a few firms start laying off their workers, other firms might lose demand due to these layoffs and respond by firing their own workers, as the demand for their products reduces. Recession then becomes a self-fulfilling prophecy, creating a need for government intervention. As we see later, this behavioural assumption has been questioned by the rational expectations (new classical) school.

Keynes proposed that government intervention is necessary to restore the economy to full employment level of output. Please note, even at full employment levels, there will be some unemployment as people may be in the process of moving from one job to another. Such level of unemployment which is associated with the full employment level of output is known as the *natural rate of unemployment*.

The synthesis of classical economics and Keynesian ideas, also known as *neoclassical synthesis*,⁵ dominated much of the mainstream economics until the early 1970s. After World War II, the US government and the Western European governments largely followed the Keynesian prescription of active government intervention to control the output gap. Initially, the Keynesian prescription of managing aggregate demand was biased towards using fiscal policy. In 1958, A.W. Phillips showed that wage inflation varies inversely with unemployment.⁶ Higher inflation (resulting from a higher nominal wage rate) leads to a lower unemployment rate. Following Phillips' works, the Keynesian economists started giving importance to monetary policy, in addition to fiscal policy, for controlling the output gap. The synthesis of

fiscal and monetary policies in the Keynesian framework came in the form of IS-LM model, and this model was extensively used during the 1960s.

However, the Keynesian idea of managing demand using fiscal and monetary policies came under severe criticism during the early 1970s. In 1973, the Organization of the Petroleum Exporting Countries (OPEC) imposed an embargo. The decision to boycott the US and Western European economies was a response to these economies' support for Israel in the Yom Kippur War against Egypt. This embargo caused the price of crude oil to jump from US\$ 3 per barrel in 1973 to US\$ 12 by 1974. It resulted in high inflation (price of universal input oil increased) and a steep economic downturn (characterized by a high unemployment rate) for major oil importing nations.

According to the Keynesian group of economists, recession and inflation are two mutually exclusive events. However, high oil price of the 1970s led many Western economies and the USA into stagflation—stagnation and inflation. The Keynesians were puzzled by the outbreak of stagflation because the original Phillips curve ruled out the simultaneous occurrence of high inflation and unemployment.

The new classical school emerged during the 1970s as a response to the failure of Keynesian economics to explain stagflation. The ideas of the new classical economists were similar to the orthodox monetarist view which suggested that demand management policy had little role to play in managing the output gap. Monetarists believed that fiscal policy would be less efficient in context of developing and less developed countries in particular. When the economy is less developed, there is a scarcity of capital. And when capital is scarce, borrowing by the government leads to a higher interest rate. This, in turn, can crowd out more efficient private investment and make the economic adjustment towards full employment a slow process.

Also, if the government does not use borrowed money efficiently and there is corruption in the system, then fiscal expansion may lead to inflation. In addition, since it is difficult to predict the extent of the output gap, demand management policy may, in fact, take the economy away from equilibrium.

Prominent among the new classical economists are Milton Friedman and Robert Lucas, Jr. Two influential works by Milton Friedman essentially led to the revival of the monetarists.⁷ Friedman argued that money supply had no role to play in controlling the output gap. There is essentially no long-run trade-off between inflation and unemployment—something as suggested by

Phillips. Friedman suggested that if inflation were to last for several years, workers and firms would start taking this high inflation into account during wage negotiation. This would cause the wages of workers, and hence input cost of firms to increase, leading to inflation. As there was no change in real wage rates (both output price and nominal wage rate increase), firms would not have any incentive to hire more labour. Therefore, prices would increase without reducing the level of unemployment.

In this case, the Phillips curve is vertical and not convex to the origin, suggesting no trade-off between inflation and unemployment rates. Friedman rose to prominence as his research was able to explain the economic conditions of the early 1970s, when in spite of high inflation, the unemployment rate never came down. Friedman argued that if monetary policy were to persistently attempt to bring unemployment below the natural rate of unemployment (the rate corresponding to the full employment level of output), it would only increase the inflation rate explosively.

Friedman's works regarding the inefficiency of monetary policy in restoring the unemployment level back to the natural rate of unemployment were supported by the work of Robert Lucas, Jr. Lucas attacked the Keynesian school of thought on the ground that it is based on fundamentally-flawed theories. Keynesian theory is not built on a micro-foundation, where utility-maximizing economic agents rationally optimize their decision to arrive at an economy-wide outcome. Lucas argued that Keynesians failed to take into account the endogenously determined expectations formed by the economic agents. As we discussed earlier, Keynes treated expectations exogenously, being driven by animal spirits.

Lucas proposed that economic agents such as governments, firms, and consumers have imperfect information about how the economy works.⁸ While forecasting or forming expectations about the future value of any variable (say, inflation), rational economic agents make the best use of all publicly available information about factors that may affect inflation. Expectations are assumed to form 'rationally' in line with the utility-maximizing behaviour of individual economic agents. However, gathering information is costly. And, often in spite of the best efforts, it is not possible to gather complete information.

For example, government's decision to formulate monetary or fiscal policy is based on certain behavioural assumptions about how the economy works. These behavioural assumptions can be related to the saving and consumption

habits of individuals, or even the investment pattern of firms. If government (central bank) implements fiscal (monetary) policy under certain presumptions about marginal propensity to consume (MPC) and invests, then controlling the output gap may be successful, provided these assumptions are correct. However, if these assumptions are wrong—that could happen when an econometrician wrongly estimates these numbers, or when some smarter economic agents alter their economic behaviour (*i.e., portraying time-inconsistency behaviour*)—then demand management policies will be ineffective and may actually increase variation in the actual level of output. *This is the famous Lucas Critique.*

Also, if the central bank under government directive has been following a rule-based monetary policy for a while (*i.e., increasing money supply by a specific amount every year*), the smarter economic agents try to outsmart the government decision by changing their behaviour. Therefore, the government might not be able to achieve its policy target of controlling the output gap.

During the early 1980s, a newer approach to explain the existence of an output gap emerged. This is known as the real business cycle theory, pioneered by the works of F.E. Kydland and E.C. Prescott,⁹ and J.B. Long and C.I. Plosser.¹⁰ The real business cycle approach argued that it is quite natural to have an output gap.

This is as opposed to both the Keynesian and the new classical approach, where departure from the natural rate of employment is considered to be a state of disequilibrium. These schools believe that society can achieve more employment and lesser inflation when the economy moves towards the full employment level of output. The government and central bank have a critical role to play by formulating an efficient demand management policy. According to the new classical view, this disequilibrium is self-correcting—market forces take care and there is no necessity for government intervention.

In sharp contrast to both these hypotheses, the real business cycle school of thought argues that each stage of the business cycle—be it boom or bust—is at an equilibrium. Although recession is undesirable and represents a shift in the constraints that people face, given these constraints, markets react efficiently and people succeed in achieving the best outcomes under the given circumstances. As per the real business cycle theory, every point in the cycle is in equilibrium. Fluctuations in output and employment are Pareto-efficient responses to real technological shocks (see [Box 1.2](#)). The occurrence of cycles is due to some positive and negative technology shocks that an

economy experiences at every given point of time. Economic agents react by supplying more (less) labour during the time of a positive (negative) technology shock. This is because a positive (negative) technology shock increases (decreases) their marginal productivity and hence their wages. An example of a positive technology shock is the computer revolution, whereas that of a negative technology shock is the 11 September 2001 attack in USA by the militant organization—Al-Qaeda. When there is a positive technology shock, the economy is in the expansion mode, and in the case of a negative technology shock the economy is in the recession mode.

The technological shocks as suggested in the real business cycle hypothesis are exogenous and hence government (or central bank) is not in a position to control them. That is, the government may be successful in controlling demand-side shocks arising out of unanticipated fiscal and monetary policies, but will have little influence over controlling supply-side shocks. Because of positive or negative supply-side shocks and changes in relative prices, rational economic agents optimally respond to such changes in prices by changing their supply of labour and leisure (or consumption). This implies that the observed fluctuations in output are viewed as fluctuations in the full employment level of output and not deviations from the long-term trend component. So the output gap does not exist.

Box 1.2: Technology Shocks

Positive versus Negative Technology Shocks

Positive Technology Shock:

In terms of costs, one MHz computing power declined from \$ 760 to 17 cents in this period of three decades from 1970. Similarly, the cost of storing one mega bit of information declined from \$ 5,257 to a mere 17 cents. The cost of transmitting a trillion bits of information declined from \$150,000 to 12 cents

Gordon E. Moore (Chairman Emeritus, Intel)

Negative Technology Shock: 9/11 Attack

- Jobs lost in New York owing to the attacks: 146,100
- Days the New York Stock Exchange (NYSE) was closed: 6
- Point drop in the Dow Jones industrial average when the NYSE reopened: 684.81
- Economic loss to New York in the month following the attacks: \$105 billion

The real business cycle theory was criticized on the ground that it assumed a perfect world—economic agents have perfect information, perfect competition in the factor (input) and output market, and the existence of a comprehensive set of markets such as markets for capital and land. However, prolonged unemployment in Europe during the 1980s and early part of the 1990s raised questions regarding the plausibility of an economy always staying at equilibrium. This led to the emergence of a new Keynesian group of economists—those who tried to explain the reasons for the market not clearing instantly. According to the new Keynesian group (led by economists like Gregory Mankiw, Lawrence Summers, Olivier Blanchard, Edmund Phelps, and John Taylor, among others), the cause of market not clearing was wage and price stickiness.

So the primary disagreement between new classical and new Keynesian schools of thought is the *flexibility of wages and prices*. Unlike their new classical counterparts, the new Keynesians did not believe in full wage and price flexibility. Building on a microeconomic foundation where utility-maximizing economic agents operate under a rational expectation hypothesis-type framework,¹¹ the new Keynesians were able to show that it is possible that market will not clear in the presence of price and wage stickiness. In fact, price stickiness may lead to coordination failure among rational economic agents, aggravating the situation further.

The reasons for price stickiness can be attributed to ‘menu cost’, and imperfect market structure. The reason for wage stickiness is trade unions. Let me explain. Price is sticky because to change prices, a firm needs to send out a new catalogue to its customers, distribute a new price list to its sales staff, or print new menus in the case of eateries. Even though menu costs are small for an individual firm, such things add up to a large number, when we consider the entire economy.

Similarly, wage stickiness is the result of the presence of labour unions. In fact, the period for which wage contracts are valid and are renegotiated varies across countries. For example, in Japan, wage contracts are renegotiated every year, whereas in the USA, wage contracts are renegotiated every three years. When wages and prices do not move simultaneously, it leads to a situation where money is not neutral. When contracts are staggered, nominal wages show more inertia in the face of shocks than when existing contracts are renegotiated in a synchronized way to accommodate new information. This leads to a condition where market does not adjust instantly, thereby

creating a need for government intervention.

Price stickiness may also lead to coordination failures among firms. For example, following a contractionary monetary policy by RBI, it is not an easy decision for the management in Maruti Suzuki to go for a price cut. A contractionary monetary policy would imply that people will have less real income, resulting from lesser investment in the event of a rise in the interest rate, to buy cars. Ideally, the Suzuki management should go in for a price cut to accommodate a lower real income.

If only Maruti Suzuki were to cut prices, a car buyer would have a higher real income and would therefore buy more products from other companies which may include Ford and Hyundai. But being rational, Maruti Suzuki cares less about the benefits to other companies. Therefore, it would be better off not cutting the prices, if it believes that other companies are not going to cut prices as well. Such coordination failures may result in prices not adjusting in event of lower real income as suggested by the new classical school.

In short, the new Keynesian theories suggest that the classical prescription of controlling the output gap through laissez-faire will not work as the market is not perfect. Real economic phenomena such as menu costs, staggered adjustment of prices, wages, and coordination failures represent substantial departures from the assumption of classical economics. There is a need for government and central bank intervention rather than allowing price flexibility to become the guiding factor to restore the economy back into the full employment level of output.

EXAMINING GDP

Now that we have discussed in detail various macroeconomic policy prescriptions on how to manage an output gap, in this section we talk about how to measure output and the different components of output. Output produced in a country is measured in terms of GDP. GDP is the market value of all final goods and services produced in a country during a given financial year. The word ‘final’ is important.

A ‘final’ good or service is one that is purchased by its final users and is not included in the production of any other goods or services. Also, GDP is measured in value terms to avoid problems arising out of lumping together of ‘apples’ with ‘oranges’ while counting the quantity of production. It does not

make sense to add the quantity of cars produced by TATA in Gujarat with quintal of potatoes produced by a farmer in West Bengal. In order to come to a meaningful figure, it makes sense to convert these heterogeneous quantities to values and then add them up. Alternatively, we can also calculate the GDP by adding up all the wages, interest, rent, and profit components—the total money spent for producing final goods and services.

This is because the total value of production must be equal to the total income generated in the economy. In India, the Central Statistical Organization (CSO) under the Ministry of Statistics and Programme Implementation compiles the data needed to calculate the GDP.

GDP is slightly different from GNP. GDP usually refers to the total value of goods and services produced within the country. On the other hand, GNP is the value of goods and services produced by an Indian citizen and firm, even if the production takes place outside India. For example, if Videocon has an assembly plant in USA, then the value of television sets' production in USA will be counted as a part of Indian GNP, but will be a part of the US GDP. By the same reasoning, value of Ford cars produced in India will be a part of the Indian GDP and will not be included while calculating Indian GNP. That is, GNP includes foreign production by Indian firms but excludes the value of production done in India by foreign firms.

DEMAND-SIDE COMPONENTS OF GDP

We have mentioned earlier that there are five components of demand. Let us take a closer look at each one of these components.

Consumption Expenditure (C). Everyone like you and me consumes some goods and services to meet our daily requirements. Consumption of goods ranges from buying groceries from your local stores to buying consumer durables such as cars, refrigerators, television sets, iPods, digital cameras, etc. Likewise, consumption of services refers to using facilities such as telecommunication, banks, private healthcare, etc. A conspicuous part of consumption has to do with consuming final products. For instance, we buy a Peter England shirt (final output), and not cotton and woven fabrics (intermediate inputs) which are used for producing that shirt. It is to be noted that consumption expenditure is the largest component in the demand-side identity of GDP—with a share ranging between 60 and 70 per cent of the

GDP.

During 2010–11, consumption expenditure in India accounted for 61.6 per cent of the GDP. In government documents such as the Economic Survey and the National Account Statistics, consumption expenditure is referred to as private final consumption expenditure (PFCE). It is important to note that spending only on non-durable consumer goods and services and all goods except land, building, and any other items with longevity less than a year, fall under PFCE. Purchase and construction of residential buildings are not treated as part of PFCE but are included in gross capital formation. Durable goods are defined as those items with a life-span more than a year. Examples are items such as washing machines, televisions, and automobiles. These are a part of the private investment expenditure. Non-durable or perishable items which are part of PFCE include primary products such as agricultural items, fishery, forestry, and dairy items; manufactured items such as pencils, pens, shirts, etc.; and services such as the services of maid servants, drivers, nursing, doctors, etc. If services such as cleaning the house, or rearing children, or even cooking and driving are rendered by someone in the family, then the household does not spend money on these activities. Accordingly, these activities are not counted as part of the consumption expenditure.

What about acquiring valuables such as precious stones, jewellery, artworks, etc.? They are also not counted as part of the PFCE. Valuables are expensive durable goods that do not deteriorate over time, are not used up in consumption and production, and are acquired primarily for their store value. Although the owners of valuables may derive satisfaction from possessing them, they are not used up in a way like any other consumer durables, such as cars, television sets, and computers.

Investment Expenditures (I). This component refers to an investment component undertaken by private corporate entities and domestic households. Households carry out investments in the form of buying flats, houses, land, consumer durables (with more than one year longevity), and stocks. Firms on the other hand carry out investments to manufacture final products using intermediate inputs, which in turn are consumed by households and other firms. For example, in the process of manufacturing John Players brand of men's apparel, ITC (an Indian public conglomerate company) has to initially procure cotton from cotton farmers, process it into woven fabrics, manufacture cotton shirts using these woven fabrics, and finally market these

cotton shirts under the brand name—John Players. Each stage of this production involves a cost and can be taken as investment expenditure. A point to note here is that ITC undertakes all these expenditures with the objective of selling these shirts and to make some profit. Investment expenditures typically refer to the private investment components by corporate entities, like ITC, where the final objective is to make some profit. This is unlike the government expenditure component—something which we discuss next.

Government Expenditures (G). Government expenditures—unlike private investment expenditures—are carried out with the objective of maximizing social welfare. The government spends money predominantly with the objective of providing public goods. Public goods are something which are non-rivalrous and non-excludable in nature—that is, consumption of the good by one individual does not reduce the amount of the good available for consumption by others; and no one can be effectively excluded from using that good. Examples of public goods include social infrastructure (school, colleges, hospitals, etc.), physical infrastructure (roads, ports, airports, water, sanitation, etc.), institutional infrastructure (judiciary, regulatory authorities, audit organizations, police, etc.), and defence. The government also spends money to better distribution of income among its citizens. Examples such as granting subsidies, providing employment guarantee to those below poverty line (BPL), outright grant of funds to people affected by natural calamities, etc., are undertaken with this objective. Government expenditures are not necessarily dictated by a strong economic rationale but are carried out with the objective of improving the general well-being of its citizens. This is the reason why the government is sometimes referred to as a ‘Welfare State’.

It is quite natural to ask that if the government spends money towards provisioning public goods and at the same time not charge for it, then how does one calculate the government expenditure? The method of measuring government expenditure has been a matter of debate among economists. Since government's services are *not sold*, what is agreed is that they can be valued in money terms by adding the expenditure incurred by the government in buying the services of teachers, doctors, public administrative employees, the armed forces, etc., together with the goods and materials purchased to run these different establishments.

Exports (X). Exports are goods and services which are produced in the

domestic economy but are consumed by foreign consumers. A country can export both services and merchandise items. For example, if Tata cars manufactured by the Tatas in India are purchased by people in Europe, then the Tatas will be exporting cars to Europe, and the value of exports will be added to India's exports. This is an example of merchandise exports. India can also export services. For example, if Infosys provides some software-related services to its foreign client in the USA, then the value of exports will be added to India's exports of services. India's major merchandise export items are refined petroleum products, engineering goods (mainly manufactures of metals, machinery, instruments, and transport equipment), gems and jewellery, chemicals, textiles, leathers, handicrafts, and agricultural products.¹² Similarly, India's service exports mainly comprise mode 1 and mode 4 types of services.¹³

Imports (M). Imports are goods and services which are produced in the foreign economy but consumed by domestic consumers. India imports both services and merchandise items. Between 25 per cent and 30 per cent of India's imports consist of crude oil, and the share depends on movements in global prices of oil. Other major merchandise import items are metals (gold and silver), machinery including both electrical and non-electrical, transport equipment, and capital goods, such as chemicals and metal-ferrous ores. In services, a major part of imports are made up of mode 2 and mode 3 type services.¹⁴

Net Exports (X-M). Net exports, that is, exports minus imports, give an idea of the extent of trade openness of an economy. The more open the economy, the more the share of exports and imports as a percentage of GDP. A crude way of measuring the index of openness is the ratio of exports to GDP (or GNP) multiplied by 100. The higher this number, the more open is the economy. For some countries such as Singapore, the index of openness is greater than 100. For a country like Singapore, much of the economic activity involves assembly and export of final products made from imported raw and partially assembled materials. The value in excess of 100 comes from the fact that output is always measured in terms of value added (the value of capital and labour services devoted to assembly/produce final goods) while exports are measured in terms of the total value of goods, including the value of imported parts. A value greater than 100 implies that the value of trade is greater than the value added that goes in assembling/producing the final

output.

Now, let us see what is available in case of India regarding demand-side components of GDP. India's Economic Survey—a document published by the Ministry of Finance, Government of India—contains information about these numbers ([Table 1.2](#)).

Table 1.2 India's Macroeconomic Figures at a Glance, 2010–11

GDP at Factor Cost (Current Price in ₹ Crores)	7,157,412
Saving	32% of GDP
Investment	35% of GDP
Consumption	62% of GDP
Current Account Balance	–2.7% of GDP
Exports	15% of GDP
Imports	23% of GDP
WPI	9.6%
Consumer Price Index-Industrial Worker (CPI-IW)	10.4%

Source: Economic Survey 2010–11, Government of India.

So what do the numbers published in the Economic Survey 2010–11 reveal, or for that matter, how should we read these numbers?

First, consumption expenditure has the largest share in the demand-side components of GDP. Hence, an important component of demand management policy is containing consumption expenditures at a time when the economy is passing through an expansion. For instance, raising tax rates by reducing the net income might have a dampening effect on consumption expenditures. Similarly, an increase in interest rates raises the borrowing cost of capital, leading to lower sales of consumer durables such as flats, cars, etc. Needless to say, such increase in interest rates also hurts the business sentiment and has a negative effect on investment.

Second, in a *closed* economy framework, that is, without considering foreign transactions, one would expect domestic savings to be the only source of investment. Accordingly, what is saved is invested and hence investment is expected to be equal to savings. In the present context, however, there is a divergence between the investment and savings components of GDP. This divergence is on account of the fact that we are considering an *open* economy framework where we allow for foreign transactions. Typically, the more *open* is the economy, the more is the extent of this divergence. If savings are

higher than the investment component, it implies that the country is a net lender. Contrarily, if investment is higher than savings, the country is a net borrower. It is worth noting that the current account balance—which takes into account the inflow and outflow of all transactions on account of trading merchandise goods and services—reflects the difference between saving and investment.

Third is the concept of inflation. Typically, inflation is measured in terms of Consumer Price Index (CPI) and WPI. We will deal more with the concept of inflation later. For the time being, note that the CPI reflects the change in prices for finished merchandise items and services. So, it is a way of looking at inflation from the perspective of a consumer. WPI, on the other hand, reflects the rise in prices for intermediate inputs used for producing the final output. WPI is therefore a way of looking at inflation from the perspective of a producer.

The reason we are using the word *indices* is to compare the rupee value of inflation during different years. For instance, in terms of purchasing power, a 100 rupee note certainly would have been able to buy more baskets of commodities during 1997 as compared to what it bought during 2011. If CPI during 1997 was 90 and during 2011 was 120, then prices on an average increased by $120/90 = 1.3$ times. Therefore, what a 100 rupee note could buy during 1997, a $₹100 \times 1.3 = ₹133$ bought during 2011. Besides WPI and CPI, there is a concept related to core inflation. It refers to the level of inflation adjusted for the seasonal factors. Often prices rise during festive and harvest seasons and not because of mismatch between demand and supply. So looking at inflation purely on the basis of supply and demand mismatch, and not looking at other seasonal factors such as festive and harvest seasons, leads us to the concept of core inflation. Core inflation is thus intended to be an indicator and predictor of underlying long-term inflation. One limitation of the WPI figure in India is that the CSO does not take into account prices of services while calculating this index. CPI and GDP deflators do take the prices of services into account. We will deal with these measures in detail in the chapter on inflation.

Fourth, it is important to recognize that whenever GDP numbers are reported, they are reported either as GDP at *factor cost* or as GDP at *market price*. GDP at *factor cost* means money value of all goods and services produced in India without counting for government intervention in the form of taxes and subsidies. Consider this: Price paid by consumers for many

goods and services is not the same as the sales revenue received by the producers. There are taxes that have to be paid or subsidies received, which place a wedge between what consumers pay and producers receive. The term factor cost or basic price refers to the prices of products as received by producers. Market prices are the prices as paid by consumers. *Thus, GDP at factor cost is equal to GDP at market prices minus taxes plus subsidies on product.* During first quarter of 2013–14, India's GDP grew at 4.4 per cent when measured at factor cost, but only at 2.4 per cent when measured at market prices. Going by our definition, this means that in case of India, either subsidies rose or sales-related taxes fell. It is to be noted that International Monetary Fund's (IMF's) coordinated global growth forecasts are measured on the basis of GDP measured at market prices, while in India growth is usually reported at factor costs.

[Case Study 1.1](#) tells how to judge the economy of any country on the basis of some economic indicators that we have discussed.

Case Study 1.1: Economy Laid Low by Governance*

Performance of Brazil, Russia, India, China, and South Africa (BRICS) Economies Between 2006 and 2010

<i>Economic Indicators</i>	<i>India</i>	<i>Brazil</i>	<i>Russia</i>	<i>South Africa</i>	<i>China</i>
Exports of goods and services (annual % growth)	13.0	3.8	3.8	1.5	15.7
Imports of goods and services (% of GDP)	24.8	11.8	21.7	31.5	28.0
Final consumption expenditure, etc. (% of GDP)	68.2	80.8	67.7	81.8	48.8
FDI, net inflows (% of GDP)	2.2	2.3	3.3	1.8	4.0
GDP growth (annual %)	8.5	4.0	4.0	3.7	11.2
Gross capital formation (% of GDP)	35.8	18.0	22.2	20.0	44.5
Gross domestic savings (% of GDP)	31.8	19.2	32.3	18.2	51.2
Household final consumption expenditure (annual % growth)	8.3	5.7	7.7	4.0	8.0
Interest payments on external debt (% of exports of goods, services and income)	2.2	7.7	4.0	2.0	1.0
International tourism, receipts (current US\$)	11.08	5.33	11.92	9.37	41.17
Current account balance (% of GDP)	-1.8	-0.5	7.0	-4.8	7.3
Inflation, consumer prices (annual %)	7.8	5.2	10.8	6.3	2.7
Country Rating on June 2012	BBB-	BBB	BBB	BBB+	AA-

Source: World Development Indicators (2013), World Bank.

We are all aware of individual well-being. We are a lot happier when we have opportunities to earn/augment our personal income, are in possession of consumer durables such as a house, cell phone, iPod, digital camera, air conditioner, etc., have the ability to park our excess income in financial assets such as bank deposits, equities, mutual funds, etc., and live in a society which is secure, transparent, less corrupt, and better governed.

A summation of individual well-being gives us a sense about how an economy is doing. An economy is doing well if it is doing better in terms of some basic economic indicators such as national income or GDP, savings, investment, consumption expenditure, FDI, CAD, and inflation rate.

So far, India has done pretty well in terms of these basic economic indicators relative to other emerging or newly industrialized economies, conveniently termed as BRICS economies. If one were to rank the BRICS economies on the basis of these basic economic indicators, then India would be next only to China.

However, things suddenly changed to worse for India, starting March. At present, everyone is worried about the state of the economy, with Standard and Poor's hinting at downgrading it to junk status from the present BBB.

There is apprehension about the economy slowing down; there could be fewer

opportunities to earn, fewer to spend, weaker demand, and hence lesser incentive to invest. The common man is worried as low investment (as is evident from the stagnating index of industrial production [IIP] numbers) leads to an increase in the unemployment rate.

India is at present passing through a period of stagflation characterized by lower job creation and higher inflation. This prompted the central bank not to cut rates further during its policy meet on 19 June 2012.

THE BUGS

Why this sudden change of fortune? Although many may attribute wrong policy signalling and policy paralysis as the main reasons, lack of governance leading to corruption was also a factor.

A few events since March seriously dented India's image as a favourable investment destination. First was the much-talked-about Vodafone case where the Union Government retrospectively changed the tax laws to penalize the UK-based telephone giant. Second was the cancellation of 2G mobile licences, sending a clear signal to the international business community about the uncertain policy environment in India. To top it all were the general anti-avoidance rules (GAAR) introduced in the last budget, spooking foreign investors.

Adding to this was the policy paralysis, thus hindering further economic reforms. In the process of bargaining hard for a tax moratorium, the West Bengal Chief Minister Ms Mamata Banerjee (an important coalition ally), also made sure that none of the essential reforms—starting with pension, insurance, FDI in multi-brand retail, and aviation—were passed without the Centre agreeing to her demands.

INVESTMENT DEFICIT

India's budget deficit was also a worry for fund managers. When a part of this budget deficit was on account of non-productive expenditure such as waiving farm loans, and a part due to scams, the high level of inflation did not come as a surprise. Over the last three years, between March 2009 and March 2012, the CPI had increased annually at 11 per cent.

Scams such as the 2G, the National Rural Health Mission (NRHM) in Uttar Pradesh, and 'Coalgate' costed the government more money than what it had spent on the National Rural Employment Guarantee Act (NREGA) and food subsidy. The government also failed miserably in terms of what it had promised and what it delivered.

The Finance Ministry announced for the fiscal year 2012 that the budget deficit would be limited to 4.6 per cent. However, the budget deficit stood at 5.9 per cent.

In the 2011 Railway Budget, the Railway Ministry announced laying of 1,075 kms of new railway lines and doubling of 867 kms of railway lines. A year later, only 180 kms of new railway lines were laid and 249 kms of railway lines doubled.

A higher budget deficit than what is originally planned means that the government has been borrowing more from the market. As supply of funds is limited, this additional demand raises the interest rate which is bad news for investment and future job creation.

It also means that to contain the budget deficit, the government may have to increase corporate tax in the future—further undermining investment sentiment. From the supply side, spending money on infrastructure projects that are not completed implies expenditure without any addition to the supply of real deliverables, leading to inflation.

It is not surprising that foreign fund managers are nervous about investing in India. When foreign fund managers withdraw dollars in response to uncertain policy direction and high inflation, the rupee is bound to depreciate. During April–May, foreign fund managers withdrew close to US\$ 400 million, taking down the stock market along with the rupee.

EUROPE CANARD

The Government is trying to save face by saying that the trade deficit is increasing because of the worsening economic situation in Europe.

Truth is, only around 20 per cent of our total exports are headed to Europe. Since March, the rupee has depreciated not only against the dollar but also against other currencies such as the renminbi, the yen, the Australian dollar, the Canadian dollar, and the Singaporean dollar, among others.

This means our exports gained in terms of price competitiveness and should have been able to lower our trade deficit. However, the fact that the rupee continues to fall tells us that the problem is not foreign but one within our borders.

We can draw little solace from Modi's reaffirming a stable rating for India unless we fix the bugs.

* Previously published by the author in *The Hindu Business Line* (3 July 2012).

SUPPLY-SIDE COMPONENTS OF GDP

So far we have discussed the demand-side components of GDP. Now let us shift our attention to the supply components of GDP. Economists have long tried to explain as to what determines the supply of output. We discuss some important works in literature.

Harrod–Domar Model. One of the earlier works in the area of supply-side economics was independently undertaken by two economists—Roy Harrod in 1939 and Evsey Domar in 1946. The relevance of the Harrod–Domar

model lies in its ability to give a dynamic flavour to the Keynesian model. The Keynesian model is a static model putting emphasis on aggregate demand and its effect on the output gap in the short run. Harrod–Domar, on the other hand, emphasizes how the investment-spending component of aggregate demand may influence the productive capacity of the economy in the long run. That is, they put emphasis on the supply side. Growth rate of any economy is conditional upon how much saving it has. More is the saving, more is the ability to invest; higher is the productivity level of capital, more is the growth. Alternatively, a higher population growth and depreciation rate of machines will slow down the economic growth. More population means, on average, people will save less and hence the ability to invest. Likewise, more the depreciation of machine, lesser is the investible surplus available for future capital formation. The model implies that economic growth depends on policies to increase investment by increasing saving and using that investment more efficiently through technological advances. One important assumption/limitation of the Harrod–Domar model is that it assumes that there is a strong relationship between growth and investment. However, the reason why many developing countries fail to grow fast—such as India during the pre-1991 phase—has to do with poor productivity of capital and not because of poor saving performance. Government invested heavily in public sector units, most of which were run inefficiently, leading to a poor capital productivity. Another limitation of the model is that it assumes that labour and capital are used in equal proportions (equal prices for labour and capital). Again, this may not be true for relatively labour-abundant less developed countries, or for relatively capital-abundant developed nations. In fact over the years, irrespective of the economies, the relative price of capital has fallen vis-à-vis labour.

Solow Growth Model. To overcome the limitations of the Harrod–Domar model, Robert Solow during the 1950s, came up with the Solow growth model.¹⁵ Solow assumed a perfect factor market so that planned investment always equals planned savings. No consideration whatsoever was paid to the underlying macroeconomic adjustment process that made this true. Solow tried to explain variations in growth and per capita income across countries in terms of a simple production function $Y = f(L, K)$. In Solow's formulation, output (Y) was the dependent variable while physical stock of capital (K) and labour (L) were the independent variables. Countries with greater supply of

skilled labour and physical stock of capital would have greater per capita income compared to countries with less access to these factors. Other things remaining equal, an increase in per capita income could be brought through an increase in saving (assuming savings are invested, and hence would increase the availability of physical stock of capital) or by a decrease in the population growth rate and depreciation rates of capital. In the long run, per capita income of all countries grows at the rate of growth of population. The important assumption here is that initially countries have an abundant supply of capital stock with less labour. So the per capita income of a country grows at the rate at which its population grows. However, this process of growth will or can continue till the relative supply of capital equals that of labour. Hence in the long run—also known as the steady-state growth rate in literature—the economy continues to grow at the rate at which the population grows.

A country cannot grow at the rate of growth of capital because it is the labourer who saves; and savings when invested lead to the creation of capital. Per capita income continues to increase until the labourer saves enough so as to make additional investment possible. When the economy reaches steady state, no investment takes place. The capital created is equal to that lost in depreciation. The labourer saves enough to keep per capita availability of capital constant. As is understandable—the model is more suitable to depict the growth behaviour of developed economies with surplus capital. Does this imply that the model cannot predict the growth behaviour of less developed or developing countries? To some extent, the model does do so, as these economies still have some, if not many, skilled labour and machines to generate output. Through this simple model, Solow was able to explain more than 50 per cent of the cross-country variation in income among countries. The unexplained portion of growth, that is, over and above what was explained by capital stock and labour, was attributed to technology. In literature, this unexplainable portion of growth is referred to as Solow's Residual.

However, the Solow model has some limitations. First, technology—an important component of growth—is not included in this model. The Solow model is a simplistic one where technology, savings rates, and population growth rates are treated as exogenous variables—those not derived from the model. The model says nothing about what determines technology or factors responsible for its growth. Second, the model predicts that countries with

different savings rates and with varying access to technology have the same growth rate, albeit with different levels of per capita income. In reality, however, countries across the world are growing at different rates. Subsequent growth models tried to build on the limitations of the Solow model, to account for differential growth rates across countries and to explain factors driving technology.

Endogenous Growth Model. This model was developed during the 1980s by an economist named Paul Romer.¹⁶ The endogenous growth model allows for technology to evolve from the model. Endogenous growth theory tries to overcome the shortcoming of the Solow model (where technology is treated exogenous, i.e., not derived from the model) by building macroeconomic models using microeconomic foundations. Households are assumed to maximize utility subject to budget constraints, while firms maximize profits. Technology is no more exogenous but originates from human capital—a key factor driving productivity. Productivity is measured in terms of goods and services produced with one labour hour of work. Any technological advancement enables labourers to produce more goods and services in one labour hour. Technology is synonymous with total factor productivity. Countries which have more skilled labour and invest in R&D grow faster as they have better access to human capital. Human capital helps in productivity growth through knowledge sharing. This knowledge sharing acts as a positive externality—labourers become smart or more efficient by sharing information they acquire during production. A good example is pharmaceutical companies investing in R&D activities. Once a company invents a new formulation, it is only a matter of time before that formulation becomes generic. This drives down the economy-wide cost of production and the society gains. Another example is that of radio, which was originally developed in the USA because the vacuum tube was invented there. However, after World War II, the technology of manufacturing vacuum tubes spread fast, making radio accessible to the common man.

One can be curious and ask why firms invest in R&D knowing that the invention or the technology will be available to others at a far lower cost compared to what was incurred to invent the original product or formula. The answer lies in patents or exclusive legal rights to the inventor of the product, granted to them by the government. Going with our above example, a

pharmaceutical company which develops a drug that can cure AIDS can secure a patent on this drug formulation, preventing other pharmaceutical companies from manufacturing this drug. Patents are generally given for a period of 20 years. Other government policies, such as direct R&D subsidies, tax incentives, and low interest loans to firms investing in R&D, investment in education, and investment in health, have similar impact in terms of increasing labour productivity.

The contribution of endogenous growth theory is unlike the Solow model where all economies grow at some fixed rate in the long run; the model allows countries to experience differential long-run growth rates. The reason why under the Solow model countries cannot grow at a differential rate has to do with diminishing return to factor inputs with a constant return to scale-type production function. What this means in simple terms is that if labour is increased keeping capital constant, then the marginal contribution of each additional labour in increasing output will fall. For instance, if there are 10 programmers writing software codes for INFOSYS with access to 10 computers, then going by the Solow model, the productivity of the 11th person hired will fall unless the company allocates an additional machine for him/her. Addition of each subsequent programmer leads to a gradual fall in average productivity. However, by Romer's formulation, the productivity of this 11th person will not fall as other persons in the room will share their programming knowledge with this person. So on an average, these persons are more efficient because of a positive spillover effect in terms of knowledge sharing. The reason for there being no room for faster growth in the Solow model is that, owing to this diminishing factor productivity, the growth rate of per capita output eventually falls to the growth rate of population. Eventually, the per capita income of all the economies continues to grow at the same rate, that is, at the rate of growth of their population, albeit with a different level of per capita income. Countries with lower saving rates have lower per capita income. In this way, the endogenous growth model is more realistic, considering that countries can actually experience different growth rates of GDP. There is an explanation to what contributes to technology.

[Case Study 1.2](#) tells about the state of higher education system in India—a key component for nurturing human capital and providing technological innovation.

Subsequent growth models reflected in the work of Robert E. Hall and Charles I. Jones, and Robert Fogel tried to account for other factors affecting

growth. Hall and Jones stress on the need for social infrastructure as the key component for growth. Social infrastructure refers to institutions such as judiciary, law enforcement, and other government policies that determine the overall economic environment of the country.¹⁷ It has been found that during the 1990s, the real per capita GDP in 20 most law-abiding countries grew more than six times faster compared to real per capita GDP of 20 least law-abiding countries. Likewise, economist Robert Fogel researched the interaction between health and economic growth. Countries investing in health are likely to have a stronger and more productive work force, and hence grow faster than countries with a less healthy work force. It is important to notice that the later models tried to incorporate factors which were not considered in the earlier growth models. The objective is to account for Solow's residual, or that part of growth left unexplained after accounting for labour and capital.

Case Study 1.2: Quality Deficit in Higher Education*

India figured second-last among 73 countries that participated in the Programme for International Student Assessment (PISA) test conducted annually by the Organisation for Economic Co-operation and Development (OECD) secretariat. This came as a nasty surprise to those who believed in the prowess of India's scientific and technological manpower. There are, however, three ways of looking at this. First, Indian students are not smart despite having access to quality teachers. Second, Indian students are actually smart but because of want of access to quality education, they are not able to perform well. There is also a third possibility which is, there are both quality education institutes and smart students in India. However, these smart students prefer to explore options outside India—for jobs or for pursuing higher education—leaving the poorer quality students in India.

DEMAND, SUPPLY FACTORS

From the demand side, quality education translates into graduates who are employable and have adequate skills to deliver according to the needs of corporate India. Be it doctors, engineers, or even MBA graduates, there is dearth of quality professionals in India. This is precisely why every year, corporates like Infosys (service), ITC (consumer items), Apollo (medical), and L&T (engineering), to name a few, are left with vacant seats or prefer to recruit people with foreign degrees rather than employing graduates from India. Yes, there are quality education institutes such as IITs, IIMs, AIIMS, etc., in India. However, the number of pass-outs from these institutes is either too low or they decide to go abroad for higher studies, or even take up work there.

From the supply side, quality of education would be seen in terms of contribution to R&D. This means educational institutes serve as an incubator for developing new technologies that can be of use to the entrepreneurs to produce goods and services more efficiently. This becomes evident from the number of patents and research articles published from universities and colleges. Although there has been an increase in the number of patents applied and research articles published from India, it is far less compared to the more advanced economies.

It is to be noted that the per capita income of any country can be increased either by increasing labour force participation and/or by technological breakthroughs. The growth performance of the newly industrialized economies in Asia such as Taiwan, South Korea, Singapore, and Hong Kong is typically driven by designing curriculum so that more people can be employed. This model of increasing growth by producing more employable graduates implies that growth has taken place through increase in labour force participation. On the other hand, the growth process in the West is attributed to technological innovation.

India faces a dearth of both quality teachers and quality educational institutes. At a time when deans of Indian origin at Ivy League business schools in the USA are making national headlines in India, the newly opened IIMs and IITs are scouting for professors. In fact, these newly opened institutes survive by hiring visiting professors from other institutes and universities in India.

BRAIN DRAIN

A majority of quality students regard education as they would any other commodity. Pursuing quality education comes with a cost. For example, many MBA students who take bank loans look at education as a return on their investment, that is, the jobs they are likely to get once they get their degree. In this way, most educational institutes—especially the MBA ones—have now been transformed into sophisticated placement agencies. If the institutes cannot secure jobs, they are likely to get fewer students.

The preference for IITs and IIMs derives from the fact that the perceived returns from education in these institutes are the highest here. Corporates come to IIMs and IITs, not by taking into consideration the patents and research articles published, but by being persuaded that the rigorous screening procedure in these institutes is assurance enough that quality students get in.

During slowdown, the second-tier institutes provide more value for money to students and corporates. No matter what the business school teaches, the corporates have their own induction programmes. During slowdown, a corporate hires students at a lower cost compared to what it would have to offer to tier-1 graduates. Hence, in recent times, some of the IIMs faced difficulties while second-rank business schools were able to achieve 100 per cent placement.

The other smaller group of quality students who are indeed passionate about pursuing, and not consuming education, typically leaves for the USA, Australia, or Western Europe to pursue higher education. Recent evidence also suggests that

because of want of adequate seats in medical colleges, students are actually going to the erstwhile Soviet Union, and even learning medicine in their local languages. Net result: India still loses out in terms of brain drain, because of adequate quality education facilities at home.

STIFLING REGULATIONS

Government regulations in higher education hinder the supply of quality education. It is all-pervading, whether in terms of determining fees to be charged or foreign collaboration. When it requires around ₹6 lakh per year to produce an engineer, and anything between ₹10–12 lakhs per year to produce a doctor, asking a private institute to charge state-determined fees is unreasonable. In this way, the privately-funded universities cannot survive, leave aside hiring quality teachers.

What is however doable is asking the privately-run institutes to give scholarships to the needy, meritorious students. In fact, most of the successful universities in USA are privately run. Many business schools in China are thriving and providing better education because of their collaboration with universities in USA and Canada—something that is not possible in India. To open any private institute, no-objection certificates need to be taken from multiple sources such as the state government, state universities, and government regulatory bodies (e.g., University Grants Commission [UGC], All India Council for Technical Education [AICTE] etc.) instead of having a single-window clearance mechanism in place.

The government will do better by putting a grievance redressal mechanism in place where the universities can be tried, or their license cancelled in the event of false promises. In case of healthy competition, bogus education institutes will not be able to survive. So let the students decide. Hopefully, this will add to the supply of quality educational institutes, human capital, and help to sustain India's growth.

* – Previously published by the author in *The Hindu Business Line* (19 January 2012).

HOW WE MEASURE GDP

There are two primary ways to measure the value of GDP: from the perspective of production, and from the perspective of income. These two forms are circular in nature. The measurement begins at the production stage where the productive units such as firms hire capital and labour to produce goods and services. Labourers and owners of capital earn income which they spend on procuring goods and services. It is the total value of these goods and services that we term as GDP or the national product. Let us elaborate a little more. The production process generates a given amount of money income

which is distributed to factors of production namely, labour and capital. Measuring income in this way indicates the share of national income by factor shares. Labour income takes the form of wages and salaries, including commission, pension benefits, bonus, etc., or supplementary contribution of employers towards payment in kind. The income received by the households is spent on acquiring and consuming goods and services. What is not distributed ends up as operating surplus for the firm. Some portion of the operating surplus is retained by the firms, which is partly used for further investment, thus increasing their physical assets. The balance is distributed in the form of dividend, interest, and rent. The rent in the Indian context includes rents on land and buildings. In case the person is self-employed, such as running his/her own grocery store, the distinction between employment income and operating surplus cannot be made. Such incomes are separately classified as mixed incomes. Thus, the total income generated in the form of factor shares consists of wages and salaries, interest, rent, dividends, undistributed profits, and mixed income of the self-employed.

For the measurement of national income at the point of production, the method generally followed is to divide the whole economy into a given set of economic activities and to estimate the total value of output and the corresponding value of inputs used for production, and then arrive at the value addition of each sector as the total value of output minus the value of raw materials and services. In the case of services, value addition is measured in terms of the total amount of money paid in return for the services received minus the cost of inputs like expenditure on transport, advertisement, and other miscellaneous services.

[Table 1.3](#) will make the concept of value addition clear.

For example, Peter England typically does not produce raw cotton for its apparel ranges, but buys them either from the cotton farmer or woven cotton fabrics from the mill owners. Raw cotton and the woven cotton fabrics are the intermediate goods whereas Peter England shirt is the final good. While calculating the value of GDP, we do not include the value of raw cotton and the woven cotton fabrics, as doing so leads to double counting. Similarly, entry to the components of GDP is also in the form of value addition. For our example, value addition in the investment expenditure component will be ₹ 100 + ₹200 + ₹100 = ₹400, and the value addition in the consumption expenditure component will be ₹200.

Another alternative way to measure the value of GDP is to look at the

income side. While accounting for national income, CSO uses the concept of double-entry bookkeeping such that the cost side of the ledger equals the income side. Whenever production takes place (that is, there is an increase in the number of Peter England shirts), there is an increase in cost which is accounted in the expenditure side. Concomitantly, an increase in income is accounted for in the income side. Double-entry bookkeeping guarantees that GDP calculated through income or expenditure methods is almost one and the same.

Every rupee we spend on buying this Peter England shirt ends up as someone's income. These incomes are primarily in the form of wages, interest, rent, and profit. Coming back to our Peter England example, buying this shirt ends up as profit to Peter England, and also as wages for the people who are working at Peter England showroom. Again the textile mill owner—supplying woven cotton fabrics to the shirt manufacturer—might have rented some machines for which he/she has to pay rent to the machine owners. In case one has not rented the machines, he/she gets to keep the entire profit for himself/herself. In this case, one actually gets rent in the form of his/her own profit. Similarly, if the farmer who is growing cotton is tilling the land of another, he/she has to pay rent. If one has borrowed from the local money lender to buy essential inputs for cotton farming, he/she has to pay interest. Hence, any production process can lead to a rise in the four aforementioned types of incomes. The total value of production is equal to the total value of income. Therefore, national income is same whether measured at the point of production or at the point of income generation. It is to be noted that forms of income such as old age pensions, education grants, unemployment benefit, and gifts are not regarded as payments for current services for production. These are paid out of factor incomes and are called transfer incomes.

Table 1.3 Measuring GDP

<i>Measurement of GDP (Value Added)</i>		
Cotton Farmer	Value of Cotton = ₹100	Value Added (VA): ₹100
Textile Mill	Raw cotton woven into cotton fabric = ₹300	VA: ₹300 – ₹100 = ₹200
Shirt Company	Cotton fabric made into shirt = ₹400	VA: ₹400 – ₹300 = ₹100
Peter England	Peter England Shirts = ₹600	VA: ₹600 – ₹400 = ₹200
	Total VA	₹600

Source: Author's estimate.

FACTORS AFFECTING GDP

The value of GDP can change if money is spent on creating any ‘new’ goods and services. The word ‘new’ is important. If a person buys an old car or an old flat which has already been purchased by some other individuals, it will not affect GDP. This is because the value of the car or the flat was already included in GDP when it was purchased for the first time. However, if the person selling the car or the flat uses those proceeds to buy new goods or services, it will be counted as part of the current year's GDP. Few more cases clarify this point further.

Tsunami Revisited. If natural calamity like Tsunami destroys physical and human capital stock, the productive capacity of the economy definitely falls during the time of its occurrence. However, GDP is an annual concept. If the government spends money and creates capital stock with a capacity to produce more goods, by the end of the year, GDP may increase. So it is not necessarily true that the value of GDP decreases due to Tsunami-like natural calamity.

Change in Inventories. Inventories are unsold products. A reduction in inventories therefore shows up in terms of increasing the value of GDP. If the inventories are sold at a profit, then GDP also increases, this time by the value of the invoice plus profit made.

Movement in Stock Indices. During 2014, there was a huge rally in the Indian stock market. Indians were all excited about the returns they got from equities. Everybody seemed to be a fund manager with the National Stock Exchange reaching a new high every other day. Gains from stock market are not an addition to the current GDP, unless this newly created gain is used for purchasing new goods and services. However, an increase in dividend entails larger profit realization by the firms, and hence increases GDP.

GDP, as a measure of well-being, has some limitations. For example, if a person with more income tends to have more leisure and does not work or contributes to the production of current goods or services, such an act lessens the value of GDP. This is despite the fact that this person's individual well-being increases because of leisure. GDP does not take into account the concept of freedom—in this case freedom to enjoy leisure. This leads us to

the concept of development.

¹ Ministry of Finance, Economic Survey 2007–08, Ministry of Finance, Government of India.

² Ibid.

³ The Finance Commission of India came into existence in 1951. It was formed to define the financial relations between the Centre and the states in India. As of January 2013, 14 Finance Commissions have been appointed. The 12th Finance Commission was established in 2003.

⁴ World Bank Group, Doing Business Report (2012). Available at: <http://www.doingbusiness.org/data/exploreeconomies/india/>

This report assesses regulations affecting domestic firms in 185 economies and ranks the economies in 10 areas of business regulation, such as starting a business, resolving insolvency, and trading across borders.

⁵ The word ‘neoclassical synthesis’ was coined by Samuelson in his book titled *Economics* published in 1955.

⁶ A.W. Phillips (1958), The Relation between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861–1957, *Economica*, Vol. 25, No. 100.

⁷ Milton Friedman and Anna J. Schwartz (1963), *A Monetary History of the United States, 1867–1960*, Princeton, NJ: Princeton University Press. Also see, Milton Friedman (1968), The Role of Monetary Policy, *The American Economic Review*, Vol. 58, No. 1, pp. 1–17.

⁸ Robert E. Lucas, Jr. (1972), Expectations and the Neutrality of Money, *Journal of Economic Theory*, Vol. 4, April, pp. 103–24.

⁹ F.E. Kydland and E.C. Prescott (1982), Time to Build and Aggregate Fluctuations, *Econometrica*, Vol. 50, No. 6, pp. 1345–70.

¹⁰ J.B. Long and C.I. Plosser (1983), Real Business Cycles, *Journal of Political Economy*, Vol. 91, No.1, pp. 39–69.

¹¹ Under the rational expectation framework, expectations are assumed to be formed rationally in line with utility maximizing behaviour of an individual economic agent. For example, if an agent believes that inflation happens because of expansionary monetary policy followed by the central bank, then he would make the best use of all publicly available information on monetary expansion in forming his expectation about future rates of inflation.

¹² Ministry of Finance, Economic Survey 2010–11, Ministry of Finance, Government of India, New Delhi.

¹³ Mode 1 type services also known as cross-border supply refers to services of the types such as international telephone calls, business process outsourcing (such as call centres, human resources, accounting, and payroll outsourcing)—where companies from high-cost economies set up their services-related operation in low-cost economies to save

on their cost. Mode 4 refers to movement of natural persons, such as IT professionals, scientists, and other professionals, travelling from their own country to provide services in another country.

¹⁴ Mode 2 relates to consumption abroad where consumers or firms of one country make use of services in another country. Examples in this category include medical care, education, and tourism. Mode 3 refers to commercial presence where foreign companies set up subsidiaries or branches to provide services in another country. Examples include banking, financial, and telecommunication services.

¹⁵ Trevor Winchester Swan, an Australian economist, simultaneously came up with a model with findings similar to Robert Solow. Swan published his findings in *Economic Record* in December 1956, whereas Solow published his findings in *Quarterly Journal of Economics* in February 1956. The Solow growth model is also popularly known as the Solow–Swan growth model.

¹⁶ Paul Romer (1990), Endogenous Technological Change, *Journal of Political Economy*, Vol. 98, No. 5, pp. S71–S102.

¹⁷ R.E. Hall and C.I. Jones (1999), Why Do Some Countries Produce So Much More Output Per Worker than Others? *Quarterly Journal of Economics*, Vol. 114, No. 1, pp. 83–116.

CHAPTER 2

Growth, Development, and Income Distribution

GROWTH AND DEVELOPMENT

In the [last chapter](#), we primarily talked about growth and its various components. In this chapter, we will discuss two other interrelated aspects. These are development and income distribution. Often, we hear that growth does not necessarily mean development, or for that matter, growth leads to unequal income distribution—with the rich becoming richer faster, more rapidly than the poor becoming richer. To understand these two interrelated concepts, first we shall talk about development.

There is a difference between growth and development. While growth is a univariate concept, measured purely on the basis of growth of per capita income (i.e., GDP), development is a multivariate concept and refers to the achievement of a quality of life for the average citizen of a region. United Nations Development Program (UNDP) has a way of examining the development of a country or region through human development index (HDI). The HDI is calculated as the simple average of life expectancy (proxy for health), education (proxy for literacy), and the per capita GDP (proxy for income) of a country. Development is therefore, a much broader concept than growth. When the citizen of any economy enjoys a good quality of life in terms of better access to health, education, and governance, and has opportunities to earn income, we say that the economy is developed. For instance, North American countries (Canada and the USA) are developed because there the citizens, in general, are more educated and healthy, have access to an efficient court and police system, and have better opportunities to earn income, relative to countries such as Somalia and Chad in sub-

Saharan Africa, which are considered to be less developed. It is not uncommon to hear stories of crime and atrocities in sub-Saharan African countries where people live a hand-to-mouth existence to earn their livelihoods.¹

In the words of Professor Amartya Sen, development is synonymous with freedom. Freedom from poverty, illiteracy, infant mortality, and freedom to participate in political processes are a few examples. One can achieve freedom from poverty, provided there is an opportunity to earn income; freedom from illiteracy, provided the citizens are educated; freedom from infant mortality, provided there are enough hospitals and an adequate healthcare system; freedom to participate in political processes, provided there is good governance. Only when each member of the society has the capacity to avoid impediments to happiness, which are poverty, under-education, malnutrition, political unrest, and gender inequality, can a society consider itself as developed.

A country that has better growth prospects but neglects development cannot grow in the long run. Improved standards of living cannot be ensured through increased growth rate alone. For example, during the 1960s and the 1970s, Brazil witnessed higher growth but as distribution of income along with other quality indicators of life such as health and education were neglected, policymakers eventually had to follow populist policies for fear of losing power. This put a halt to Brazil's reform programmes and prevented it from achieving full employment level of output. As the levels of development were low and larger proportion of population was neglected, the ruling parties in Brazil were repeatedly thrown out of power. So the initial reform process that resulted in higher growth could not be sustained. Therefore, in addition to growth, policymakers also need to make sure that the society is also developing, that is, the citizens have access to quality living.

GROWTH AND INEQUALITY

Now let us turn our attention to growth and inequality. When there is growth in economic opportunities, it is quite natural that some people with better skills benefit more from it. This leads to inequality. At the very outset, it is important to draw distinction between equality and equity. Equality is aligned with positive economics, providing evidence about income distribution

(through Gini coefficient) without commenting about what should have been an ideal income distribution. Equity, on the other hand, is based on value judgement and argues about what should have been an ideal income distribution. Stated simply, equality refers to equality of income, whereas equity refers to *equality of opportunities* to earn income.

Inequality (in terms of income earned) can primarily be because of circumstantial reasons or due to policy failure. Circumstantial reasons are exogenous, that is, they cannot be controlled by policy measures.

Examples of poverty arising out of circumstances are: i) caste, ii) natural disaster, iii) gender, and iv) war. For instance, people taking birth in some lower castes in India (Schedule Tribes or other backward castes) are more likely to start with limited opportunities and hence have a lower steady-state level of income (i.e., are poor). Similarly, Bangladesh frequented by natural disasters like flood and tornados witnessed a loss in physical capital/assets, leaving its citizens poor. Another example is that of gender inequality. While 200 million women entered the global workforce in the decade before 2003, 60 per cent of the one billion poorest people are women (Human Development Report, UNDP, 2007). War also has an effect in terms of loss of human and physical capital. Much of the poor GDP growth rate in Vietnam during 1980s, and more recently the fall in per capita income in Iraq is because of wars and the political and economic isolation that followed.²

Different countries have different ways of classifying people living BPL. Generally, poverty is measured in terms of the headcount ratio—which is the proportion of national population whose income is below the official threshold level of income. Since income data are hard to obtain, many countries use expenditures or calorie intake data as a proxy for income. For example, in India, Planning Commission computes poverty ratio on the basis of expenditure data. Based on the 55th Round (July 1999 to June 2000), large sample survey of consumer expenditure data obtained from the National Sample Survey Organisation (NSSO)³ estimated the percentage of people living BPL in 1999–2000 at 27.09 per cent in rural areas, 23.62 per cent in urban areas, and 26.10 per cent for the country as a whole. These expenditure data are indicative of the amount of money people are required to spend to enable them to consume minimum threshold amount of calories.

This minimum level of calories was specified in terms of food necessary for survival, with the poverty line being the income required (after adjusting for inflation) to be able to afford a daily energy consumption of 2,100 (for

urban areas) to 2,400 calories (for rural areas). National Sample Survey (NSS) data on household consumption expenditure in 1973–74 were used to calculate the monetary equivalents of these calorie requirements. So, the data showed that on an average, those spending approximately ₹49 per person per month in 1973–74 satisfied the calorie norm. The corresponding figure was roughly ₹56.50 in urban areas. These then became the rural and urban poverty lines for 1973–74. These figures were then inflated by appropriate CPI numbers for urban and rural India to derive the poverty lines for later years.

In 2011, India had a new poverty line. An individual spending less than ₹31 in urban areas and ₹25 in rural areas on food, health, and education, every day is poor. These figures were derived by applying the CPI for industrial workers for urban areas, and for agriculture labourers for rural areas, to poverty line figures for 2004–05. The figures for 2004–05 were ₹20 for urban areas and ₹15 for rural areas. The Tendulkar Committee (with economist Suresh Tendulkar as Chairman and appointed by Manmohan Singh-led Congress government in 2009) reached this figure by calculating the monthly cost on food, entertainment, school education, and non-institutional health based on NSS's Consumer Expenditure Survey, 2004–05. The committee stated its desire to move away from a calorie-based norm. However, it kept the 2004–05 urban poverty line unchanged, although this was based on the earlier calorie norm, but increased the rural poverty line. This came to be called the Tendulkar poverty line and forms the basis for the latest poverty estimates of the Planning Commission. This was comparable to the World Bank specification of one-dollar-a-day benchmark when differences in purchasing power across countries were taken into account. For poor, the maximum daily spending on cereals was ₹12.16 in urban areas and ₹10.24 in rural areas. Similarly, expenditure on pulses was ₹3.31 in urban areas and ₹3.22 in rural areas. Expenditures on health and education were calculated to be less than ₹2. It meant that a poor person could buy daily food worth 2100 calories in urban areas and 1776 calories in rural areas. The World Bank has a way of classifying the poor. A person is classified to be BPL if his income is below US\$ 1 (measured in 1993 prices) per day and if his income is below US\$ 2 per day in terms of PPP.

Returning back to our discussion on inequality, fortunately, much of the other causes of inequality are endogenous, that is, can be addressed by policymakers. For instance, most Asian economies have a majority of their population dependent on the agriculture sector, many of whom are poor.

Therefore, a way to increase income for the people earning their livelihood from the agricultural sector is to increase the agricultural productivity and have a better supply chain management in agriculture. In Vietnam, for example, the reform process that began in 1986 benefited the rural workers by linking the domestic coffee and rice market with the international market. Close integration of the rural and urban labour market, facilitated by rural financial market intermediation, made economic growth pro-poor in Bangladesh.

However, a lot more needs to be done. Since 1996, as reported by publications from two major multilateral organizations—IMF and the Asian Development Bank (ADB)—inequality has been on a rise in Asia. For example, IMF Regional Economic Outlook has this to say: ‘Over the last ten years or so, 13 out of 18 Asian countries for which data are available have recorded increases in income inequality, ranging from around 5–35 per cent.’⁴ ADB, in its 2012 report titled ‘Confronting rising inequality in Asia’, writes that the story of rising income inequality in Asia can be best portrayed as the rich are getting richer faster than the poor becoming richer. According to this report:

Inequality widened in 11 of the 28 economies with comparable data, including the three most populous countries and drivers of the region's rapid growth—the People's Republic of China (PRC), India, and Indonesia. From the early 1990s to the late 2000s, the Gini coefficient—a common measure of inequality—worsened from 32 to 43 in the PRC, from 33 to 37 in India, and from 29 to 39 in Indonesia. Treating developing Asia as a single unit, its Gini coefficient went from 39 to 46 in that period.⁵

UNDERSTANDING INEQUALITY

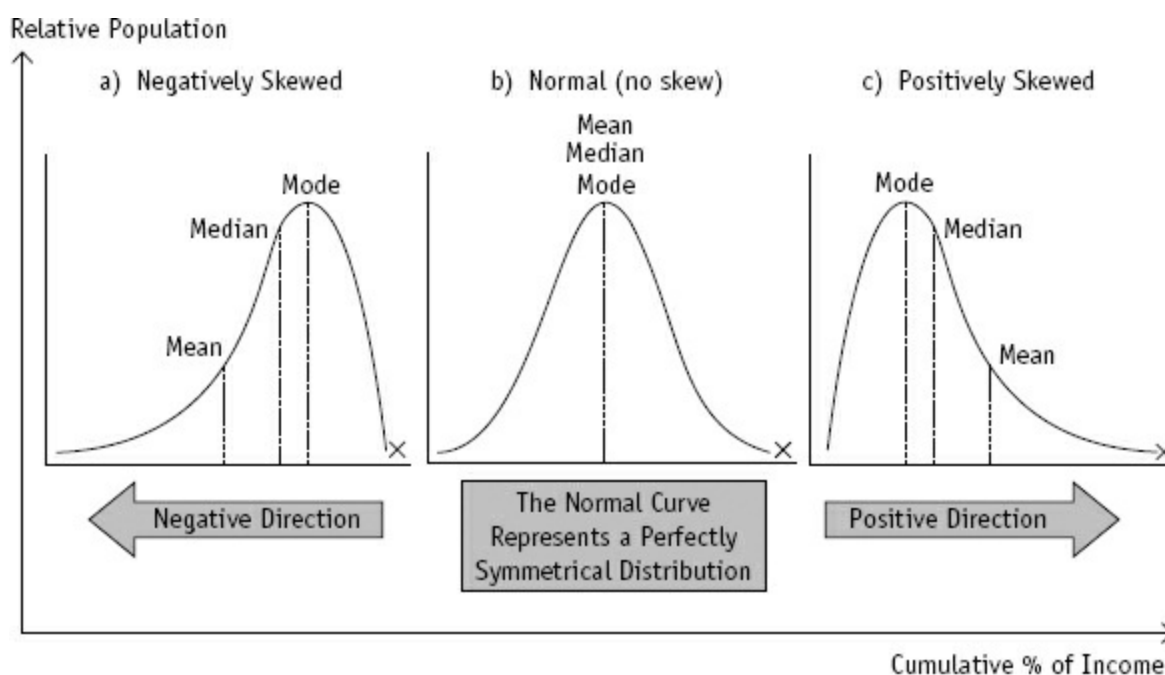
We can form an idea about how equal or unequal an income distribution is by looking at the probability density function (PDF). We draw a density function of income by plotting income on the horizontal axis and the probability of realizing that income on the vertical axis. If income is evenly distributed, then the income of majority of the population (i.e., mode income) is likely to be equal to the mean or the average income. Of course, there will be a few who get high income and few others getting low income, but on an average, income will be evenly distributed.

[Figure 2.1](#) makes this clear. There are three panels. For each panel, the income density function is drawn with income (X) on the horizontal axis, and probability on the vertical axis. For the whole figure, we have cumulative percentage of income earned on the horizontal axis, and relative population/total population (i.e., corresponding population) on the vertical axis—juxtaposed on figures for each panel.

We now have three scenarios. Starting with [Figure 2.1b](#), we find that the density function looks like a nice bell-shaped symmetrical curve, also popularly known as normal density function. In this case, the mean income (average value) equals the median income (middle value) and the mode income (what majority of the population makes).

However, when income is unequally distributed, the nature of skewness or asymmetry in the income density function tells us whether bulk of the income generated is apportioned by the rich or by the poor. Considering [Figure 2.1a](#), we find that a majority of the population gets a major portion (mode value) of the income. In this society, there are very few people who make less money. In this case, the income density function is negatively skewed. On the other hand, if we have a scenario where a majority of people earn less income whereas a lucky few apportion most income, we say that income distribution is positively skewed. As is evident from [Figure 2.1c](#), income of majority of the population, that is, the mode income is less than the mean income. The bulk of the income values, and possibly the median income, lies to the left of the mean income. The mean income is stretched to the right, possibly because of few rich people (such as Ambanis, Birlas, Tatas, etc.) in the society. Ideally, policymakers should strive to reach a more equitable income distribution as portrayed in [Figure 2.1b](#).

Figure 2.1 Understanding Income Distribution



Source: Author's own drawing.

MEASURING INEQUALITY

A way to measure the extent of inequality is through the Gini coefficient index which takes a value between 0 and 1. The Gini coefficient is usually defined mathematically based on the Lorenz curve, which plots the proportion of total income of the population (drawn on the vertical axis) that is cumulatively earned by the bottom x per cent of the population (drawn on the horizontal axis).

Through [Figure 2.2](#), we explain the concept of Gini coefficient. The economy is split into segments, for example, into quintiles (or any other percentage of population), and under the condition of equal income distribution, each quintile contains the same share of income earners. That is, the first 20 per cent of the population gets 20 per cent of the income; the second 20 per cent of the population gets the next 20 per cent of the income; and so on and so forth. The 45° line represents the line of perfect equality—everyone has the same income. In case of unequal income distribution, the shares of income available in each segment are different. The more unequal the income distribution, the farther will be the Lorenz curve from the line of perfect equality. The Gini coefficient is the ratio of the area that lies between the line of perfect equality and the Lorenz curve (marked A in the diagram)

over the total area under the line of perfect equality (marked A and B in the diagram); that is, Gini coefficient (G) = $A / (A + B)$. The higher the value of G , the more unequal is the income distribution.

Figure 2.2 Measuring Inequality



Source: Author's own drawing.

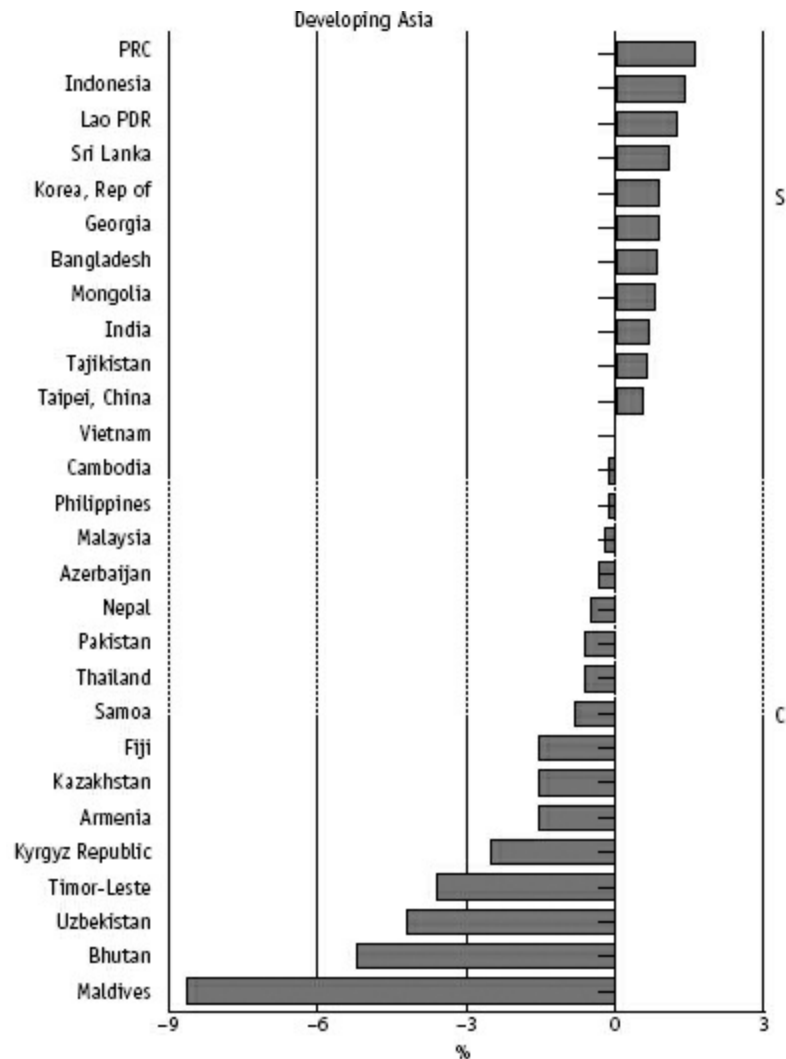
[Figure 2.3](#) describes changes in the Gini coefficient for 28 countries in Asia, spread over a period of 12 years from the mid-1990s till the late-2000s. As may be seen, an increase in inequality is registered for a majority of the developing member countries, although countries like Bhutan, Maldives, and Uzbekistan in particular, reported a reduction in inequality. For two of the fastest growing economies in Asia, namely China and India, there has certainly been an increase in income inequality.

The Asian Development Outlook 2012, attributed the reasons for growing inequality to a number of factors. In China, the reasons for unequal income distribution were related to market-oriented reforms where coastal areas had a greater concentration of investment, and hence growth in comparison to the rural hinterlands. In India, disparity in attainment of education gave skilled workers more opportunities compared to the less educated/unskilled workers in a newly globalized environment. Caste system also played a major role in

accentuating inequity in India. The perception about upper caste people having all positive traits (civilized, cultured, educated, and rich) while the lower caste people having all negative traits (black, uncouth, uneducated, and poor) still persists in many pockets of India. In Vietnam, although the Gini coefficient has changed negligibly, income disparity is more on the basis of circumstance where mass exodus of ethnic Chinese from industrially developed South Vietnam to agriculture-dominated North Vietnam has created spatial inequality. In Indonesia, the economy has expanded rapidly in capital-intensive sectors, whereas labour-intensive sectors such as mining have grown slowly. The contribution of mining to national income—a major provider of jobs—has fallen since the 1980s. Instead, with the Indonesian economy opening up, capital has moved into cities such as Jakarta, leaving behind the mining provinces of Java and Bali in terms of economic prosperity. In general, people living in rural areas in China and India have lower earning potential in comparison to their urban counterparts because of the slow growth of agriculture vis-à-vis industries and services sectors.

The discourse on income inequality gained prominence with the world economic order facing a threat of recession. Recession is more likely to affect the common man on the street and the poor, in comparison to the rich. Over the past 20 years, the gap between the rich and the poor in Asia has widened so that the richest 1 per cent of Asian households now account for 6 per cent to 8 per cent of expenditure (Asian Development Outlook, 2012). Income inequality has widened in China, India, and Indonesia—three of the fastest growing economies in Asia. We already pointed out that the Gini coefficient for Asia increased from 39 per cent to 46 per cent. A stable Gini coefficient would have implied around 240 million people escaping poverty.

Figure 2.3 Change in the Gini Coefficient for the Emerging Economies in Asia between Mid-1990s and Late-2000s



Source: Asian Development Outlook, 2012 (p. 51).

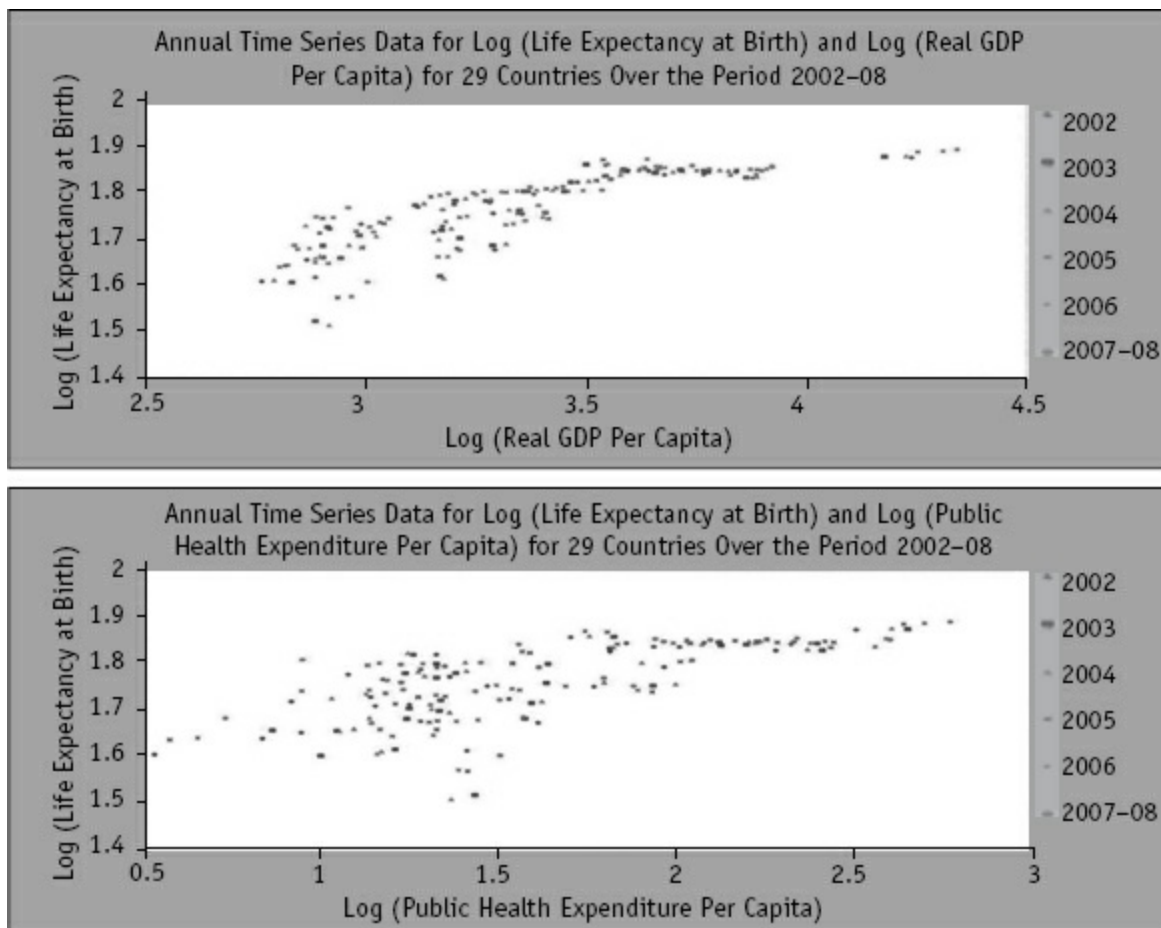
More worrying is the gap in economic opportunity. Children born to poor families are 10 times more likely to die in their infancy than infants from affluent households. Children from the poorest quintile are up to five times less likely to attend secondary schools than their wealthier peers and up to 20 times less likely to attend university. This reduces their chances of career growth and economic security (Asian Development Outlook, 2012).

In fact, the three main constituent factors of development, that is, income, health, and education are interrelated. A more educated person is more likely to find a job with which he can afford to go to a gymnasium, thereby rewarding himself with a healthy life. Similarly, a healthy person is likely to be more productive and smart, making him more competent for a job. Looking at cross-country data involving 29 different countries and covering the time period between 2002 and 2008, we find evidences suggesting a

positive relation between income and health indicators (see [Figure 2.4](#)).

Similarly, the more educated the people, the better their prospects to earn income. As the Asian Development Outlook, 2012 (p. 65), points out, ‘Education inequality almost always accounts for more than 20 per cent of total income inequality. The share of total income inequality explained by educational inequality has by and large been on the increase’. As is evident from [Figure 2.5](#), inequality accounted for by difference in educational attainment increased for all the countries, particularly for China and India.

Figure 2.4 Linkages between Income and Health



Source: Author's own calculation.

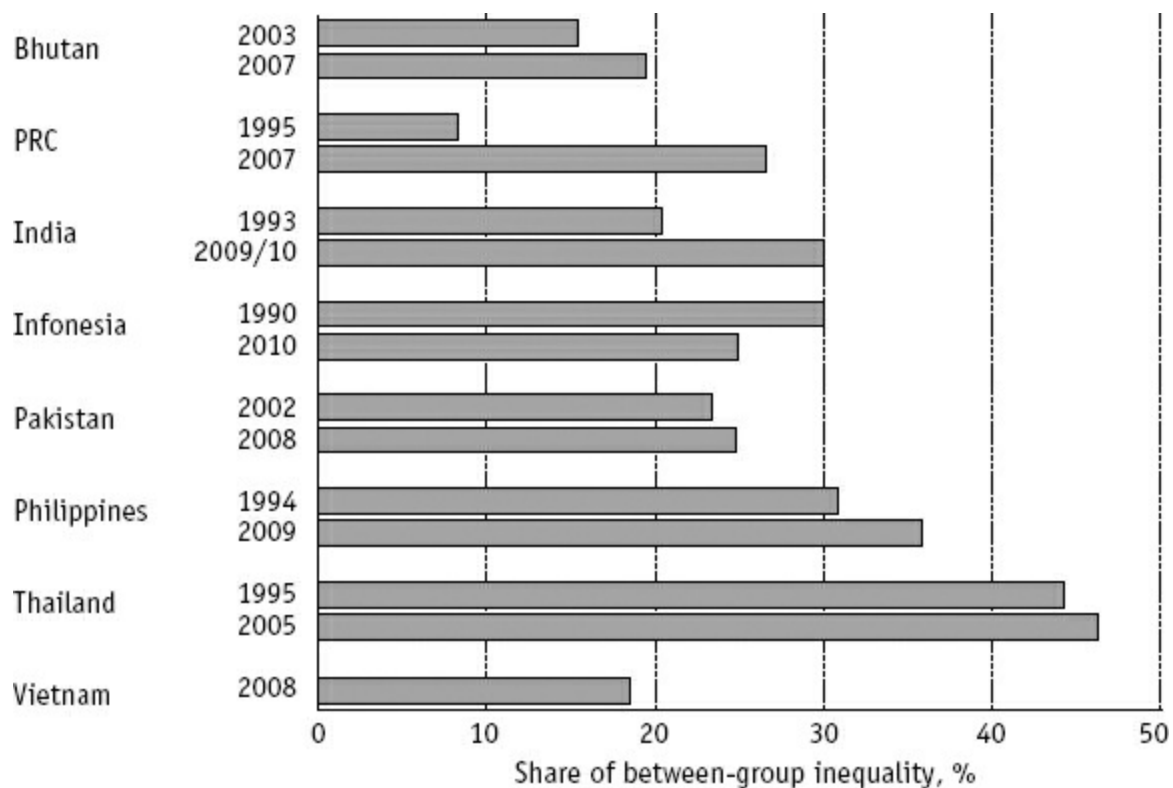
Ironically, technological progress, globalization, and market-oriented reforms—the main drivers of Asia's rapid growth—also drive income inequality. The opportunities created by technology and magnified by trade, finance, and market-oriented reforms have created a growing demand for skilled labour. Wages for graduates have climbed far above those with only a

basic education.

The abundance of labour has depressed wages. Capital has benefited disproportionately from Asia's growth. Between the mid-1990s and the mid-2000s, labour income as a percentage of manufacturing output fell from 48 per cent to 42 per cent in China and from 37 per cent to 22 per cent in India. Some regions, especially cities and coastal areas, were better able to respond to new opportunities and in many Asian countries 30–50 per cent of income inequality was accounted for by geography (spatial factor) alone.

Even the capital market is not perfect with only a lucky few getting access to funds to do business. Consider this: In India, some 41 per cent of profits of the top 100 firms are controlled by state-owned companies, from big oil firms to coal, steel, and other metals. Blue chip firms controlled by institutional owners such as ITC and a handful of foreign subsidiaries such as Unilever, together account for only 18 per cent of the total profits. The remainder, some 41 per cent of the earnings, is made up by firms under some form of family or founder control. About 70 per cent of the value of the Indian Stock Market is derived from 30 well-established companies listed on the Bombay Stock Exchange (BSE). In 2007, a government survey of around 200,000 service firms concluded that the top 0.2 per cent of them accounted for almost 40 per cent of the output.⁶

Figure 2.5 The Education Premium



Source: Asian Development Outlook, 2012 (p. 65).

To tackle inequality without bringing down growth, Asian policymakers must seek more employment-friendly growth and more targeted fiscal policies, often dubbed as ‘inclusive growth’. Social spending on health and education is important. At the same time, governments should make social protection schemes more targeted and efficient. They need to reduce distortions that favour capital over labour and support medium and small enterprises to balance growth between industry, services, and agriculture. For regions lagging behind, better infrastructure is essential—as are policies to ease the flow of goods and services.

INEQUALITY IN INDIA

Let us bring our focus back to India. The present buzzword for India's development strategy is inclusive growth. Inclusive growth emphasizes a more equitable distribution of income and building capabilities for attaining better health and education. If popular press articles are any indication, then most of the published articles on inclusive growth are about the effectiveness

of government development programmes in reducing poverty,⁷ and whether pursuing economic reforms has any negative fall-out such as an increase in income inequality.⁸ One of the reasons for government intervention in the market is the apprehension that total reliance on market mechanism would result in excessive consumption by the upper percentile of the population along with relative under-investment in sectors essential for development of the economy. Please note, when we consider mapping inequality, we talk about *regional income inequality* (across various states and districts) and *personal income inequality* (within a given region whether inequality has increased between the rich and the poor cohorts). The discussion around economic reforms only benefitting the rich might refer to personal income inequality. This might have been one of the factors responsible for the ouster of the National Democratic Alliance (NDA) government, paving way for the election of the United Progressive Alliance (UPA) government initially during 2004, and its subsequent re-election in 2009. The slogan ‘India Shining’ completely backfired on the NDA. To address this perception about increased inequality—with the rich getting more opportunities to participate in the market than the poor—the UPA Government started market intervention.⁹ Schemes like the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme, under which the poor are guaranteed 100 days of employment are a classic example of labour market intervention. During the fiscal year 2010–11, Government of India allocated ₹ 40,000 crores on account of MGNREGA. The UPA Government promoted a plethora of other schemes such as the mid-day meal programme, Indira Awas Yojana (housing) and Pradhan Mantri Gram Sadak Yojana (rural roads) among others. Capital market intervention such as micro-financing also emerged in a big way. We will talk in detail about such schemes in [Chapter 5](#).

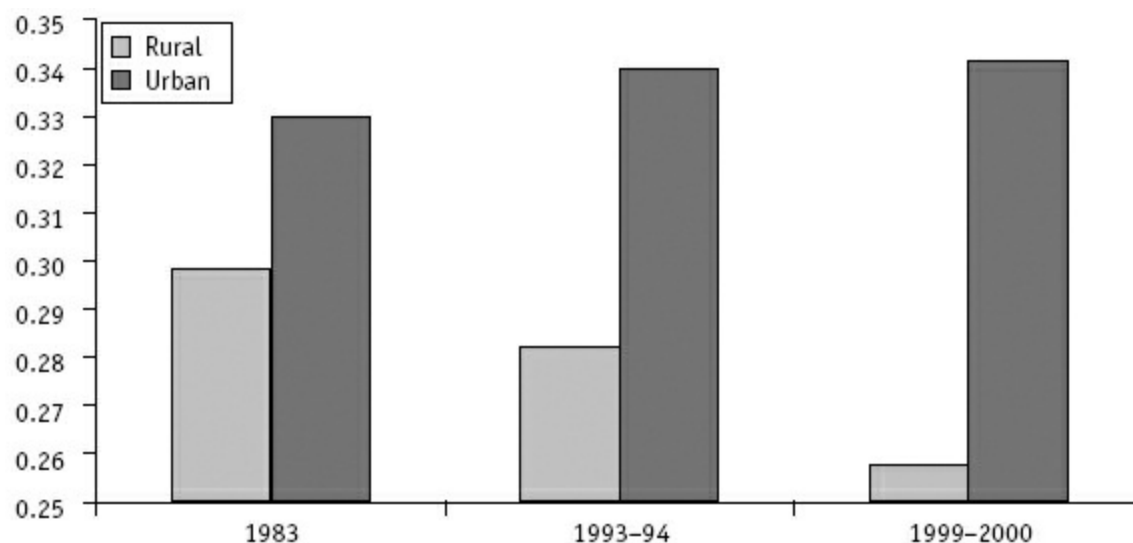
So, has inter-personal inequality fallen? Here studies find mixed evidence. Based on estimates of household consumption expenditure data from the NSS, Bhalla finds that both urban and rural Gini coefficients declined between 1993–94 and 1999–2000.¹⁰ According to his calculation, rural inequality declined in 15 out of 16 major states in India, and urban inequality declined in eight out of 17 states over this period. Therefore, he concluded that inequality did not worsen in India after reforms.

National Human Development Report (NHDR, 2001) published by the Government of India does not find any strong evidence in favour of an increase in income inequality. This report published state-wise Gini

coefficients for the years 1983, 1993–94, and 1999–2000. Gini coefficients were estimated using the 38th, 50th, and 55th rounds of the Household Consumer Expenditure survey conducted by the NSS. Comparing the level of inequality between 1993–94 and 1999–2000 among 32 states and union territories, seven states had experienced an increase in rural inequality and 15 states had experienced an increase in urban inequality. There were five states where both urban and rural inequalities increased. All these five states were located in the northeastern part of India. States and Union territories where rural inequality increased were Assam, Manipur, Mizoram, Nagaland, Sikkim, Chandigarh, Dadra and Nagar Haveli, and Arunachal Pradesh. States and union territories where urban inequality increased were Assam, Bihar, Gujarat, Haryana, Karnataka, Manipur, Mizoram, Nagaland, Punjab, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, Daman and Diu. Both urban and rural inequality increased in Assam, Manipur, Mizoram, Nagaland, and Sikkim.

It is also notable that during the reform period, urban inequality in India was much higher than rural inequality. In 31 out of the 32 states and union territories, urban inequality remained higher. This was also reflected at the pan-India level, showing that urban inequality remained higher than rural inequality for all the reference years. Considering Gini coefficients for urban and rural India between 1983 and 2000, there had been a gradual reduction in rural inequality and an increase in urban inequality (see [Figure 2.6](#)).

Figure 2.6 Rural and Urban Gini Coefficients



Source: National Human Development Report (2001), Government of India.

The studies that did not agree with the conclusion that income inequality fell during the post-reforms period argued that there was a problem in comparing the 55th round of the NSS (1999–2000) with the earlier ones. Sen pointed out that the reference periods in the Consumer Expenditure Survey of the 55th round of the NSS were changed from the uniform 30-day recall period (questions asked about consumption), used until then, to both 7- and 30-day questions for items such as food and intoxicants, and to 365 day questions for items of clothing, footwear, education, institutional medical expense, and durable goods.¹¹ The change from 30 days to 365 days in the reporting period for these low-frequency items possibly was responsible for lower poverty and inequality estimates. The longer reporting time reduced the mean expenditure on these items but because much larger fraction of people reported something over a longer reporting period, the bottom tail of the consumption distribution was pulled up, and as a result, both inequality and poverty reduced. Therefore, although the unadjusted data showed a decrease in income inequality between 50th (1993–94) and 55th (1999–2000) round, the adjusted comparable data suggested that inequality had in fact gone up between these two rounds.¹²

Based on indices of real mean per capita consumption expenditure by fractile group, Sen and Himanshu showed that whereas the consumption level of the upper tail of the population including the top 20 per cent of the rural population, went up remarkably during the 1990s, the bottom 80 per cent of the rural population suffered during this period.

In the next section, we start our discussion with regional income inequality and later focus on regional pockets of deprivation leading to inter-personal income inequality, explaining much of the root cause of Naxalism. [Case Study 2.1](#) gives an idea about how poverty line is measured in India.

Case Study 2.1: The Poverty Line Slugfest*

Currently, much of the policy debate in India is centred on the new poverty line and the food security bill. Critics argue that the ruling UPA government is trying to get political mileage by claiming that there has been a reduction in the number of people living BPL. It is the same UPA government which uses a totally different norm when it comes to doling out subsidized food items to nearly two-thirds of India's population under the food security bill. If the government plans to provide subsidized wheat and rice to 70 per cent of India's population and at the same time claim that poverty is down from 37.2 per cent in 2004–05 to 22 per cent in 2011–12, then something is

wrong.

Generally, poverty is measured in terms of headcount ratio, which is the proportion of national population whose income is below the official threshold level of income. Since income data are hard to obtain, many countries instead use expenditure or calorie-intake data. In India, the Planning Commission computes poverty ratio on the basis of expenditure data. Based on the 55th Round (July 1999 to June 2000) conducted by NSSO, the percentage of people living BPL is estimated at 27.09 per cent in rural areas, 23.62 per cent in urban areas, and 26.10 per cent for the country as a whole. The data give an estimate on the amount of money a person is required to spend to consume a minimum threshold amount of calories per day (2,400 in rural areas and 2,100 in urban areas), in addition to subsistence clothing and shelter.

In 2011, India had a new poverty line. A person spending less than ₹32 in urban areas and ₹26 in rural areas on food, health, and education everyday was poor. The Tendulkar Committee reached this figure by calculating the monthly cost on food, entertainment, school education, and non-institutional health based on the NSS's Consumer Expenditure Survey, 2004–05.

Irrespective of the methodology used, everyone agrees that the absolute number of people living BPL has fallen. As the Indian economy develops, we should brace for a stricter poverty measure. For instance, in the USA, a family of four earning less than US\$ 23,000 per annum is classified as poor. The USA can go for higher poverty standard as it is developed. There is little merit in discussing about what should be the correct measure of poverty.

Instead, it would make sense to debate about what other factors one should include in addition to calories such as fuel and electricity as a measurement of poverty—something the poor cannot live without. What also needs special attention is the dynamics of income distribution. An income distribution basically tells us how an entire population is distributed on an income scale, starting with very low incomes to billionaires. From the policy perspective, an equal income distribution is more important than discussing as to what might be the correct poverty line.

So, what does dynamics of income distribution tell us? Working with district-level per-capita income data, we found evidence about the increase in income inequality between the rich and the poor income cohorts within any given district. This result was similar to the recently published data. But what was more interesting to note is that although there was an increase in income inequality within a district, it had fallen across districts (Anurag Banerjee and Nilanjan Banik, February 2014, Review of Development Economics). Categorizing India into high-, medium-, and low-income regions, we found that some districts of Madhya Pradesh, Orissa, and Rajasthan moved from being low-income to middle-income categories. Some of the fastest growing states comprised erstwhile BIMARU states, that is, Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh. This study also found evidence about the neighbourhood spillover effect. Working with per-capita district income between 1999–2000 and 2004–05, we found that when income in a district (i) increased by 100 per cent, income in the neighbouring district (j) increased by 10 per cent. Among important development

indicators, closed drainage system has the maximum impact on income through own and spillover effects. Own effect reflects how the level of development (captured through development indicators) in any particular district (i) affects its own income. For 1 per cent increase in a closed drainage system, income increases between 0.96 per cent and 2.58 per cent. The second biggest factor is the availability of potable water. A 1 per cent increase in the availability of tap water systems within households gives rise to 0.16–1.30 per cent rise in income.

Many districts in India do not have a proper drainage system and lack potable water. Poor drainage systems usually have stagnated water, thereby becoming a breeding place for mosquitoes. This could result in an increase in malaria and water-related diseases in the vicinity, adversely affecting income. Similarly, proper potable drinking water systems have positive public health outcomes. If people are healthy, they can work harder and assimilate knowledge more efficiently, which translates into higher productivity and income growth.

Three important lessons are to be learnt from these results.

First, as India grows and urbanizes, an equal importance should be given to sanitation and other factors of development such as schools and hospitals. At times, faulty policy designs prevent the desired outcome. For instance, despite the success in enrolling students in primary education, there is still a vast pool of population stuck in the agricultural sector. In fact, 75 per cent of unemployment lies in the agriculture sector.

Second, widening of within-district income inequality shows the need for more effective government intervention. Although the UPA government started several market interventions in the form of MGNREGA (labour market intervention), NRHM (intervention in health for disadvantaged groups), etc., these schemes may not have yielded the desired results because of poor implementation and corruption. Hopefully, schemes like the direct cash transfers (DCTs) can help towards better implementation by stopping leakages.

Third, a fall in regional income disparity shows that the growth process is spreading uniformly. The private sector (without depending too much on the government) is taking the lead in moving capital and labour to areas with lesser input costs (that is, investing more in backward districts, or second and third tier cities), contributing to uniform growth across India. What is needed is better governance to complement this growth.

* Previously published by the author in *The Financial Express* (9 August 2013).

REGIONAL INCOME INEQUALITY

Now, let us check whether regional income inequality fell post reforms. On the basis of the 1991 census by the Government of India, there is evidence of

widening regional disparities in India when measured in terms of sex ratio (females per 1,000 males), female literacy, infant mortality, and the level of infrastructure development. The forward group of states (Andhra Pradesh, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Punjab, and Tamil Nadu), with higher per capita income moved ahead in terms of performance of the aforementioned parameters relative to the backward group of states (Assam, Bihar, Rajasthan, Uttar Pradesh, and West Bengal), that is, the states with lower per capita income. On the basis of data obtained from Planning Commission in 2000, there is also evidence that regional inequalities existed at all levels of disaggregation—a given state may perform extremely well on all indicators but there may be districts within that state that are among the most deprived in the country, or a state may have very high levels of attainment for certain specific development indicators but not all of them.¹³

However, there is an indication about a fall in regional income inequality starting in 2000. In order to examine whether indeed the poor income districts are left behind, we consider the dynamics of the income distribution pattern in India.¹⁴ If reforms are pro-rich, then we would see the emergence of twin peaks in the underlying income distribution function, that is, clustering of the rich income districts and clustering of the poor income districts. On the other hand, a uniform growth process at pan-India level leads to the disappearance of any such clusters. Considering *district-level per capita income* data from the Planning Commission between 1999–2000 and 2004–05, income distribution did not change. Thus, the perception of economic reforms having benefited only the rich income districts was not supported by the data. Data for the years after 2004–05 was not available for all the districts, resulting in significant drop in the number of observations. Also, many districts were newly formed and for them, information about per capita income was not available for the earlier years.¹⁵ Therefore, to maintain uniformity and to get a more robust result, we consider the time period between 1999–2000 and 2004–05.

The results suggest that between 1999–2000 and 2004–05, there was no statistically significant difference in the median-adjusted income distribution functions. The reason why we are deflating individual district income with median income is because we want to know whether income has grown in real terms or not. We all know that a rise in the nominal value of income can happen because of inflation. The purchasing power of that income can be measured by deflating nominal income with median income.

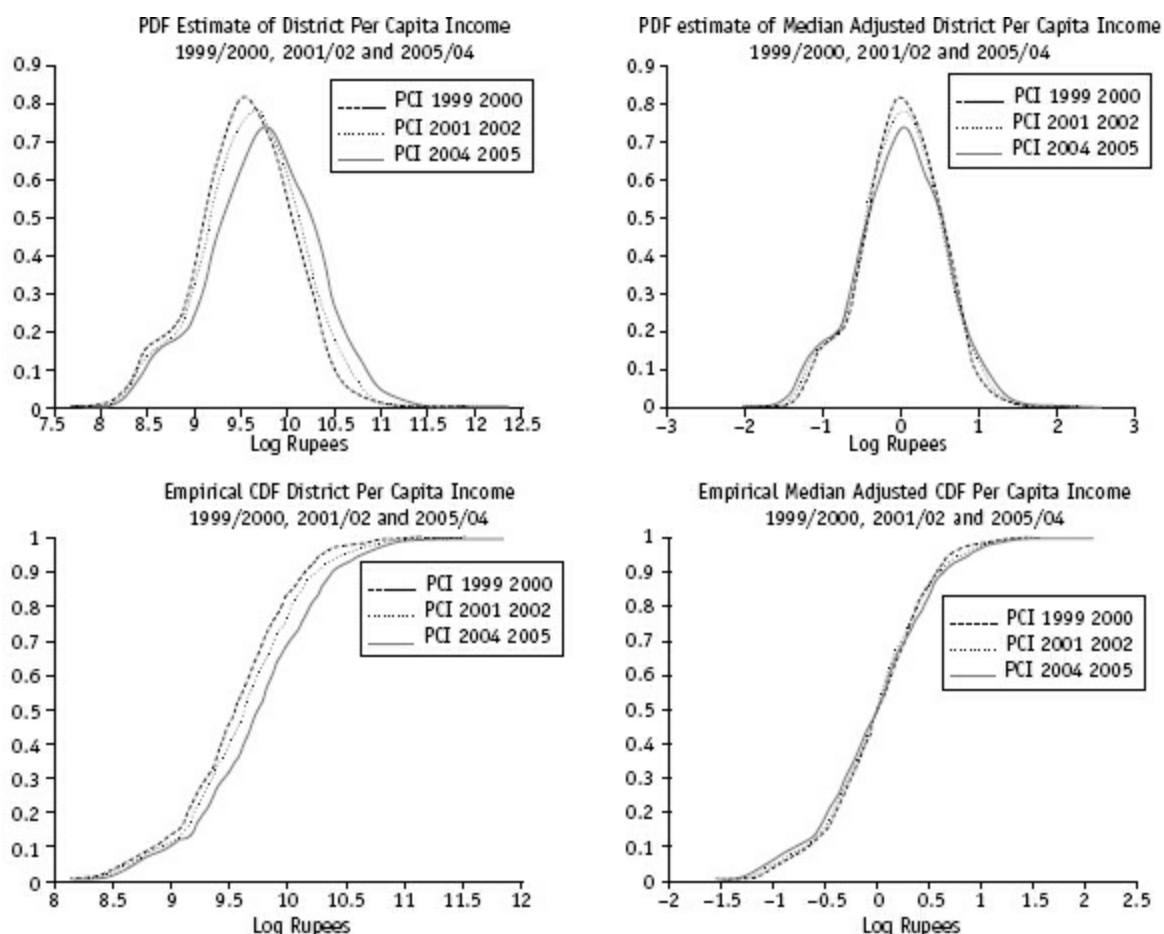
We find that the income density function for 2004–05 became more platykurtic (with fewer extreme values) than it was during 1999–2000, suggesting that there had been a reduction in inter-district per capita income disparity. The income dynamics provide no evidence in support of the twin peaks hypothesis: clustering of the rich income districts and clustering of the poor income districts at a pan-India level. Income growth has been spatially correlated—growth in one district aids growth in others, and there has been a reduction in income disparity *among* districts in India. Income disparity *across* districts in India has fallen. This indicates that the private sector, without depending too much on the government, is taking the lead in moving capital and labour to areas with lesser input costs (i.e., investing more in backward districts, or second and third-tier cities), making the growth process uniform across India. In fact, we see tier-two cities such as Pune, Indore, Patna, Lucknow etc., becoming a favourite destination for investment among various corporate entities. There is also indication about rapid urbanization. Between 1901 and 2001, less than 2500 new towns were born.¹⁶ However, between 2001 and 2011, more than 2500 new towns have come into existence. In 1951, only 17 per cent of the population lived in urban areas but in 2011, this number increased to 31 per cent. For the first time in India, population growth rate in urban areas surpassed that of rural India. In 2011, about 380 million people were living in urban areas. Rapid urbanization and investment in smaller town and cities reduced inter-regional income inequality.

Although we noticed no change in inter-district per capita income inequality, we have however noticed that within any given district, income inequality between the rich and the poor has increased.

As is evident from [Figure 2.7](#), both the PDF and the cumulative density function (CDF) have moved to the right for the fiscal year 2004–05, indicating that income has increased. The income distribution functions (captured through CDF) also show evidence about first-order stochastic dominance: Income distribution function for 2004–05 lies everywhere below (i.e., to the right of) income distribution drawn for 2001–02. An income distribution function stochastically dominates another if the cumulative percentage of people below any given income is lower in the first (2004–05) than in the second (2001–02). The income distribution function that stochastically dominates the other also has higher poverty than the other. Similarly, income distribution for 2001–02 lies to the right of income

distribution drawn for 1999–2000. This implies that between 1999–2000 and 2004–05, poverty had fallen. We will talk separately about poverty in [Chapter 5](#).

Figure 2.7 Median-adjusted Densities and Distribution of Log-income in 1999–2000, 2001–02, and 2004–05



Source: Author's own calculation.

This result is not surprising. As is evident from [Table 2.1](#), there has been a steady increase in both mean and median level per capita district income. It is widely documented that when economic growth occurs, absolute poverty falls ([Table 2.2](#)).

Because of paucity of data, we are not able to extend this district-level analysis beyond 2005. However, going forward, we expect that income disparity across districts would fall further. This is because active labour and capital market intervention started only post 2005—when in addition to MGNREGA, government introduced other schemes such as mid-day meal

schemes for primary school going children, Indira Awas Yojana (scheme for houses), NRHM (scheme for health), Pradhan Mantri Gram Sadak Yojana (scheme for rural roads), Swarnajayanti Gram Swarozgar Yojana (scheme for rural income), and other microfinance activities. In 2011–12, there were around 200 such government schemes. Hence, if there has been a fall in inter-district per capita income disparity for the period before these schemes were started, there is a likelihood for the process of income generation to be more uniform across districts with these schemes in place.

Table 2.1 Per Capita Income Summary Statistics (in 1999)

	1999–2000	2001–02	2004–05
Mean ₹	15,512.3	16,882.7	19,600.8
Median ₹	14,029.5	15,154.5	17,084.5

Source: Author's own calculation.

Table 2.2 Poverty Rate (Tendulkar Methodology)

State	(Unit: %)					
	2004–05			2009–10		
	Rural	Urban	Total	Rural	Urban	Total
Bihar	55.7	43.7	54.4	55.3	39.4	53.5
Delhi	15.6	12.9	13.0	7.7	14.4	14.2
Haryana	24.8	22.4	24.1	18.6	23.0	20.1
Punjab	22.1	18.7	20.9	14.6	18.1	15.9
Uttar Pradesh	42.7	34.1	40.9	39.4	31.7	37.7
West Bengal	38.2	24.4	34.2	28.8	22.0	26.7
India	42.0	25.5	37.2	33.8	20.9	29.8

Source: 'Press Note on Poverty Estimates, 2009–10', Planning Commission, Government of India, 13 March 2013.

In fact, recent evidence from states in India has shown that various backward states performed better in comparison to the rich states (see [Figure 2.8](#)). During 1980s and early 1990s, the so-called BIMARU states were held responsible for pulling down the national average growth rate. But this trend is changing—and this is reflected in our district-level analysis. Considering the period between 2009 and 2012, the GDP growth rate averaged 7.7 per cent. The fastest *growing* states were Uttarakhand and Bihar (12.5%), followed by Gujarat (10.3%), Madhya Pradesh (9.9%), Goa (9.8%), Maharashtra (9.7%), Haryana (9.6%), and Jharkhand (9.2%). There are four backward states in the fastest growing eight states. Chhattisgarh and Odisha

slowed in 2009–12 to 7.5 per cent, after averaging almost 10 per cent in the previous five years. Rajasthan averaged 7.3 per cent and Uttar Pradesh 6.8 per cent, closely following the national average. In fact, these two states have almost doubled their growth rates during post-reforms. To sum up, we find evidence of convergence in growth rates across states and districts in India.

Figure 2.8 India's New Growth Map: The Country's 20 Largest Economies and Their Average GDP Growth Rates, 2007–13



Source: Author's own drawing. Data used in this map are sourced from India Planning Commission.
Note: This map does not claim to represent the authentic domestic or international boundaries of India. This map is not to scale and is provided for illustrative purposes only.

There are indications that these backward states are picking up in other indicators of development such as health and literacy. Uttar Pradesh and Bihar, historically, have been the worst areas for polio in the entire world. Presently, all of India, which includes these two states as well, has been polio-free since the last two years. At a pan-India level, the literacy rate

improved to 9.7 per cent in the decade ending 2011. But it improved faster for the backward states—Bihar (16.8 per cent), Uttar Pradesh (11.5 per cent), and Odisha (10.4 per cent). The figures for female literacy rates have been even more impressive—20.2 per cent for Bihar, 17.1 per cent for Uttar Pradesh, 15.9 per cent for Jharkhand, and 13.9 per cent for Odisha (Economic Census 2011, Government of India).¹⁷

This uniform regional growth and a faster post-reforms period growth resulted in a fall in poverty. It is to be noted that during the 7th Five Year Plan (1985–89), India's annual growth rate of GDP was around 5.5 per cent. During the 8th Five Year Plan (1992–96), the GDP growth rate increased to 6.5 per cent, and during the 10th Five Year Plan (2002–06), the GDP growth rate increased further to 7.7 per cent.¹⁸ At a pan-India level, the head count ratio (HCR)¹⁹ fell from 36 per cent in 1993–94 to 27.5 per cent in 2004–05.²⁰ Before 2004–05, poverty reduction averaged 0.7 per cent per year, but between 2004 and 2009, poverty reduction doubled to 1.5 per cent per year. Between 2004–05 and 2009–10, the absolute number of poor fell by a huge 52 million. Even this figure is a gross underestimate as the survey year was 2009–10—a terrible drought year.

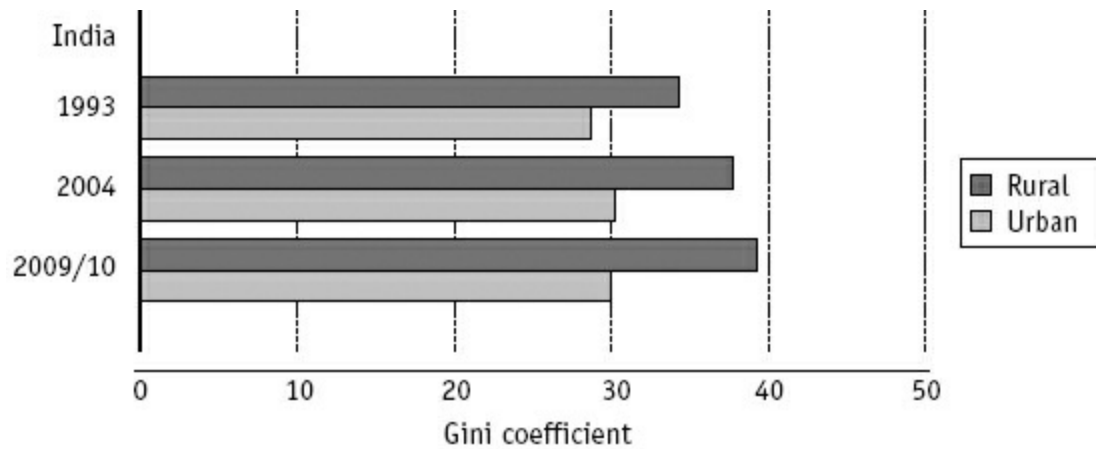
Does our result in any way contradict the findings of the ADB, that is, has income inequality increased in India? The answer is 'NO'. As we already mentioned, our results suggest that *across* districts income inequality has fallen, but *within* any district, we find evidences of an increase in income inequality (see [Figure 2.9](#)). A given state may perform extremely well on all indicators but there may be districts within that state that are among the most deprived in the country, or a state may have very high levels of attainment on certain specific development indicators but not on all of them. For example, in fast growing states such as Maharashtra and Tamil Nadu, we find backward regions like Vidarbha and Dharmapuri. Although there is convergence in growth rate across states, pockets of deprivation exist.

Deprivation is more acute in the Red Corridor region²¹ of India experiencing an upsurge in the Maoist movement and related insurgents (see [Figure 2.10](#)). Socio-economic development of the region has been abysmal since independence. As a result, the Maoists have been able to win the confidence of the deprived sections of the population living in this region and have organized them to revolt against the government.

While examining deprivation, we found that the Red Corridor region is indeed impoverished in comparison to the rest of India (henceforth, ROI).²²

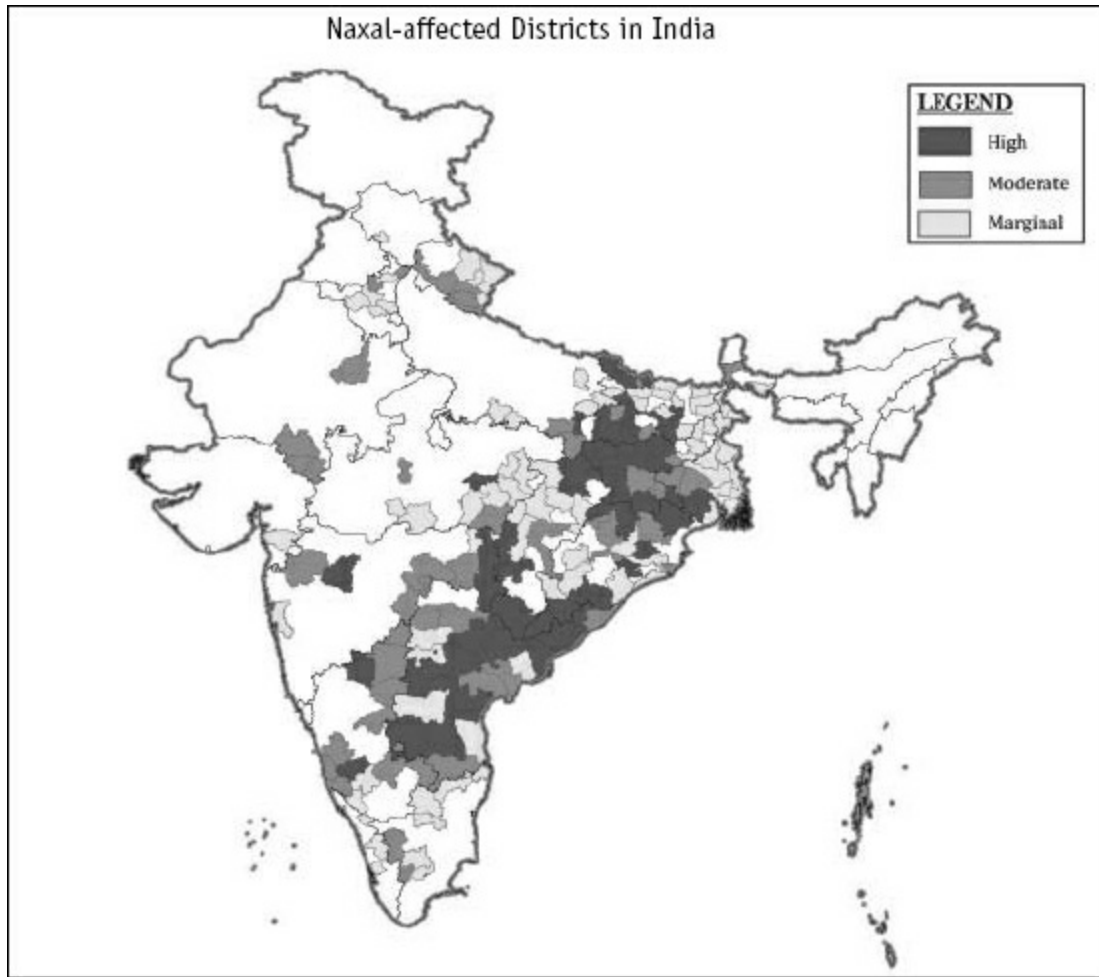
We examined deprivation in terms of seven development indicators, namely access to health, access to education, access to finance, access to communication and other basic amenities, nature of work participation, living standards, and poverty.

Figure 2.9 Inequality in India



Source: Asian Development Outlook, 2012 (p. 48).

Figure 2.10 Red Corridor Region in India



Source: Author's own drawing.

Note: This map does not claim to represent the authentic domestic or international boundaries of India. This map is not to scale and is provided for illustrative purposes only.

For our study, we tested whether there was any statistically significant difference between the mean outcomes of the Red Corridor region and those from the ROI sample. For this purpose, we did one t-tail test. The null hypothesis was that there is no significant difference in development indicators between the Red Corridor region and the ROI. The alternate hypothesis was that development indicators in the ROI on average were better than those in the Red Corridor region. We used the 2001 census data—the time when India was experiencing a high GDP growth rate in excess of 8 per cent. The one t-tail test indicated that except for education, for all other parameters that we considered, there was a statistically significant difference, with ROI having better development indicators vis-à-vis the Red Corridor region.

The summary findings are as follows:

Demography. Maoist movement got tremendous support from the tribal and the Dalit population. We found that the Red Corridor region had higher proportion of tribal (Scheduled Tribe) population (27.39 per cent) as compared to the ROI sample (14.79 per cent).

Health. The Red Corridor region on an average had five hospitals and dispensaries per one lakh population in comparison to 12.6 hospitals and dispensaries per one lakh population for the ROI.

School. The Red Corridor region had less number of primary schools, 98 per one lakh population in comparison to 106 for the ROI.

Banks. In the Red Corridor region, 27 per cent of the households had a bank account while for the ROI, 40 per cent of the households had a bank account.

Basic Amenities Such as Electricity and Communication Services. In the Red Corridor region, 28 per cent of the households used electricity as a source of light while in the ROI, 77 per cent of the households used electricity.

Access to Roads and Railways. Road and rail connectivity is important for integrating remote rural economies with bigger markets and thus opening up opportunities for rural households to get better price and hence higher incomes. Connectivity also favourably affects school attendance of both students and teachers, especially during monsoons, and helps patients in accessing healthcare, resulting in reduced morbidity rate. We find that only 45 per cent of the population in the Red Corridor districts had access to paved roads in comparison to 60 per cent for the ROI. To avail a bus service, only 2 per cent of the population has to travel more than 10 km in the ROI as opposed to 15 per cent of the population. Railway connectivity is even worse with 65 per cent of the population in the Red Corridor region in comparison to 53 per cent for the ROI, needing to travel more than 10 km to avail railway services.

Marginal Worker. Census 2001 defines a main (marginal) worker as someone who participates in any economically productive activity for more than six months (less than six months) during the reference period of conducting the survey (usually one year). Red Corridor region, on an average, has a higher proportion of marginal workers (32 per cent) in comparison to the ROI (22

per cent).

Living Standard. Considering the type of housing, a mud house vis-à-vis a *pucca* (concrete) house as a proxy for standard of living, we find that 16 per cent of the population in the Red Corridor districts resides in a pucca house in comparison to 42 per cent for the ROI.

Poverty. Considerably large proportion of the population (39 per cent) in the Red Corridor region lives BPL in comparison to 16 per cent for the ROI. This figure is for 2004.

Has the situation in the Red Corridor region improved during recent times? Yes, recent numbers from 2011 census indicate towards that direction. In terms of basic amenities such as electricity and communication services, the figure improved from 28 per cent in 2001 to 44 per cent in 2011. For banks and households with concrete houses, the figures improved from 27 per cent to 50 per cent and from 16 per cent to 23 per cent respectively between 2001 and 2011. Government intervention through various social schemes and investment in public goods, especially in agricultural and allied activities, had a positive impact on development.

WHY IS INEQUALITY BAD?

Inequality is undesirable because it leads to social unrest such as Naxalism²³ in India. When one group of people consistently experience inferior opportunities (economic, social, and political) in comparison to their fellow citizens, then it is not surprising that these ‘have-not’ groups may revolt against the state. If the poor who are docile are exploited, then it may hurt the long-term growth prospects of any country. The growth experience of North and South America brings this out. In South America, land ownership and political power were highly concentrated. Unskilled labourers comprising of native American and African slaves were abundant in number. They were used in mining and large plantation agriculture, leading to the emergence of hierarchical and extractive societies. On contrary, in North America there was scarcity of labour. Competition in labour market led to the development of less unequal land ownership patterns, a faster expansion of the franchise, and rapid increases in literacy and basic education. This had a positive impact on long-run growth and we all know now that USA has forged ahead of the

South American economies.

There is another way through which inequity affects the long-run processes of development and that is through shaping economic and political institutions. Institutions determine the incentives and the constraints people face and provide the context in which markets function. Institutions are an outcome of complex historical processes that reflect the interests and structures of political influence of different individuals and groups in a society. From this perspective, market imperfections may arise not by accident but because institutions distribute income or power in particular ways. In this view, there will be social conflict over controlling institutions in order to shape them in a particular way. The bottom line is that unequal power leads to the formation of institutions that perpetuate inequalities in power, status, and wealth, which are bad for investment, innovation, and risk-taking abilities which are important for long-term growth.

Good economic institutions are equitable in a fundamental way: To prosper, a society must create incentives for vast majority of the population to invest and innovate. But such an equitable set of economic institutions can emerge only when the distribution of power is not highly unequal and in situations in which there are constraints on exercise of power by office holders. Highly unequally distributed wealth associated with unduly concentrated political power prevents institutions from enforcing broad-based personal and property rights and leads to inefficient outcomes.

As the poor in general have less voice and less income, there is a need for a more equitable distribution of income. As there is no user charge for using public goods (explaining the less influential voice of the poor people) and the poor are more dependent on them, it is the quality and the delivery mechanism of these public goods which makes all the difference. When societies become more equitable in ways that lead to greater opportunities for all, the poor stand to benefit on two counts. First, expanded opportunities benefit the poor directly through greater participation in development process. Second, the development process itself can become more successful and *resilient* as greater equity leads to better institutions, more efficient conflict management, and a better use of all potential resources in society including those of the poor. Through effective institutions and strong governance, emphasis should be laid on how to achieve a more equitable income distribution.

In addition to an effective institution, there is a need to remove market

imperfection. The labour market is arguably not perfect because of discrimination and reservation on basis of personal contacts, caste, religion, and gender. Land markets have imperfections associated with lack of clear titles, histories of concentrated ownership, and imperfect rental markets. Capital market is not perfect as credit is rationed across prospective clients and interest rates differ considerably across lenders and borrowers in ways that cannot be linked to default risk or other economic factors affecting expected returns to the lenders. For example, interest rates decline with loan size in Kerala and Tamil Nadu in ways not explained by risk difference.

The upshot of this is that the market is still not perfect,²⁴ and there are ways to increase the overall productivity through an attempt to make the market work for the poor and deprived. Imperfection in labour and capital market affects the distribution of income. Imperfection in the goods market thwarts the opportunities to earn income. Imperfection in the judicial system means that the deprived do not enjoy any legal rights thus leading to exploitation, discrimination, and capture of the state by the elite. Many a times, markets do not exist and it is the responsibility of the government (both at the Centre and at the states) to provide public goods to help the poor participate in the market. Poor quality (of roads, electricity supply, etc.) and an inefficient delivery system of services such as education and healthcare make it more costly for the poor to participate in the market. In addition, inefficient and corrupt bureaucracies raise transaction costs in assets such as land which is important for the poor.

Although economists and policymakers in general are worried about individual well-being and the factors affecting this well-being, they somehow seem to assume that market is perfect (better known as classical assumption). All the growth models namely the Solow growth model, endogenous growth models, etc., have tried to explain higher standards of living (per capita income) without explicitly accounting for market imperfection. In fact, the fundamental assumptions for these growth models to work is to assume that the capital market is perfect—so that whatever is saved can be invested for productive purposes. Development economists looked at other factors like better access to health and education—not otherwise considered in the growth models—as indicators of well-being. They too do not explicitly focus on market imperfection. [Case Study 2.2](#) gives some idea about why income inequality exists in India.

Case Study 2.2: Farm Crisis, Root Cause of Inequality*

The manner in which the Planning Commission classified people living BPL remains, as ever, a subject of heated debate. The government shelved the Tendulkar Committee's findings and appointed another panel to look into the extent of poverty. But the crux lies in looking at poverty and inequality in tandem.

The idea that only someone with a consumption expenditure of less than ₹28.65 per day (in urban areas) will be counted as poor is hard to believe.

However, there is agreement on one important issue—during the post-reform period, the percentage of people living BPL has indeed fallen. This is borne out by all the methodologies—whether it is the NSS, the World Bank, or even the Tendulkar Committee. So there is unanimity of opinion when it comes to reduction in poverty per se.

Policymakers need to focus on increase in inequality. Much of the increase in income inequality is on account of the poor being dependent on agriculture. The agriculture and allied sector which supports the livelihood of around 60 per cent of the population gets a paltry 14 per cent of the total national income.

On a per capita basis, an agricultural worker earns much less than those working in the services and the manufacturing sectors.

Factors aggravating distribution of income are of two kinds: those specific to agriculture and those pertaining to the farm sector's linkages to industry and services.

AGRI PRODUCTIVITY

India is one of the largest producers of many agricultural products such as rice, wheat, sunflower oil, tea, and coffee. However, if one looks at productivity, India is way down the ladder. China has much less arable land in comparison to India, but its yield per hectare is almost twice that of India's.

In India, 70 per cent of the landholdings belong to tenant farmers. The big landlords are busy making money in the USA and elsewhere. They have all but abandoned their traditional occupations so farm productivity is not a priority for them anymore.

In states such as West Bengal and Kerala, a different situation prevailed—Left governments were successful in initiating land reform programmes, but as a result, land owners and shared tenants had little resources to invest in high-yielding crops.

As crop output is dependent on rainfall, landowners were risk-averse—investing in low-yield varieties such as rice, pulses, rather than in high-yield varieties such as groundnuts and castor.

Volatile agriculture output contributes to rural poverty, affecting distribution of income. It also triggers migration to the urban sector. The migration of unskilled or semi-skilled labourers into the urban informal sector aggravated inequality in the distribution of income. The workforce had little or no chance of being meaningfully employed in the services sector.

INDUSTRIALIZATION

A way out of this trap, albeit an extreme, theoretical option, is to use agricultural land for industrialization and to meet our food requirement through imports. But this is not a practical or feasible option.

The acute power shortage in rural India rules out small-scale options such as the food processing industry. This leaves us with the option of setting up large industries.

Even if the state provides the necessary infrastructure such as roads, power and water, the central problem is of acquiring land. A case in point is Singur, West Bengal, where the Tatas were not allowed to set up their plant.

Land-owning farmers were willing to enter into an agreement with the previous Left Front government to sell their land but the tenant farmers were not willing. The reason: There is no law defining the rightful share of the tenant farmer in the compensation paid to land owners.

The irony is that though the Tatas have left, the farmers are yet to get back their land. Even if they do get it back in some distant future, the land would perhaps no longer be cultivable.

GOVERNMENT INTERVENTION

When industrialization is a difficult proposition, the other alternative is government intervention to boost farming—procuring agricultural commodities and giving fiscal incentives. But how effective are these? The idea behind government procurement is to ensure that farmers get the right price for their produce, especially when supply exceeds demand. Now consider this. Between 2010 and 2011, fertilizer's prices doubled.

There has also been an increase in the cost of daily labour and transport. All these raised the input cost of farming by around 30–40 per cent. On the contrary, there was a reduction in the wholesale market prices of jute and paddy during 2011, making it a perfect case for government intervention.

Considering the market for jute and paddy in rural West Bengal, the data showed that for the last two years, most of the government procurement took place in February when it should have been done soon after the harvest in January in case of paddy and in November in case of jute.

This is because small tenant farmers, unlike their big counterparts and wholesale traders, cannot hoard their produce. Soon after the harvest, they need to sell most of their produce to pay off their existing loan.

So delay in government procurement benefits large farmers and traders, further aggravating income distribution in rural areas.

As for fiscal stimulus, the classic case has been that of Vidarbha region in Maharashtra, where in spite of various packages being announced, farmers' suicides continue.

The root cause of the problem in Vidarbha is the lack of irrigation facilities, the

crop output being heavily dependent upon rainfall. The then Prime Minister Manmohan Singh visited this region and announced some relief packages, a part of which was meant to build a dam.

Better irrigation because of a dam was expected to lessen the woes of the farmers. The dam was built, but the water now gets diverted to generate power to feed the nearby industries. Farmers' suicides continue and the government saves face by categorizing these deaths as accidental rather than announcing them as farmers' suicide.

To sum up, the government can better address the big question of poverty and inequality by looking into these microissues. It is easy to be deluded by a deluge of statistics.

* Previously appeared in *The Hindu Business Line* (26 March 2012).

POLICY RECOMMENDATIONS

So what should be done? At present the two most important challenges facing the policymakers in India are the ways by which to sustain high growth and to ensure equal distribution of income. With majority of the Indian population still earning their livelihood from agriculture (close to 58 per cent of the population) and the manufacturing sector resorting to capital-intensive mode of production, it will be difficult to realize equal income distribution without boosting agriculture productivity, labour market reforms, and adequate skill formation. The latter two are important for the manufacturing sector to go with the labour-intensive mode of production—a crucial factor for employing a young and growing labour force. All the success stories of the Indian manufacturing sector were achieved through the capital-intensive mode of production. Be it Reliance in the petrochemicals sector; TATA motors, Bajaj, and Mahindras in the automobiles sectors; or even Godrej, Birlas, and Videocon in the consumer durables sector, the success stories revolve around the capital-intensive mode of production. The lack of labour market reforms forced these companies to go for the capital-intensive mode of production and shun the labour-intensive mode of production.

However, merely reforming labour laws may not help. For job creation, what is important is skill formation among workers. Everyone talks about India's demographic dividend. But without proper education and skill formation, much of this demographic boon may turn into demographic bane. Spending more on health and education provides more growth because

people become more productive. Once growth happens, it generates more tax revenues and there is more to spend on poor. Skill formation among workers and provision of better infrastructure such as electricity, roads, schools, hospitals, etc., helps business to grow and generate more employment.

Similarly, in the case of agriculture, lower productivity kills this sector. Agriculture has suffered a secular decline in public investment since the mid-1990s. India is behind comparable countries when it comes to investment in the agricultural sector. For instance, India spends around 0.5 per cent of the agricultural GDP in agricultural research, compared to 0.7 per cent in developing countries as a whole and as much as 2 to 3 per cent in developed countries.

What a robust growth in agricultural sector does in terms of pulling up the entire GDP becomes evident from the recent growth experience in Madhya Pradesh. Riding high on 18 per cent growth in agriculture in 2011–12, Madhya Pradesh was able to register the second highest growth rate in the entire country. Gross State Domestic Product (GSDP) grew at 11.98 per cent in 2011–12, much of which was possible because of an improved canal system and realization of irrigation resources, providing farm inputs at a lower cost. Construction of farm ponds under the Balram Talab Scheme improved the irrigation potential.²⁵

There is also a need to address problems faced by the small and medium enterprises in India. Also, termed as an unorganized sector, it accounts for around 84 per cent of the total manufacturing unemployment in India. With small scales of operation (typically employing less than 50 workers), these firms are caught in a vicious circle of reliance on traditional low productive technologies with limited earning potential. Imperfections in the credit market and lack of awareness and access to new markets add further to their problems. A recent study by the Associated Chambers of Commerce and Industry of India (ASSOCHAM) found that around 25 per cent of small and medium manufacturing units had either closed their business or were struggling for survival due to the non-availability of easy credit and delayed payments by large firms. Out of 500 manufacturing units surveyed from different states such as Uttar Pradesh, Haryana, Punjab, West Bengal, and Bihar, over 70 per cent of the respondents said that they did not have access to institutional credit to operate competitively.²⁶ Add to these factors issues such as poor infrastructure, inefficient supply chain management, red tapism, unreliable markets for people, and materials and finished goods, and you

know why India ranks poorly in the *Doing Business Report* published by the World Bank. Addressing the needs of small and medium enterprises is also crucial for India's inclusive growth agenda. A better investment climate with less control, regulations, and bureaucratic delays will help Indian business community to flourish.

¹ In India, we can get an idea about the level of regional development by looking at The India Human Development Survey (IHDS). IHDS is nationally representative, multi-topic survey of 41,554 households in 1,503 villages and 971 urban neighbourhoods across India. The first round of interviews was completed in 2004–05. A second round of IHDS re-interview happened in 2011–12 to examine changes in an era of rapid economic growth. Data are available at: <http://www.icpsr.umich.edu/icpsrweb/DSDR/studies/22626>

² N. Banik (2009), *Trade and Social Development: The Case of Asia*, Asia-Pacific Research and Training Network on Trade, Working Paper No. 68, United Nations ESCAP.

³ The NSSO has conducted nationwide socio-economic sample surveys of rural and urban areas since 1950. Consumption expenditure surveys form the basis of official poverty estimates in India. Consumption surveys are conducted both annually on a small sample basis (thin sample), and every five years (quinquennial basis) involving large or thick sample surveys. Published reports can be accessed at http://mospi.nic.in/Mospi_New/site/home.aspx

⁴ IMF (2006), *IMF Regional Economic Outlook, 2006*, Washington, D.C.: International Monetary Fund, p. 63.

⁵ ADB (2012), *ADB Economic Outlook, 2012*, Metro Manila: Asian Development Bank, p. xviii.

⁶ *The Economist* (2011), 'Business in India', *The Economist*, 22 October 2011.

⁷ *The Economic Times* (2011), 'Poverty Rate Drops, Rural Wages Up During Six Years of UPA Rule', *The Economic Times*, 16 July 2011.

⁸ *The Economic Times*, 'Talk of Inclusive Growth, Rich Getting Richer, Faster: Report', *The Economic Times*, 1 February 2011.

⁹ Although the UPA government at the Centre is credited for undertaking these welfare augmenting schemes, other parties such as the Left Front (alliance of left-wing parties in India), however, played an important role in bringing in the employment guarantee scheme. Also, the Bharatiya Janata Party (BJP) government in Chhattisgarh is credited for bringing in the food security bill before the central UPA government brought it.

¹⁰ S. Bhalla (2003), Recounting the Poor: Poverty in India, 1983–99, *Economic and Political Weekly*, January, pp. 338–49.

¹¹ A. Sen (2001), *Estimates of Consumer Expenditure and Implications for Comparable Poverty Estimates After the NSS 55th Round*, Paper presented at NSSO International Seminar, New Delhi, May.

¹² A. Deaton and J. Dreze (2002), Poverty and Inequality in India: A Re-examination, *Economic and Political Weekly*, 7 September, pp. 3729–48. Also see, A. Sen and Himanshu (2005), ‘Poverty and Inequality in India: Getting Closer to the Truth’, in A. Deaton and V. Kozel (eds.), *Data and Dogma: The Great Indian Poverty Debate*, New Delhi: Macmillan, pp. 306–70.

¹³ A.K. Mehta (2003), *Multidimensional Poverty in India: District Level Estimates*, CPRC India Working Paper, pp. 339–59. Manchester: Institute for Development Policy and Management.

¹⁴ For a detailed discussion on this topic, see N. Banik and A. Banerjee (2011), *The Rich Keep Getting Richer in India! Says Who?* Asia-Pacific Research and Training Network on Trade Working Paper No. 105, United Nations ESCAP, September.

¹⁵ In 2011, there were 627 districts in India. Many of these districts were newly formed and for some of them, information about the income variable was not available. The case in point is Delhi. The Census 2001 contains information about many variables related to north, northeast, northwest, south, southwest, west, east, and central Delhi. However during 2001, when it comes to per capita income, we find information relating to Delhi only as a whole and not its constituent districts. Source: Planning Commission, Government of India, <http://districts.nic.in/dstats.aspx> (accessed 2 April 2011).

¹⁶ Census 2011 defines towns as, ‘places with a municipality, corporation, cantonment board or notified town area committee, etc.’ In addition, a town should also satisfy the following criteria: i) a minimum population of 5,000; ii) at least 75 per cent of the main working population engaged in non-agricultural pursuits; and iii) a density of population of at least 400 persons per square kilometre.

¹⁷ Also see, Swaminathan S.A. Aiyar (2012), ‘Backward States Surge Even as India Slows Down’, *Times of India*, 4 November.

¹⁸ Office of the Registrar General and Census Commissioner, Government of India.

¹⁹ HCR is measured as a proportion of the population living BPL. India's official poverty lines in 1993–94 were ₹205.84 and ₹281.33 for rural and urban India, respectively. In 2004–05, poverty lines were ₹356.30 and ₹538.60 for rural and urban India, respectively.

²⁰ Ministry of Rural Development, Government of India.

²¹ The Red Corridor is a region comprising parts of Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, Uttar Pradesh, and West Bengal with considerable Naxalite activities.

²² J.P. Mukhopadhyay and N. Banik (2015), ‘Misery of the Red Corridor Region of India: What Do Data Tell Us?’, in R. Bhattacharya (ed.) *Regional Development and Public Policy Challenge in India*, Springer: New Delhi.

²³ Naxalism is a social movement which mobilizes landless labourers and displaced tribals into cadres with the aim of overthrowing the Indian State and supplanting it with a stateless and classless society through armed revolution. We consider the two terms

‘Naxalism’ and ‘Maoism’ as synonymous and hence have used them interchangeably.

²⁴ Market is perfect when providers of goods and services are able to participate and get returns according to the value of a marginal product. There are no entry barriers and factors of production operate under perfect competitive setting.

²⁵ Source: <http://www.thehindubusinessline.com/news/job-creation-to-be-our-mantra-fordevelopment-shivraj-singh-chouhan/article4030302.ece> (accessed on 25 October 2012).

²⁶ Source: <http://www.thehindubusinessline.com/industry-and-economy/credit-scarcity-hits-smallunits-hard-says-assochem/article4027901.ece> (accessed on 24 October 2012).

CHAPTER 3

Demand Management Policies

We know from [Chapter 1](#) that the objective of demand management policy, namely fiscal and monetary policy, is to control the output gap. In this chapter, we take a closer look at fiscal and monetary policy, particularly with reference to the Indian economy.

FISCAL POLICY

Fiscal policy refers to central government intervention through government expenditure and taxes as policy tools to control the output gap. The idea is to promote maximum permissible production and employment. Please note that *fiscal policy refers to actions taken by the central government* and not by governments and local bodies at the state and sub-state levels. Often, local bodies (such as city corporations, municipalities, and panchayats) spend money, but this is not counted as part of fiscal policy, as their actions are not calculated to impact the overarching national goal of maximizing employment and production.

When government spends money or raises taxes, it affects the aggregate demand. Government expenditure is part of the aggregate demand. So an expansionary fiscal policy means higher government spending and/or lower tax rates. Government spending means more income, which for a given tax rate means higher disposable income (income-less taxes). When people have more disposable income, they tend to spend money, pushing up the aggregate demand. Likewise, when the government cuts taxes, it also pushes up the aggregate demand as people have more disposable income.

Concept of Multiplier

Here, it is important to mention that for any given amount of money spent by the government, the resultant increase in aggregate demand is more than what the government initially spends. Consider this: Let us assume that the economy is in recession and the government wants to push up aggregate demand by spending ₹100 billion. The government wants to use this ₹100 billion to build roads. In the first stage when this ₹100 billion is spent, the aggregate demand component of the GDP increases by ₹100 billion. This is not the end of the story. To build roads, the government needs to hire labourers and contractors who oversee the making of this road. A part of this ₹100 billion goes to the labourers and contractor as income. For simplicity, assume that MPC for the labourers and contractors is 0.5. That is, for every ₹100 earned as income, ₹50 is consumed (spent). Therefore, the first period of government spending by ₹100 billion results in an increase in aggregate demand by ₹50 billion in the second period, due to spending by the labourers and contractors. In case of an open economy, some of this spending goes towards buying foreign goods (a slight negative effect, as money spent on foreign goods does not raise domestic output). The net effect is that in the context of a closed economy, the first period of government spending of ₹100 billion raises the demand-side component of GDP by ₹50 billion in the second period. The induced effect of the initial increase in income goes on further, as again out of this resultant ₹50 billion increase in income, ₹25 billion is spent (assuming MPC to be 0.5) on goods and services. This process continues and we can show that initial ₹100 billion spent by the government eventually leads to an increase in aggregate demand by ₹200 billion (see [Table 3.1](#)). The ratio of change in real GDP to initial change in government purchases is known as government expenditure multiplier.

Likewise, an initial cut in the tax rate leads to a sequence of additional consumption spending (as in the case with government expenditure), and ultimately leads to an increase in aggregate demand more than the extent of tax rate cut. The only difference in case of a tax cut is that the first period of the multiplier process will witness a smaller increase in aggregate demand than in the case of an increase in government purchases. The total increase in real GDP (from the demand side) is smaller in the case of a tax rate cut as opposed to government expenditure. This is because multiplier effect of a tax cut works through disposable income.

UNDERSTANDING THE INDIAN BUDGET

In simple terms, a budget depicts the relationship between the government expenditures and the government revenue. If a government collects more taxes (revenue) relative to what it spends (expenditure), then we say that there is a budget surplus. The popular perception is that running a budget surplus is a good thing. However, if at the time of recession, a government wants to balance its budget by raising taxes, then it may actually pull the economy further into recession. At the time of recession, the government should spend money even if it means running a budget deficit.

Table 3.1 Government Expenditure Multiplier

<i>Period</i>	<i>Government Spending and Additional Consumption Spending</i>	<i>Cumulative Increase in Spending</i>
1	100	100
2	50	150
3	25	175
4	12.5	187.5
:	:	:
N	0	200

Source: Author's calculation.

The governments usually sells bonds to borrow money from the market. Borrowing is a bad idea if it is to meet the current expenses but not if it is to make some long-term investment. For example, if someone borrows to pay for his credit card bill for consumption expenditure over and over again, it is a bad thing. On the other hand, if this person takes a loan to invest in building a house, then future capital gains will eventually make life happy for this person. The same applies to a government. If a government borrows to spend for consumption goods (non-merit goods such as subsidy), it is a bad thing. On the other hand, if a government borrows to spend on increasing the productive capacity of an economy, it is a good thing.

What about government debt? If you or I run into a debt for a long time, we may very soon be broke. We may have to sell our collateral (assets) to service the debt. With a government, the situation is a bit different as it virtually cannot default on its debt, except under rare circumstances. It can always raise taxes to make the interest payment on its earlier debt. If debt becomes uncontrollable, a government can resort to austerity measures, such

as cutting social security payments as happened in Greece, Italy, Portugal, and Spain. In the long run, if government debts increase in size relative to GDP, it can pose problems. This is because crowding out of investment occurs if an ever-increasing debt (especially raised to meet current consumption) raises interest rates. Lower investment means a lower stock of capital goods and hence a reduced capacity of the economy to produce goods and services. This effect can be offset if the government spends money on merit goods such as building infrastructure (ports, roads, and airports), or financing education, research, and development. Improved infrastructure and a more educated labour force complements enhancing the productive capacity of the economy. Government debt is sustainable if the income generated from government spending is able to pay for interest on the earlier government debts.

An alternative way to check for sustainability is to assess solvency. A solvent government must be able to finance its deficit in the long run. To be solvent, the initial debt stock has to be equal to the present discounted value of future primary surpluses, or in other words, the present discounted value of a country's public sector debt should fall to zero (or a minimum acceptable limit) as time progresses. While an increase in the real rate of interest increases the debt burden of a country, a higher growth rate reduces the debt burden when it is taken as a proportion of GDP. Now that you have got an idea about government debt, [case Study 3.1](#) enumerates how excessive government debt led to European economic crisis.

Now let us turn our attention to the Indian budget.

The budget deals with allocating money towards areas where the government thinks it is essential to spend and finding out ways such as taxes to finance it. The government primarily requires money to spend on social infrastructure (such as schools, hospitals, water, sanitation, etc.), physical infrastructure (such as railways, roads, airports, etc.), and to transfer funds to the poor and the deprived in the form of subsidies so that distribution of income becomes more equal. Too unequal income distribution can instigate revolt and in the case of a democracy, can vote the ruling party out of power. The government also needs money for running various government departments and to provide good governance. How does one say whether a budget is good or bad? The general assumptions underlying a good budget are: it contains the fiscal deficit, carries on with the necessary reforms, beefs up planned capital expenditure, and curtails non-planned spending while

increasing revenue receipts.

Case Study 3.1: Europe Gaping at Lost Decade*

The European economic crisis is back again at the centre stage of all economic discussions. During an economic crisis, consumers spend less and investors do not invest (or postpone their investment decisions). There is a general sense of pessimism about future earning prospects leading to higher unemployment and lower productivity growth—something that is evident in the present day Europe.

In order to understand this crisis, we step a little back into history. Soon after the World War II when Europe was devastated, policymakers in the region wanted to rebuild Europe on the premise of socialist capitalism. The underlying idea was that when the market is at a nascent stage, the State would ensure that labour market comes into play and jobs become available. For the elderly and those without jobs, the State would take care through a benevolent social security system—paying unemployment benefits and pensions.

NOBLE SYSTEM, FALLING GROWTH

The objective is noble, but to make the system efficient, the government has to ensure that it collects funds through taxation to pay dole for the unemployed and pension for the retired. Dole and pension are expenditures for the government and to pay for it, the government has to collect taxes.

The principal sources of tax are corporate income tax (contributing nearly 80 per cent of the total tax collection), indirect tax (such as excise and service tax), and direct income tax (i.e., taxing the working class).

At the time of recession when business is not forthcoming or when people find it hard to get a job, it is quite natural that tax collection is inadequate. Therefore, the government meet its welfare objectives (i.e, to pay for dole and pensions) by printing money or by borrowing. Both are perfect recipes for increasing the budget deficit and the public debt.

A higher budget deficit can be sustained, provided the economy is growing. However, economic growth is continuously falling in the Eurozone—3.4 per cent during the 1970s, 2.4 per cent during the 1980s, 2.2 per cent during the 1990s, and 1.1 per cent between 2001 and 2009.

A reason for this is lack of institutional reforms. In a socialist capitalist structure, wages are protected by trade unions. This is irrespective of labour productivity and firms' ability to earn profits. Added to this is Europe's ageing population which is likely to increase further in the future. To maintain a stable population, 2.1 children should be born to each woman in an economy, assuming an average death rate applicable to the world's population.

In contrast, the figures for some Eurozone economies are much lower: 1.38 for

Greece, 1.39 for Spain, 1.41 for Italy, and 1.94 for the UK. For Spain and Greece, the over-65-year-old population will increase from around 17 per cent now to 25 per cent by 2030. The bottom line is that Europe has fewer younger people to work and to pay for the expensive welfare programmes.

WAY OUT

A natural suggestion would be to reform the labour and pension laws (dubbed as austerity measures) and to slacken the immigration laws. But if the recent poll results are any indication, it seems that voters in France and Greece do not like reforms and would rather punish the parties in favour of austerity measures.

A closer look at European democracies suggests it is run by insiders made up of pensioners, trade union leaders, public sector workers, and big farmers. The outsiders consisting of small number of immigrants, the youth, and small private entrepreneurs have little say.

THREAT TO THE EUROPEAN UNION (EU)

It is a classic case of socialist democracy in which the insiders are myopic, care too much about present benefits, and deliberately vote parties to power that support their cause. On the contrary, the outsiders are quite powerless.

Even issues such as changes in labour immigration laws are stalled. A flexible labour immigration clause is expected to resolve issues related to dearth of a young skilled labour force. The brain drain from developing countries such as India and China helped fuel economic growth in the USA but not in Europe.

Lack of austerity measures in the form of institutional reforms is reflected in the form of ever-increasing debt to GDP ratio. Cumulative public debt as a percentage of GDP for most Eurozone countries is already more than 100 per cent—120 per cent for Italy, 160 per cent for Greece, 105 per cent for Ireland, and 107 per cent for Portugal.

Besides, dissimilar macroeconomic conditions (reflected in the debt-GDP ratio) may even threaten the existence of the EU. This is because it renders a common macroeconomic policy—expansionary monetary/fiscal policy during recession and contractionary monetary/fiscal policy during expansion—ineffective. But Europe is diverse, and when Greece faces recession and Germany does well, then following an expansionary monetary policy may help Greece but may heat up the German economy.

It is precisely for this reason that countries willing to join the EU were expected to display similar macroeconomic indicators. It was decided that only those countries that had a budget deficit less than 3 per cent of GDP and a government debt-GDP ratio of less than 60 per cent would be allowed to become a part of the EU.

However, a few countries such as Greece, Italy, and Belgium, with debt-GDP ratios of more than 120 per cent resorted to creative accounting to become members of the EU.

We are now faced with the results, with demand management failing miserably and

the euro trading at an all-time low.

It will be to Europe's benefit if the nations prepare themselves for austerity measures. Otherwise like Argentina during the 1980s and Japan during the 1990s, a lost decade will be a reality for Europe.

* Previously published by the author in *The Hindu Business Line* (11 May 2012).

Let us examine the different heads of government account more carefully.

The government budget has two broad headings namely the revenue account and the capital account. The revenue account corresponds to income gained and expenditure incurred during the course of any fiscal year.¹ Typically, in the revenue account, the expenditures are consumption-oriented and do not have long-term assets and liability consequences (see [Table 3.2](#)). The capital account, on the other hand, consists of expenditure meant for creating long-term assets such as building roads, ports, hospital, research and development, etc. Capital account expenditures are usually undertaken for a period of more than a year.

Table 3.2 Reading the Budget (Figures as % of GDP)

Sr. No.	Item	FY 2012–13	FY 2011–12	Corrections
1	Revenue Deficit (3–2)	3.4	4.4	–1.0
2	Revenue Receipts (2A+2B)	9.2	8.6	0.6
2A	Tax Revenue	7.6	7.2	0.4
2B	Non-tax Revenue	1.6	1.4	0.2
3	Revenue Expenditure (3A+3B)	12.6	13.0	–0.4
3A	Plan	4.1	3.9	0.2
3B	Non-plan	8.5	9.1	–0.6
4	Capital Expenditure	2.1	1.8	0.3
5	Total Expenditure (3+4)	14.7	14.8	–0.1
6	Non-debt Capital Receipts	0.4	0.3	0.1
7	Fiscal Deficit (5–2–6)	5.1	5.9	–0.8

Source: Compiled from Budget at a Glance, 2012.

Following are the receipts in the revenue account:

1. Revenue account receipts
 - a) Gross tax revenue:
 - i. Direct tax such as corporate tax, income tax, interest tax, and

wealth tax.

- ii. Indirect tax such as customs, union excise duties, and service tax.
- iii. Non-tax revenue such as interest receipts, dividends and profits, external grants, and receipts of union territories (UTs)

2. Revenue account expenditure

- a) Non-plan revenue expenditure such as interest payments, defence expenditure, subsidies, postal, police, pension, write-off of loans to state governments, social services, grants to states and UTs, and grant to foreign governments.
- b) Plan revenue expenditure such as central planned expenditure and assistance to states and UTs. The Centre has the Finance Commission—the body that looks after disbursement of funds from Centre to the states. The idea is to guide the allocation of scarce resources in the most equitable manner. The Finance Commission gives money to the states on the basis of six chosen parameters which are population, income, area, infrastructure, tax effort, and fiscal discipline.

3. Capital account receipts

Recoveries of loans, market borrowings, external assistance, disinvestment of equity holdings in public sector enterprises and departmental commercial undertakings, small savings, public provident fund, deposit schemes of retiring employees, and special deposits.

4. Capital account expenditure

- a) Non-plan capital expenditure such as defence, loans to states and UTs, foreign governments and public enterprises, and other non-plan loans.
- b) Plan capital expenditure such as central planned expenditure and assistance to states and UTs for long-term development activities such as building physical infrastructure.

To summarize, the difference between capital and revenue account is that in case of the former, we deal with a time horizon which is more than a fiscal

year, while the latter involves receipt and expense for a given fiscal year.

Fiscal deficit is a broader term that comprises both revenue account and capital account. That is, $\text{Fiscal Deficit} = \text{Revenue Deficit} + \text{Capital Expenditure} - \text{Capital receipts less borrowings (recovery of loans and public sector undertaking [PSU] disinvestment)}$. Although most of the discussion on budget is centred around fiscal deficit, we should understand that controlling *revenue deficit* is more important.

This is because revenue deficit arises out of current (present) consumption-oriented expenditure of the government (including interest payment for the earlier deficit) which does not augment productive capacity of the country. There is another related concept called primary deficit. Primary deficit signifies that portion of the deficit which is not linked with the earlier deficits and has to be financed by issuing new debt. So, interest payments on earlier deficits are deducted from the current fiscal deficit to arrive at the primary deficit figure.

For India, we observe that centre–state combined deficits have been growing rapidly in the past few years. For the fiscal year 2011–12, India's fiscal deficit (centre–state combined) was around 9 per cent, highest when compared to other BRIC economies—China 1 per cent, Brazil 2.8 per cent, and Russia 1 per cent. A lower foreign capital inflow on account of higher fiscal deficit has broader implication in terms of deteriorating foreign exchange reserves, depreciating rupee, and even higher inflation—something that makes the policymakers worry.

A large part of growth in combined deficit can be attributed to a State's fiscal deficit. Primary deficit was on decline and the revenue deficit overtook the primary deficit. That is, interest payment component on earlier deficit increased. It also implies that cumulative government debt increased. Following reforms, there was now limited scope for the monetization of the deficit (or printing money to finance the deficit) and this led to an increase in market borrowings by the central government. The rising proportion of internal debt became more acute, especially with fewer disinvestment opportunities and less recoveries of loans. The rising proportion of internal debt in total debt is something that can be considered worrying.

This leads us to the discussion on how to reduce revenue expenditure. The primary components are interest payments, subsidies, defence expenditure, and salaries. While the proportion of defence expenditure in revenue expenditure has gone down in recent years, the interest payment component

has shot up because of the mounting internal debt burden. On the whole, subsidies are on a rise and this has mainly to do with subsidies on non-merit goods. There is now a consensus that subsidies on non-merit goods should decline and those on merit goods should increase. Non-merit subsidies refer to food and fertilizer subsidies and subsidies in the petroleum and power sector. Now that you have got some idea about government budget, [case study 3.2](#) helps to differentiate between a *good* budget from a *not-so-good*-budget.

Case Study 3.2: The Hallmarks of a Good Budget*

The budget deals with allocating money towards areas where the government thinks it is essential to spend and finding out ways such as taxes to finance it. The government primarily requires money to spend on social infrastructure (such as schools, hospitals, water, sanitation, etc.), physical infrastructure (such as railways, roads, airports, etc.), and transferring funds to the poor and the deprived, so that distribution of income becomes more equal. Too much unequal income distribution can instigate revolt, and in case of a democracy, can vote a government out of power.

But how does one say whether a budget is good or bad? The general assumptions underlying a good budget are: It contains the fiscal deficit, carries on with the necessary reforms, beefs up planned capital expenditure, and curtails non-planned spending while increasing revenue receipts.

FISCAL DEFICIT CUTS

Controlling the fiscal deficit is an important factor from the perspective of sovereign rating—countries with higher fiscal deficits generally lose out in terms of investor attractiveness. For the last fiscal year, India's fiscal deficit (centre–states combined) was around 9 per cent, the highest when compared with the other BRIC economies—China 1 per cent, Brazil 2.8 per cent, and Russia minus 1 per cent (or surplus).

A lower foreign capital inflow on account of higher fiscal deficit has a broader implication in terms of deteriorating foreign exchange reserves, depreciating rupee, and even higher inflation.

India's combined fiscal deficits (centre and states) have been growing rapidly during the past few years. A large part of growth in the combined deficit can be attributed to the State's fiscal deficit.

The interest payment component on the earlier deficit is increasing. It also implies that cumulative government debt is increasing. Following reforms, there is now limited scope for monetization of the deficit (or printing money to finance the deficit) and this has led to an increase in market borrowings by the central government. The rising proportion of internal debt has become more acute, especially with fewer

disinvestment opportunities, and less recoveries of loans. The rising proportion of internal debt in total debt is worrying.

SOCIAL SCHEMES

Given this background, the road map to a good budget is therefore to control fiscal deficits and make sure that the allocations for social programmes are spent effectively. To control fiscal deficit, the finance minister is expected to cut subsidies, defence expenditure, and welfare schemes such as MGNREGA.

There is now a consensus that subsidies on non-merit goods should decline and those on merit goods should increase. Non-merit subsidies refer to food and fertilizer subsidies and subsidies in the petroleum and power sector. This enables the finance minister to set aside money for government's pet project—the food security bill. The food security bill is about providing 5 kg of food grains at a subsidized rate to 75 per cent of households in the rural areas and 50 per cent of households in the urban areas.

The second part comprises using funds allocated for welfare schemes more effectively. To plug leakages in the system, an important reform push is the direct cash transfer (DCT) scheme. DCT was started on an experimental basis, initially covering 20 districts and later extended to the other 600-odd districts.

Another way to increase the effectiveness of government-funded programmes is to make them more flexible. For instance, in case of MGNREGA, unskilled labourers were used to build rural infrastructure.

MGNREGA labourers should also be allowed to take up alternate activities such as working in agricultural farms or in small- and medium-scale industries, depending on requirements. Likewise, money sanctioned under any particular scheme, say under the Sarva Shiksha Abhiyan (SSA) to build schools should be allowed to be used for next best alternative like building hospitals, if the village already has a school.

LAND ACQUISITION

Like faulty legislation, faulty policy designs can also limit the performance of a government.

A big problem in India's growth story is structural in nature. Infrastructure is needed to sustain the growth process. When it comes to investment in infrastructure or industries, the crucial issue is that of getting land.

Inability to obtain land also slows down growth. Farmers do not want to part with land as it serves as a sense of collateral and provides for sustainable income. Even if they want to sell land, they may not get the right price or the land deal may not happen at all. In the event of small land holdings where buyers negotiate with numerous tiny sellers (often with unclear land records), the transaction cost for trading in land goes up.

Often the negotiated price rises more than the 'market' price because of third party

intervention such as land brokers with strong political connections. These land brokers typically procure land in bulk before the start of the project. So, even if the farmers have wilfully given land to the government and land brokers before the start of a project, they may resort to agitation when they see the price of land skyrocket after the start of the project. Farmers' agitation over land acquisition in Greater Noida in May 2011 was of this type. Those who had given land earlier felt left out or cheated as the price of land had increased manifold after the completion of the Yamuna Expressway (highway connecting Delhi to Agra).

To prevent agitation and to procure agricultural land for non-agricultural purposes, farmers have to be made stakeholders. They can be given a part of the land in a developed form. Alternatively, proceeds from sale of land can be put in interest-bearing bonds so that the farmers do not protest against high land prices in subsequent years.

An example of policy design making all the difference is education. Primary education was successful because of meals given as freebies. However, in spite of the success in enrolling students in primary education, a vast pool of the population is stuck in the agriculture sector. In fact, the agriculture sector accounts for 75 per cent of unemployment; 56 per cent of the population with a master's degree earns only ₹6,000 per month. Many corporates such as Axis Bank, ICICI Bank, BPCL, to name a few have set up their own institutions which offer a 2-year master of business administration (MBA) degree. The government failed to provide quality education at the post-secondary level.

For policies to work and budgetary allocations to achieve their goals, what really matters is a clever policy design and a proper legislative framework.

* – Previously published by the author in *The Hindu Business Line* (15 February 2013).

READING THE BUDGET

Now that we have some ideas about various constituent elements of the budget, let me state some ground rules on how to read it. Please remember that when the finance minister places the budget before the parliament, he makes some *ex-ante* statements.

Any comment on future fiscal deficit and other tax and revenue realizations is based on a set of assumptions. It is in the best interest of the finance minister to paint a good picture of the government. Accordingly, he would like to show that the government is likely to receive greater revenue through various taxes and at the same time underestimate the expenditure component. Such overstatement of the revenue component and understatement of the expenditure component is possible as the finance

minister is never checked for his wrong estimates. Consider this: For the fiscal year 2011–12, the initial expectation was that growth would touch 8.4 per cent. However, at the end of the fiscal year, it was found that the GDP had grown at the rate of 6.7 per cent. The government estimated a fiscal deficit at 4.6 per cent of GDP. However, the number was finally 5.8 per cent of GDP.

For the fiscal year 2012–13, the government hoped to keep the fiscal deficit at 5.1 per cent of GDP. This amounted to ₹513,900 crores. Again, this was a gross underestimate. Let us objectively see why this is so. A fiscal deficit of 5.1 per cent was based on the assumption that the government would realize ₹30,000 crores from the sale of PSU shares. This did not materialize. During the fiscal year 2012–13, the government targeted ₹40,000 crores but eventually garnered around ₹23,000 crores from PSU disinvestment.

The government also anticipated cutting the oil subsidy by ₹24,901 crores—a cut of 36 per cent in comparison to the fiscal year 2011–12. Again, this was highly unlikely as the price of crude oil was moving up and the Indian rupee was depreciating. A new addition to the expected outflow was the food security bill. The food security bill was about providing 5 kg of food grains at a subsidised rate to 75 per cent of households in the rural areas and 50 per cent of households in the urban areas. The bill when passed was expected to add another ₹100,000 crores to the deficit. The whole point of going through this little exercise is to make you understand that while reading any budget document, you should read it with a pinch of salt.

A CLOSER LOOK AT TAX RATES

Now let us shift our attention to government receipts. A major component of it comes from taxes. There are direct taxes such as income tax and corporate tax, and indirect taxes such as excise tax and customs tax. Direct taxes are collected straightaway by the government. In the case of indirect taxes, the tax is collected by an intermediary (such as a retail store) from the person who bears the ultimate economic burden of the tax (such as the consumer). The intermediary later files a tax return and forwards the tax proceeds to the government with the return. By this logic, even a poor who buys stuffs from a retail store pays tax to the government, but indirectly. Direct taxes such as income tax, on the other hand, are deducted directly by the government from

the income of an individual. The basic difference between the two is that while a direct tax cannot be shifted by the taxpayer to someone else, an indirect tax can be shifted. Direct taxes are more efficient and a country with an efficient tax regime usually collects a higher proportion of taxes through direct tax.

Let us take a hypothetical example and see how direct tax is calculated. For the sake of simplicity, let us assume that there are six different slabs of taxes (see [Table 3.3](#)). These six different slab rates vary from 10 to 35 per cent. The corresponding income range for each one of these slabs is given in a table. If your friend Srini has an annual income of ₹100,000, then for the first ₹7,300 of his income, Srini pays a tax of ₹730 which is 10 per cent of ₹7,300. For the next $(29,700 - 7,300) = ₹22,400$, Srini pays a tax at the rate of 15 per cent. For the next $(71,950 - 29,700) = ₹42,250$, Srini pays a tax at the rate of 25 per cent. As we can see from [Table 3.3](#), for a total income of ₹100,000, Srini pays a total tax of ₹22,507. Although going by his income, Srini falls in the tax slab of 28 per cent (marginal tax), the average tax that he pays is $22,507/100,000 = 22.5$ per cent. This is a progressive tax system as marginal tax is higher than average tax.

In a progressive tax regime, people with lower incomes pay a lower percentage of their income as tax than people with higher incomes. Likewise, in a regressive tax regime, people with lower incomes pay a higher percentage of their income as tax than people with higher incomes. A proportional tax regime is one when people with lower incomes pay the same percentage of income as tax as people with higher incomes. When policymakers consider a change in tax, they focus on marginal tax rates rather than the average tax rates.

Indirect taxes are regressive and distortionary. They are regressive because every individual (poor or rich) in the economy pays the same magnitude of tax regardless of his level of income, and distortionary because indirect taxes change the relative prices of different commodities and services. The complexity of the tax code has created a whole industry for tax preparation services. When an economy has a simplified tax code, the economic resources currently being used for tax preparation services can be used to produce other goods and services. In addition to wasting resources, a complex tax code may also distort decisions taken by households and firms. For example, the tax rate on dividends clearly affects firms' willingness to pay dividends.

Table 3.3 Calculating the Tax Rate

<i>Income (₹)</i>	<i>Tax Rates (%)</i>
0 to 7,300	10
7,301 to 29,700	15
29,701 to 71,950	25
71,951 to 150,150	28
150,151 to 326,450	33
Over 326,450	35
On Srin's income	Srin's pays tax of (₹)...
First 7,300 of Income	730
Next 22,400 of Income	3,360
Next 42,250 of Income	10,563
Last 28,050 of Income	7,854
His total Income Tax	22,507

Source: Author's calculation.

In spite of its limitations, indirect taxes are prevalent in developing countries for the ease with which they can be administered. For example, when you go to eat out in a high-end restaurant, you generally pay service tax and sales tax on your bill. Indirect taxes are easy to collect because there is no way one can eat out and yet evade paying for it. However, because indirect taxes distort the prices of goods, they result in deadweight loss. Deadweight loss is the loss of economic efficiency that occurs when equilibrium for a good or service is not Pareto optimal (a condition under which no one can be made better off without making at least one individual worse off). From an economic rationale, indirect tax is not desirable.

Policymakers are trying to do away with a complicated structure of indirect taxes by introducing goods and services tax (GST) and lowering the tax rate. A lower tax rate makes more people pay taxes and thereby increases the tax revenue. In the following, we take a look at both the GST and the application of the Laffer principle in India. Laffer principle states that increasing tax rates beyond a certain point will be counterproductive for raising further tax revenue.

Goods and Services Tax (GST)

There is a multiplicity of taxes on goods and services in India. Some of these taxes such as excise duty on manufactures, customs duty on imports and

exports, service tax on services, etc., are imposed by the central government. Some others such as sales tax (states' value-added tax [VAT]), entry tax or octroi, property tax, entertainment tax, duty on liquor, etc., are imposed by the state governments. A multiplicity of taxes distorts the tax structure and brings in cumbersome complexities. Also, many states started offering concessions on tax rates to provide incentives for investment, resulting in a lack of harmony between the taxes applied across the states.

To make the tax system more transparent and simple, it was necessary that there should be a harmony between taxes implemented both in the Centre and in the states. Keeping this objective of harmony in mind, initial step was taken by the central government. To bring down complexities, Central VAT (CENVAT) (earlier known as Modvat) was introduced in 1986 in Central Excise Systems to avoid the cascading effects of excise duties. We will shortly deal with how cascading effects can be bad from the perspective of producers and consumers. Introduction of state VAT (21 out of 28 states) started in 2005. VAT stands for Value-Added Tax and the introduction of this was meant to take care of the cascading effects that go with the final tax. GST was meant to carry forward this state VAT exercise. The idea was to have uniform tax rates for all goods and services that came under the state's ambit. We will talk about GST but to make this discussion more meaningful, we have to understand the meaning of value addition—something which is intrinsic to GST.

Value-Added Tax (VAT)

VAT was introduced to avoid the cascading effects of taxes. If tax is based on the selling price of a product, the tax burden keeps increasing as raw materials and final products pass from one stage to another. Let us assume that tax on a product is 10 per cent of its selling price. Manufacturer A supplies his output to B at ₹100. Thus, B gets the material at ₹110, inclusive of tax paid by A which is 10 per cent. B carries out further processing and sells his output to C at ₹150. While calculating his cost, B considered his purchase cost of materials as ₹110 and added ₹40 as conversion charges. While selling his product to C, manufacturer B charges tax at the rate of 10 per cent. So C gets the product from B at ₹165 (150 + 10 per cent tax). As stages of production and sales continue, each subsequent purchaser has to pay tax again and again on the material for which taxes had already been paid.

This is called the cascading effect. This cascading effect—resulting from purely the selling price of a product—increases the cost of production.

VAT was introduced to avoid this cascading effect. Consider this: In the above example, the value added by B was ₹40 ($150 - 110$). 10 per cent tax on this value added would be only ₹4, instead of ₹15 (i.e., 10 per cent of ₹150) paid by B. In VAT, the idea is that B pays tax on ₹40—the value added by him. Then it makes no difference whether the product is passed through 10 or 15 stages of production, as every person pays taxes on the value added by him/her to the product and not on the total selling price.

Under VAT, tax credit is given at each stage for tax paid at the earlier stage. So there is no question of tax evasion. In the above example, we saw that B purchased goods from A at ₹110, inclusive of ₹10 paid by A as tax. Since B got credit duty of ₹10, he did not consider this amount for his costing. He charged a conversion of ₹40 and sold his goods to C at ₹140. He charged 10 per cent tax and sold the goods to C at ₹($140 + 10$ per cent of 140), which is ₹154. In the invoice prepared by B, the duty would be shown as ₹14. However, B got back a credit of ₹10 paid on the material purchased by him from A. Thus, the effective duty B paid was only ₹4. C got goods at ₹154 and not at ₹165 which he would have got in the absence of CENVAT. Thus, in effect B had to pay a duty of only ₹40, which is the value added by him.

The advantage of the tax credit system enshrined in VAT is that it not only makes it harder for the manufacturers to evade tax but also makes auditing much more transparent. The consumers also gain because the lack of cascading effect brings down the final price of the product.

Introduction of VAT at the central and state level has been considered to be a major step—an important breakthrough—in the sphere of indirect tax reforms in India. The states started implementing VAT beginning 1 April 2005. After overcoming initial difficulties, all the states and UTs implemented VAT. If VAT is a major improvement over the pre-existing Central Excise Duty at the national level and the sales tax system at the state level, then the GST will be a further significant improvement—the next logical step—towards comprehensive indirect tax reforms in the country.

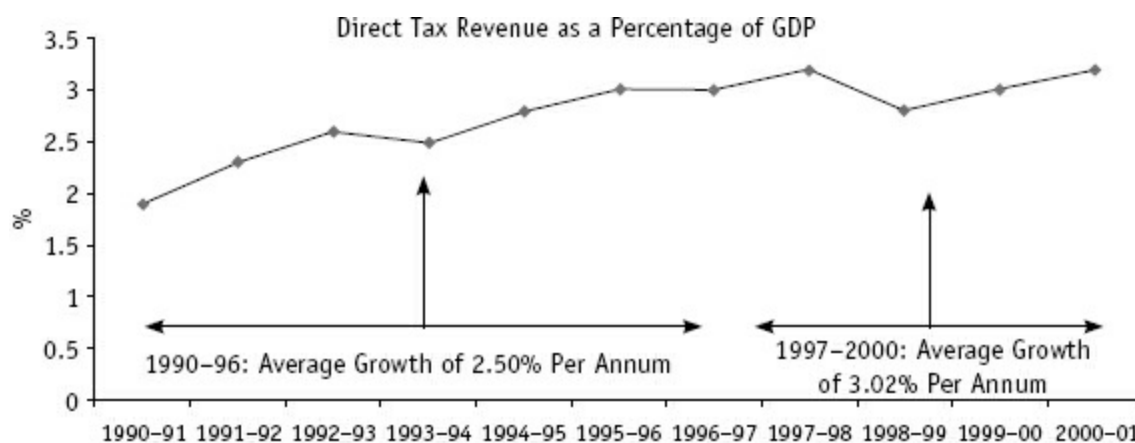
It is in this background that attempts were made by the states to introduce a harmonious VAT; at the same time keeping in mind the issue of autonomy of the states regarding tax matters. So GST is an extension of states' VAT—covering both goods and services. However, there are still certain shortcomings in the structure of VAT both at the central and at the state level

as all types of taxes are not included. The shortcoming in CENVAT of the Government of India lies in non-inclusion of several central taxes in the overall framework of CENVAT, such as additional customs duty, surcharges, etc., thus keeping the benefits of comprehensive input tax and service tax set-off out of reach for manufacturers/dealers. Moreover, no step has been taken to capture the value-added chain in the distribution trade below the manufacturing level in the existing scheme of CENVAT. The introduction of GST at the central level will not only include more indirect central taxes and also integrate goods and service taxes for the purpose of set-off relief, but also lead to revenue gains for the Centre by capturing value addition in the distributive trade and increased compliance.

APPLICATION OF LAFFER'S PRINCIPLE IN INDIA

Experimenting with the idea of increasing tax revenue by decreasing tax rates is important for India. As part of reforms, the Indian government could not raise indirect taxes to increase its revenue. Operating under the aegis of WTO, it is difficult for a country to raise its tariff barriers (read, bound tariff rates). Therefore, a loss in custom revenues is more likely to occur as a result of tariff-reducing trade liberalization. Again, a reduction in excise duties was hoped to trigger a boom in consumer expenditure and hence was seen desirable. It is therefore not surprising to see why the share of indirect taxes in gross tax revenue declined from 78.4 per cent in 1990–91 to 62.2 per cent in 2001–02.

Figure 3.1 Direct Tax and GDP



Source: Economic Survey, Government of India, Various Issues.

This leaves us with the option of increasing direct taxes as a way to collect more tax revenue and to reduce fiscal deficit. However, direct taxes also fell consistently during the 1990s. At a time of high fiscal deficit, bringing down tax is debatable. Lower tax revenue means greater budget deficit and hence lower funds available for development. The only way it make sense to lower tax is if doing so brings higher tax revenue.

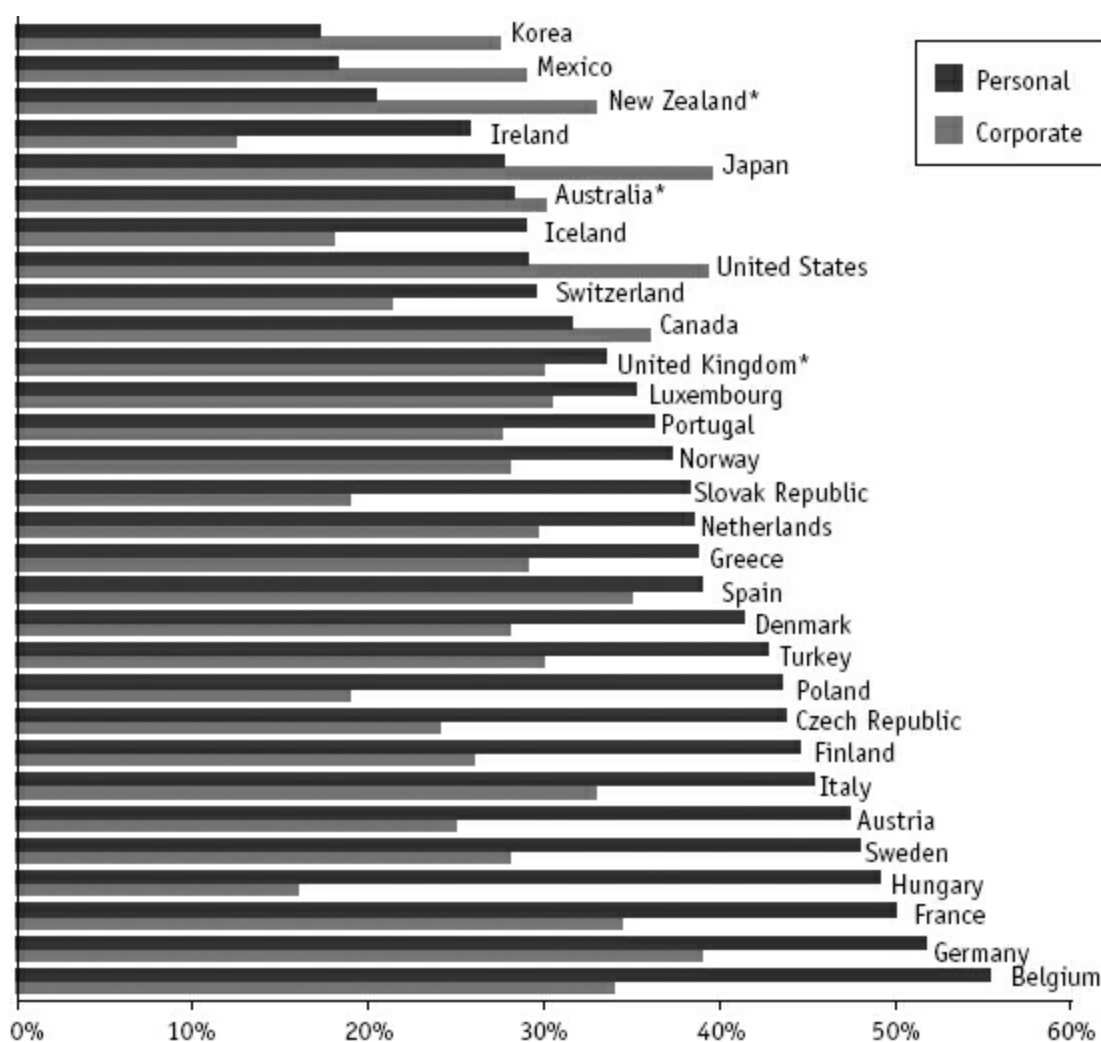
Fortunately, this happened for India. Starting from the big bang reforms of 1991 and much through the 1990s and early 2000s, there has been a reduction in the direct tax rate. In spite of this reduction, the share of direct taxes in gross tax revenue increased sharply from 19.1 per cent in 1990–91 to 38.8 per cent in 2002–03.²

There was an increase in direct tax revenue even when tax rates were lowered (see [Figure 3.1](#)). Average buoyancy, as measured by the ratio of change in tax revenue to the change in GDP at current prices, showed substantial improvement. This becomes evident while looking at the period of maximum decline in the marginal personal income tax rate. From 1991–92 until 1995–96, personal income tax rates came down from the maximum marginal tax rate of 56 per cent on income above ₹1 lakh to 30 per cent of income above ₹1.2 lakh. However, this did not resulted in a reduction in revenue collections. The buoyancy of personal income tax revenues rose from an average of about 1.1 during 1986–87 to 1990–91 to around 1.5 during 1991–92 to 1995–96.

For the fiscal year 2012–13, both the personal income tax and corporate tax stood at around 33 per cent. As can be seen from [Figure 3.2](#), this rate is indeed less in comparison to many developed countries. In case of Europe and the USA, the tax rate is more to take care of the contribution towards medicare and social security system (SSS), especially when more people retire. In case of India, we have a different scenario with a much younger workforce in comparison to these developed countries. The proportion of Indians in the working age group (15–60 years) will rise by up to 300 million over the next two decades. This means buoyant tax receipts. If economic reforms ensure that their productivity keeps rising, fast growth will add to revenue collection. This is similar to what happened in case of the Association of Southeast Asian Nations (ASEAN) economies. Fast growth in the ASEAN region helped to raise both the living and the social standards while the tax rate was kept at a much lower level. In 2013, Singapore—the biggest among the ASEAN economies—had a top income tax rate of 20 per

cent (including dividends) and corporate tax rate of 17 per cent. It had no tax on wealth, inheritance, or capital gains. In most other ASEAN economies, there is no tax on wealth or inheritance. Both the peak income tax rate and corporate tax rate are around 25 per cent or less. Tax rates on capital gain vary from 0 to 25 per cent.

Figure 3.2 Mean Tax Rate as a Percentage of Income across Countries



Source: OECD Tax Database 2011.

Note: *provisional estimates.

Laffer Principle at Work

In the Indian context, the Laffer principle seems to have relevance during the latter half of the 1990s.³ In 1997, the then Indian Finance Minister Mr P. Chidambaram reduced the tax rates for all tax payers (see [Table 3.4](#)). The

effective tax rate declined from 22 per cent to 16.3 per cent. Effective tax rate for individuals is the average rate at which their earned income is taxed. For a corporation, it is the average rate at which its pre-tax profits are taxed. Some economists did a quick calculation and came to the conclusion that revenue would be 25 per cent lower. However, they were shortly proven wrong when a year later, the results of the Chidambaram–Laffer experiments were out. Instead of declining by 25 per cent, tax revenues stayed constant. Thanks to the large increase in compliance—from 5.5 million taxpayers the year before to 6.8 million in 1997–98. Over the next six years, overall performance increased by 50 per cent from 11.9 per cent of the taxpayers’ population to 18.2 per cent.

Not only did tax receipts increase but also, as Chidambaram would have thought, there was an increase in real consumption expenditure and real government expenditure during the years following the tax cut. The result was expected. Indians, as history has shown, are a stingy lot. They understate incomes and fail to file tax returns. Only one in five today files a tax return; together with understatement, the total revenue loss is a staggering US\$ 60 billion.⁴ The biggest tax evaders are small businessmen earning ₹5–20 lakhs per year. There would have been a greater problem of compliance with increasing the tax rates. In a dynamic sense, lower tax works because of simplification. The simplification of the tax code, more efficient administration, and elimination of discretionary exemptions means that fewer national resources are consumed in tax planning, tax dodging, or rent seeking. These resources can then be more productively used towards higher GDP creation and hence higher tax collection. Also, what is desired is to settle issues relating to compensation for central sales tax. This will make implementation of GST much more viable.

There are other ways to increase tax collection and this is by identifying the sources of tax evasion. In India, the biggest generator and recipient of black money is the realty sector. Most of the housing projects are sold at double the reported price. The second sector is gold. Though not much black money is generated in the bullion business, the amount of unaccounted income invested in gold is estimated to be high. The World Gold Council estimates that Indian households have some 20,000 tonnes of gold worth US\$1.6 trillion—more than double the gold reserves maintained by the US Federal Reserves in 2011–12. The third factor is that over-invoicing and under-invoicing of sales proceeds abroad generates money which is routed

through paper transactions through tax havens such as Mauritius back into the Indian markets. Studies relating to investment in stock markets show that Mauritius-based foreign institutional investors' (FIIs) investment in Indian stocks stand at US\$ 56 billion as on 30 April 2012—the highest inflow from any country. Although some portion of this investment is genuine, most part of it is routed through Mauritius to take advantage of zero taxes that India has with Mauritius.

Table 3.4 A Look at the P. Chidambaram Tax Cut^a

<i>Six-year before Tax Cut</i>	<i>Real Consumption Expenditure</i>	<i>Real Government Expenditure</i>	<i>Tax Receipts^b</i>	<i>Six-year after Tax Cut</i>	<i>Real Consumption Expenditure</i>	<i>Real Government Expenditure</i>	<i>Tax Receipts^b</i>
1991	224.48	32.07	1.89	1997	298.09	44.67	5.47
1992	230.44	33.07	2.77	1998	318.62	50.43	4.31
1993	241.16	35.21	2.62	1999	341.56	57.08	10.50
1994	251.17	35.65	3.15	2000	350.22	57.36	10.77
1995	267.45	38.51	3.82	2001	368.40	59.10	10.36
1996	287.31	40.22	4.85	2002	381.96	60.92	11.78
Average	250.33	35.79	3.18	Average	343.14	54.93	8.86

^a Figures are in US billion dollars (constant 1995 US\$).

^b Figures are obtained by dividing nominal tax receipts on products by GDP deflator.

Source: World Development Indicators, World Bank.

FISCAL DEFICITS AND OTHER MACROECONOMIC VARIABLES

Now that we have discussed about the components of government revenue and expenditures, in this section we discuss the interplay between various macroeconomic indicators. All data on macroeconomic indicators are sourced from the RBI's Database on Indian Economy containing macroeconomic time series data on areas such as money, finance, investment, savings, and external sector.⁵

Fiscal Deficit and Interest Rates

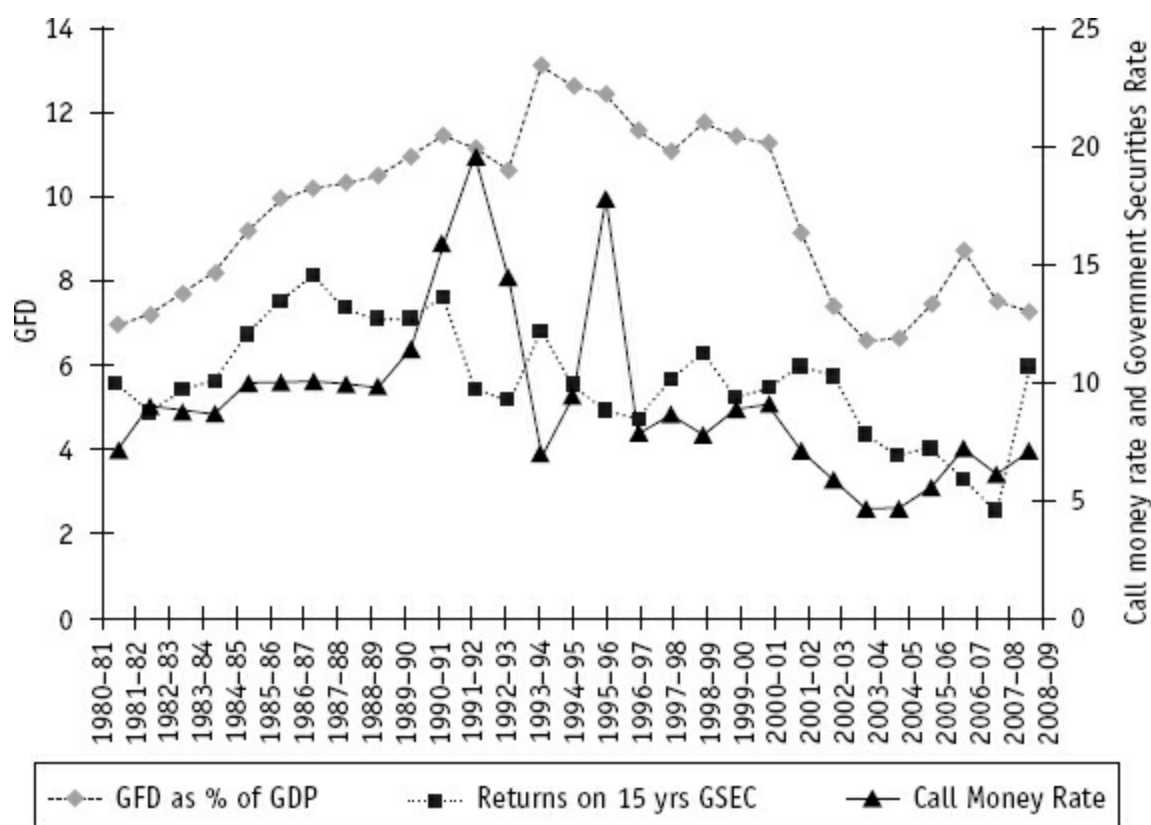
The link between fiscal deficit and interest rates can be established through various channels. The most common way is through government financing its deficit by issuing bonds. When the government spends money, it can either print it or borrow from the market. From 1 April 1997, with the introduction of Ways and Means Advances (WMA), the practice of printing money was given up. When the government repeatedly finances its expenditures by selling government bonds, then the supply of government bonds increases

and returns from government bonds which are interest rates (or yield), also increase. We all know that returns or yields from bonds increase at the time of excess supply and falls in times of excess demand. Stated differently, the government spending more money and financing the same through issuance of bonds means a rise in nominal interest rates.

An expansionary fiscal policy also means more disposable income for the consumers. Since consumers demand more goods and services, the cost of these goods and services goes up. This means, from the perspective of investment there is a greater demand for investment to meet this excess demand. As investment goes up, cost of capital also goes up which is the nominal interest rate.

However, the pass-through effect of a deficit budget in raising the interest rate may not occur always. For a small open economy, domestic investors also have the option of borrowing money from abroad. As suggested by Barro, the real interest in future increases only if borrowing by this small open economy are large enough to influence the world interest rates or an increase in national debt translates into a high-yield government bond reflecting a poor economy.⁶

Figure 3.3 Fiscal Deficit and Interest Rates



Source: Database, Reserve Bank of India.

What if the economy is closed? According to Ricardian equivalence hypothesis, for a given path of government spending, a deficit financed cut in current taxes leads to higher future taxes that have the same present value as the initial cut.⁷ Stated simply, the timing pattern of deficit financing through taxes does not matter as long as the government maintains a balanced budget in the long run. Private agents do not perceive the present tax cut (or correspondingly higher government bond holding) as net wealth because they expect to be taxed in an equivalent fashion in the future. Aggregate demand is not affected and there is no impact on the interest rate.

In short, the government budget deficit may not always translate into higher interest rates. What then does the data say for India? In India, fiscal deficit does not seem to have any noticeable effect on either the short-term call money rates or the long-term rates on government securities (see [Figure 3.3](#)). There is little correlation between government fiscal deficit and volatility in short-term call money rates. Call money is a short-term finance repayable on demand with a maturity period of 1–15 days used for inter-bank transactions. The long-term rates on government securities seemed to be

correlated with the fiscal deficit till late 1990s but the correspondence seemed to be absent post 1995. A plausible explanation for this is reforms in the capital market that led to inflow of foreign capital and thereby made the long-term interest rates fall.

Fiscal Deficit and Inflation

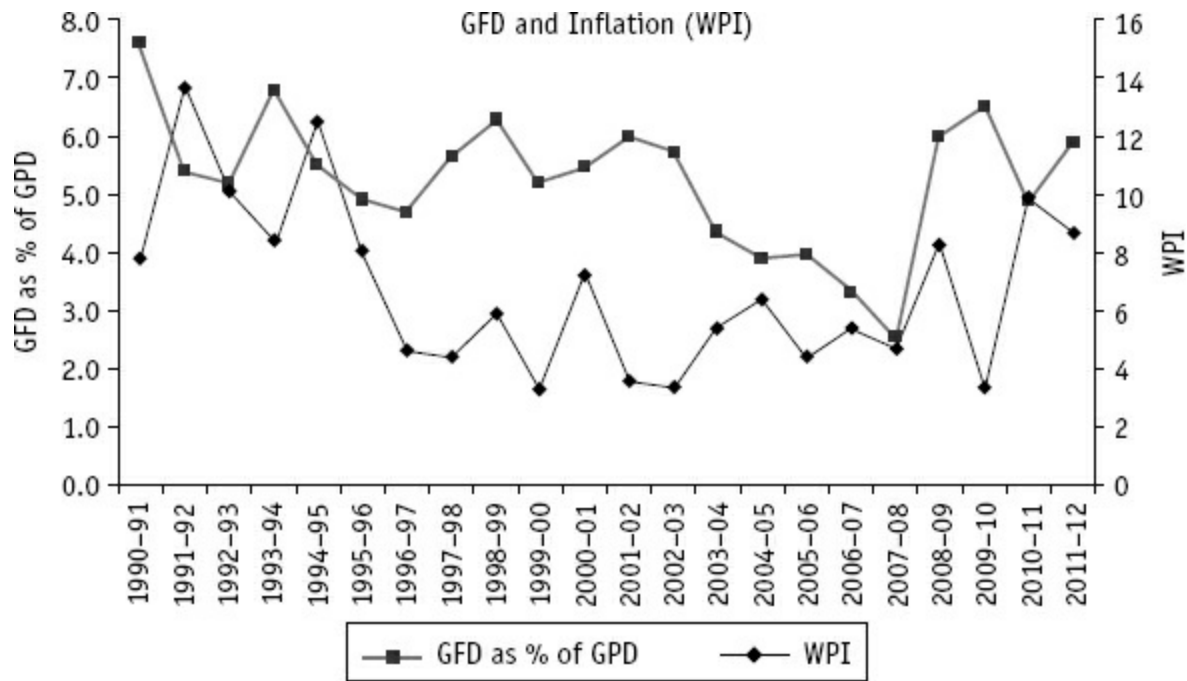
Typically, it has been observed that countries incurring a high fiscal deficit also experience high inflation. This is particularly true when government finances its deficit by printing money rather than issuing bonds. If too much money chases too few goods, it makes a perfect recipe for inflation. However, if because of an increase in fiscal deficit, there is investment in the productive capacity of the economy such as roads, airports, ports, etc., then prices may come down when output starts responding to such increased productive expenditure.

If monetary authorities peg interest rates, then bond-financed deficits are also inflationary because this leads to an expansion in money supply, ultimately fuelling inflation. Barro put forward a hypothesis that deficits are result of inflation rather than inflation being a result of deficits.⁸ The government deficit is a change in the nominal value of outstanding government bonds. If the anticipated inflation increases, then the nominal value of bonds must increase to maintain the real value of outstanding bonds.

As government is the net debtor in the economy, inflation helps the government reduce its real debt burden. A real resource transfer takes place from the creditors (private individuals holding money) to the debtors. This is the amount of inflation tax or seigniorage collected by the government.

The Indian experience is a mixed tale (see [Figure 3.4](#)). During the 1980s, a high proportion of deficit finance was monetized. This was to a large extent the root cause of crisis during the early 1990s. On 26 March 1997, the Government of India and RBI signed an agreement putting the ad hoc Treasury Bills system to an end, with effect from 1 April 1997. The interest rate on WMA was at or around the commercial bank rate with small adjustments for different kinds of WMA for the state governments. Withdrawing money more than what was permissible under WMA carried 2 per cent higher interest. After this period, we observed weak correlation between fiscal deficit and inflation.

Figure 3.4 Fiscal Deficit and Inflation



Source: Database, Reserve Bank of India; and Office of Economic Advisor, Ministry of Commerce, Government of India.

Fiscal Deficit and Private Investment

The inverse relationship between interest rates and investment is emphasized by the Keynesian theory of investment. A fall in the interest rate decreases the cost of investment relative to the potential yield and as a result planned capital investment projects become worthwhile. In the event of high and persistent fiscal deficits, real interest rates have a tendency to move in the upward direction. It is therefore likely that private investment is adversely affected with increase in interest rates. The problem gets aggravated for countries with close to full utilization of resources.

Crowding out of private investment happens because of spending by the public sector which raises the cost of scarce resources such as labour, capital, and other raw materials. For instance, let us assume that an investor wants to invest in some asset that costs him, say, ₹C. Undertaking this investment makes sense provided the present discounted value of returns from this investment is at least greater than the initial cost of investment, which means that the following equation should give a positive value.

$$-C + \frac{R_1}{(1+i)} + \frac{R_2}{(1+i)^2} + \dots + \frac{R_n}{(1+i)^n}$$

When the rate of interest increases (i), which may happen when the government is also in the business of borrowing money from the market, then the present discounted value of the returns starts to fall. Hence, some investment projects which earlier looked profitable would now no longer remain profitable under a scenario of rising interest rate. Therefore, because of the government investing in the market, some private investment gets crowded out.

‘Crowding out’ of private investment can also happen because some of the goods and services delivered by the government already met the market demand and there is no further requirement of the same to be delivered by the private parties. A decline in private expenditures as a result of an increase in government purchase is called ‘crowding out’. However, the negative effects of crowding out have to be weighed against the positive effects arising out of complementarities between the public and the private investment discussed earlier. The composite effect is country-specific and difficult to predict accurately. Consequently, the impact of higher budget deficits on growth rates is theoretically ambiguous.

Barro utilized endogenous growth models by extending them to include tax-financed government services that affect production and utility.⁹ He studied the effects of tax-financed government expenditure on investment and output in a cross-sectional study of 98 countries over the period 1960–85. He found that the ratio of real government *consumption expenditure* to real GDP had a negative association with growth and investment while spending on *productive* government services affected growth positively. The distinction between productive and unproductive government services is important.

We should also note that ‘crowding out’ is less of a concern in context of India. ‘Crowding out’ assumes a fixed pot of money which both government and private sectors seek to access, whereas the reality is that much of the liquid money in India is locked inside non-financial assets such as gold and real-estate, bank loan books, over-priced stocks, and the very small quantum of AAA-rated bonds. Locking of money in these types of asset-class has no multiplier effect.

It is also important to recognize that for the fiscal deficit not to hurt growth, it is necessary not to eliminate non-plan expenditures which are

developmental in nature. Maintenance of assets and facilities may be a non-plan expenditure item but is very crucial to derive full benefit from the assets originally created from planned spending. These include running of schools, hospitals, or irrigation projects.

Likewise, all plan expenditures also cannot be considered top priority. Here, non-developmental and non-asset-creating schemes need special review. One example is MGNREGA which is both wanting in rural assets creation and adversely affecting labour availability for agricultural operations. Subsidies for fuel, food, and fertilizers are another major non-developmental expenditure items. While raising prices is the easiest method to reduce subsidy, the basic underlying issues also need to be dealt with.

Another issue for action concerns reduction in the dependence of PSUs on the government budget. There is a need for improving project implementation, reducing time and cost overruns, and ensuring overall effectiveness of expenditure by using output and outcome budgeting as a management tool. Effectiveness of public-private partnership for infrastructure projects has to be ensured. Internal resources for infrastructure projects have to be stepped up to reduce dependence on borrowings and the government budget.

Fiscal Deficit and the Current Account

From national income accounts identity, we know that total investment in a country has to be financed from savings arising out of the private sector, public sector, and the rest of the world.

$$I = S^{Pvt} + S^{Pub} + S^{Row}$$

$$\Rightarrow (G - T) = (S - I) + (M - X)$$

Public sector saving is the difference between the government revenue which is tax and the government expenditure. Saving from the rest of the world is the difference between the home country's imports and exports. There is a CAD if imports of merchandise commodities and services are more than exports during any particular year. From the above identity, it becomes evident that an increase in fiscal deficit is associated with an increase in CAD if private sector savings do not respond to the rise in fiscal deficits. This deterioration of current account can come either through an increase in imports arising out of increased spending and wealth effects or through a

reduction in exports because of inflation-driven fall in competitiveness. The final impact depends largely on the import content of government outlays on different categories.

Current account might also deteriorate sharply in countries open to capital flows and experiencing high fiscal deficits. The rising interest rates in these countries often attract huge capital inflows and the currency starts appreciating. An appreciating currency impacts the current account adversely through the traditional relative price channels (i.e., making exports costly relative to imports). However, when foreign investors feel that the rising interest rates reflect only the country-specific risk premium, then the ensuing capital outflows could lead to a correction in CAD via the exchange rate mechanism.

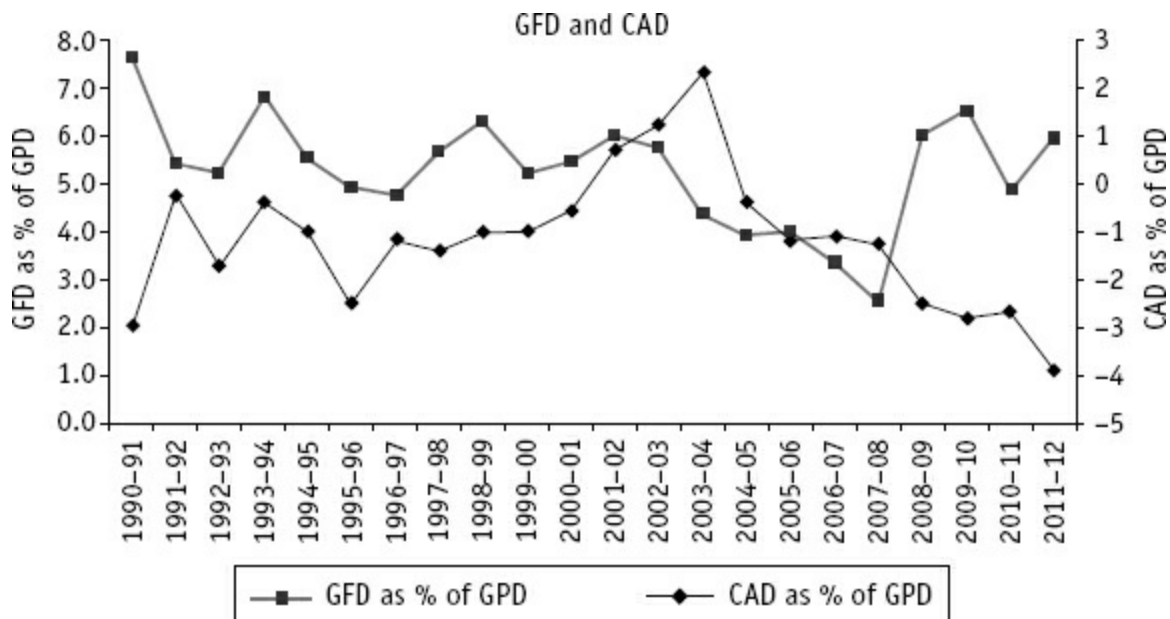
For a country operating under flexible exchange rate regimes and with limited or restricted capital mobility, there is a possibility that a depreciating currency will help to balance CAD. On the contrary, if the economy is operating under fixed exchange rate regimes and the central bank wants to monetize the deficit, then it may lead to a currency crisis. Demand for foreign currency increases when inflation takes place because of monetization of fiscal deficit. To maintain a fixed exchange rate, the central bank has to intervene in the foreign exchange market and sell foreign exchange reserves. An attack on currency occurs when the market participants believe that the central bank does not have enough resources to support the exchange rate. A fiscal crisis can get manifested in a currency crisis.

In India, before the initiation of economic reforms, there was a strong correlation between the fiscal deficit and the CAD (see [Figure 3.5](#)). The high fiscal deficits during the 1980s led to the balance of payment (BoP) crisis during 1990s. However, following the reforms of 1990s, we observe an interesting phenomenon—higher fiscal deficit and lower CAD. This trend continued until 2011–12. This apparently surprising result was because of higher level of foreign remittances during the period following the reforms. Please note that some components of capital inflow, especially in the form of FDI with a gestation period of more than a year, are treated as a part of capital account and not current account. In current account, we take into consideration foreign capital inflow that is short term in nature like portfolio investment. Post 2011, we witnessed an increase in both fiscal deficit and CAD. During 2010–11, India's CAD was 2.6 per cent of GDP, steadily increasing to 4.2 per cent of GDP in 2011–12, and further to 5.5 per cent of

GDP in 2012–13. Likewise, fiscal deficit increased from 4.7 per cent in 2010–11 to 5.8 per cent in 2011–12, only to fall marginally to 5.2 per cent in 2012–13.

The increase in CAD during post-2011 has to do with the increase in trade deficit. In a frictionless neoclassical one-good world, when capital flows into a capital-deficient poor economy, price of exports fall as this capital (input cost) is used for manufacturing exports. However, in a two-commodity world, flow of capital increases the price of exports and thereby causes a trade deficit. When the Indian economy opened up, money flowed in and increased the price of real estate. The appreciation of domestic goods made some of our exports less competitive in the international market and increased the trade deficit. In essence, this phenomenon is similar to *Dutch Disease*—increase flow of foreign capital appreciates the domestic exchange rate and makes exports less competitive. The central bank in India tried to stop this appreciation of Indian rupee by intervening (buying dollars from the foreign exchange market) and sterilizing (selling government bonds to absorb additional rupee created because of intervention) in the foreign exchange market. However, this resulted in our government bonds being owned by foreigners. It is to be noted that unlike China and some other Southeast Asian nations, India's foreign exchange reserves are not 'owned' by India because of its government bonds being sold to foreigners (liabilities).

Figure 3.5 Fiscal Deficit and Current Account Deficit



Source: Database, Reserve Bank of India.

Fiscal Deficit and the Exchange Rate

The conflicting nature of exchange rate movements becomes more apparent in a portfolio-balance framework where the economic agents choose between different types of asset such as domestic bonds vis-à-vis foreign bonds depending upon their relative rate of returns and also personal wealth. In the presence of higher fiscal deficits, yields on government bonds increase. This may entice the investor to demand more of domestic bond. However, in the presence of wealth, demand for foreign bonds also increases. So a higher fiscal deficit may produce either excess demand or supply of foreign bonds which may result in either depreciation or an appreciation of the domestic currency to re-equilibrate the market.

In foreign exchange markets, expectation plays a crucial role. High fiscal deficits lead to higher inflationary expectations and through the Fischer effect, results in higher nominal long-term interest rates. But if the nominal interest rates do not rise as much as the inflationary expectations, then the real long-term interest rates may fall, domestic assets become less attractive, and the currency depreciates. High and fluctuating deficits may affect the expectations of market agents adversely and increase volatility in the exchange rate market.

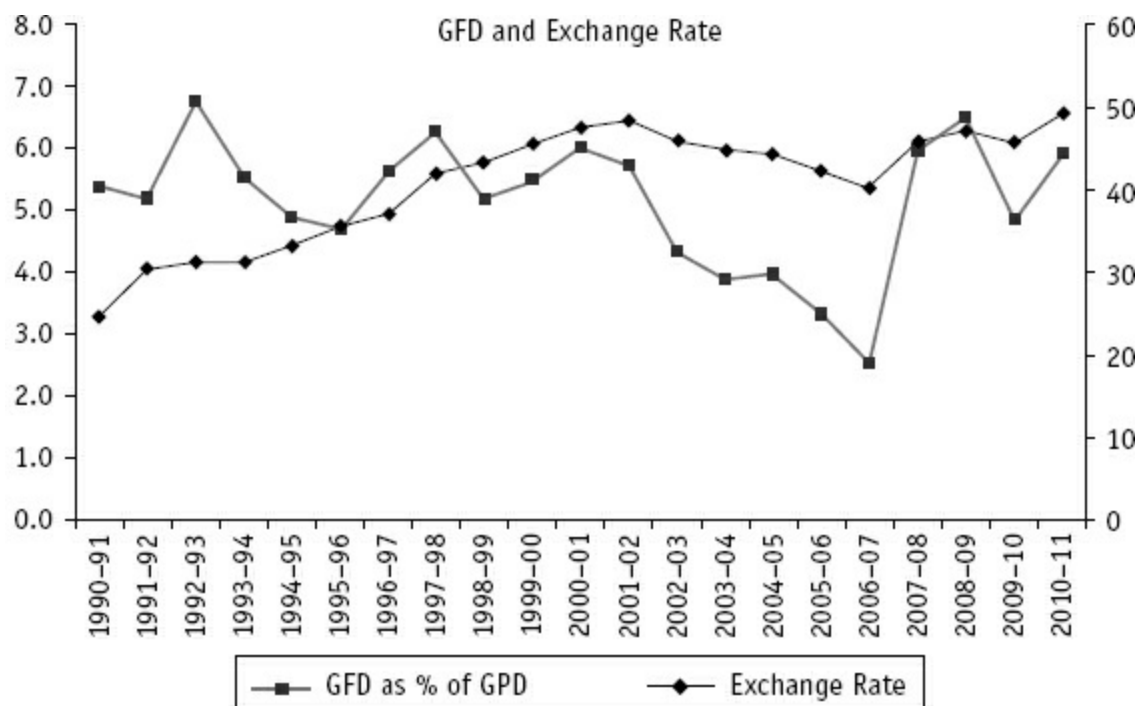
In case of India, the expected movement of fiscal deficit and exchange rates does not match with economic theory (see [Figure 3.6](#)). The rupee-dollar

exchange rate has shown a secular tendency of gradual depreciation regardless of the movement of the fiscal deficit. This is partly explained by the fixed exchange rate regimes followed by us before the introduction of reforms. Even after reforms, we have been following a system of managed float with the central bank intervening strongly to dampen excess volatility and often to give the exchange rate some direction depending upon domestic contingencies. But the secular decline in exchange rate still continues.

MONETARY POLICY

Monetary policy refers to the use of instruments such as money supply and interest rate to control the output gap. The instruments are policy variables that influence the output gap. For instance, if the rate of interest is raised, it will affect output and employment by affecting demand. Similarly, if money supply is increased more than proportionately, it will affect the purchasing power by fuelling inflation. RBI which is India's central bank conducts the monetary policy. Before we go into details about monetary policy, let us start with the concept of money.

Figure 3.6 Fiscal Deficit and Exchange Rate



Source: Database, Reserve Bank of India.

Money is a medium of exchange—something that we use to exchange for goods and services of our choice or need and to pay off debt. Usually, money comes in the form of coins and paper currencies. Paper currency has no intrinsic value except for being used as a medium of exchange. That is why paper currency is also called *fiat* money. You will observe that on every paper currency, RBI is written. It means these paper notes are legal tender in India, meaning the central government requires that these be accepted as a medium of exchange for procuring goods and services and to pay off debt.

Economists have developed various notions of money supply based on the concept of how liquid the money is. For instance, if you are holding money in your purse, you can instantly use the same to procure goods and services of your choice. We say that paper notes and coins are most liquid as there are no difficulties in exchanging them for goods and services but what about the fixed deposits or the stocks that you hold? Of course, you can sell off your stocks in the equity market and use the money that you get to buy goods and services. However, there is a time lag of usually two working days between the time you sell your stocks using a portal like ICICI Direct and when the proceeds are deposited in your ICICI bank account. Similarly for fixed deposits, you cannot withdraw your money before the maturity date, and if you close your fixed deposits before the maturity date, you may have to pay a fine. Let us assume that you are in need of money and have pre-closed your fixed deposit with a fine. But the time between closing your fixed deposit and when the amount gets realized in your savings account is just a few hours instead of an entire working day. Therefore, we say that both stocks and fixed deposits are less liquid in comparison to paper notes and coins which can be used instantly as a medium of exchange.

Depending upon how liquid the money is, economists have classified it into three broad categories. The most liquid type of money is called M1. This includes paper notes and coins that are in circulation in market and not held by government and banks. M1 also includes money kept in checking account and traveller's cheque. Both these items are highly liquid as we can always use our debit cards to withdraw money from checking account and encash a traveller's cheque when touring a foreign land.

The next classification of money is M2 which includes everything in M1 plus savings account balances, small denomination time deposit, money put by non-institutional investors like you and me in systematic investment plan (SIP), equities, and bonds. Finally, there is M3 definition of money supply

that includes large denomination time deposits and institutional money market mutual fund balances (see [Table 3.5](#)). In India, RBI classifies money supply in the following fashion (see [Box 3.1](#)).

Table 3.5 Components and Source of Broad Money

₹ Billion	2010–11	2011–12	2011–12				2012–13		
			Q1	Q2	Q3	Q4	Q1	Q2	Q3
Broad Money	16.2	15.8	17.3	16.8	15.5	14.0	14.3	13.9	12.7
Components of Money Stock									
Currency with the public	19.2	14.0	16.9	14.4	12.6	12.2	12.1	13.1	11.7
Aggregate deposits with banks	15.7	16.2	17.4	17.2	16.0	14.3	14.7	14.0	12.9
Aggregate deposits with banks as % to M3	85.8	86.1	85.6	86.3	86.3	86.0	85.9	86.4	86.4
Sources of M3									
Bank Credit to Government	21.5	21.8	18.9	22.1	23.1	23.1	22.1	20.2	17.7
Bank credit to Commercial Sector	20.6	18.7	21.6	19.6	17.7	16.6	18.2	17.0	16.4
Net FEA of the banking sector	0.9	11.4	9.6	10.2	17.5	8.3	14.4	9.1	1.4
Net Currency Liability to the public	13.0	6.4	10.2	4.7	5.3	5.5	8.3	14.3	13.6
FE Assets as % to M3	22.3	21.5	21.1	21.6	22.5	20.6	21.1	20.7	20.3
Credit to Commercial Sector as % to M3	63.0	64.6	63.9	63.8	64.5	66.1	66.1	65.5	66.6

Source: Economic Survey 2012–13, Government of India.

Box 3.1: Measures of Money Supply and Liquidity Aggregate

Reserve Money (M_0) = Currency in Circulation + Bankers' Deposits with the RBI + 'Other' Deposits with the RBI.

Narrow Money (M_1) = Currency with the Public + Demand Deposits with the Banking System + 'Other' Deposits with the RBI.

$M_2 = M_1$ + Savings Deposits of Post-office Savings Banks.

Broad Money (M_3) = M_1 + Time Deposits with the Banking System.

$M_4 = M_3$ + All deposits with Post Office Savings Banks (excluding National Savings Certificates).

While measures M_0 , M_1 and M_3 are widely used in India, M_2 and M_4 are rarely used. The RBI initiated publication of a new set of monetary and liquidity aggregates as per the recommendations of the *Working Group on Money Supply: Analytics and Methodology of Compilation*. Following the submission of its report

in June 1998, while no changes were made in the definitions of M_0 and M_1 , new monetary aggregates NM_2 and NM_3 as well as liquidity aggregates L_1 , L_2 , and L_3 were introduced, the components of which are elaborated as follows.

NM_1 = Currency with the Public + Demand Deposits with the Banking System + 'Other' Deposits with the RBI.

NM_2 = NM_1 + Short-term Time Deposits of Residents (including and up to the contractual maturity of one year).

NM_3 = NM_2 + Long-term Time Deposits of Residents + Call/Term Funding from Financial Institutions.

L_1 = NM_3 + All Deposits with the Post Office Savings Banks (excluding National Savings Certificates).

L_2 = L_1 + Term Deposits with Term Lending Institutions and Refinancing Institutions (FIs) + Term Borrowing by FIs + Certificates of Deposit issued by FIs.

L_3 = L_2 + Public Deposits of Non-banking Financial Companies.

Data on M_0 are published by the RBI on weekly basis, while those for M_1 and M_3 are available on fortnightly basis. Among liquidity aggregates, data on L_1 and L_2 are published monthly, while those for L_3 are disseminated once in a quarter.

Source: Economic Survey 2011–12.

MONEY MARKET MULTIPLIER AND MONEY SUPPLY

Just as there is a multiplier effect in the context of fiscal policy, there is one in the context of monetary policy as well. Let me explain.

In India, commercial banks are required to hold a part of their demand and time liabilities in the form of cash reserve ratio (CRR) and statutory liquidity ratio (SLR). This portion held in the form of CRR and SLR is called required reserve.

Suppose you deposit ₹100 into your account that you have with ICICI Bank. Initially, this transaction does not increase the money supply. The currency component of the money supply declines by ₹100 because the 100 rupee note deposited is no longer in circulation and therefore not counted in money supply. But the decrease in currency is offset by a ₹100 increase in the checking account deposit component of money supply.

Now let us see what happens at the bank's side. The deposit raises both assets and liabilities of ICICI Bank by ₹100. For the sake of simplicity, let us assume the required reserve (CRR plus SLR) is 40 per cent. That is, out of ₹100 deposited, bank is required to keep ₹40 in the form of CRR and SLR. The

remaining, that is $\text{₹}(100 - 40) = \text{₹}60$ ends up as an excess reserve for the bank. Since banks do not earn any interest on excess reserves, ICICI Bank has an incentive to buy securities or make a loan with this ₹60. Let us assume that ICICI Bank loans out ₹60 to another person, say your friend Srinu. Usually, ICICI Bank does not give Srinu currency directly but deposits this ₹60 in his checking account. So now the checking account deposit increases by $\text{₹}100 + \text{₹}60 = \text{₹}160$.

Please note that by making this ₹60 loan, ICICI Bank increases the money supply by ₹60. The initial ₹100 that you had deposited into your checking account turns into ₹160 in checking account deposits, thereby increasing the money supply by ₹60. The story does not end here. Let us assume that Srinu uses this ₹60 to buy a book from Landmark. So he writes a cheque of ₹60 to Landmark which has an account with Axis Bank. Once Landmark deposits this check in Axis Bank, reserves of Axis Bank increase by ₹60. But again Axis Bank is required to keep only 40 per cent of this reserve in the form of CRR and SLR. This means Axis Bank can use the rest that is, $\text{₹}(60 - 24) = \text{₹}36$, to give a loan either to other businesses or consumers and thereby earn returns on their excess reserves. Please note that when Axis Bank loans out ₹36, the initial ₹100 that you had deposited now increase the money supply by $\text{₹}60 + \text{₹}36$ that is, by ₹96.

This process of lending out continues. At each step, the bank keeps 40 per cent of the reserves as CRR and SLR and lends out the rest. Therefore, the initial deposit of ₹100 increases the money supply by ₹250 (see [Table 3.6](#)).

We can actually arrive at this result using this simple formula. The total increase in money supply because of initial deposit of ₹100 in bank is given by:

$$\begin{aligned} &100 + .6 \times 100 + .6^2 \times 100 + .6^3 \times 100 + \dots \\ &= 100 (1 + .6 + .6^2 + .6^3 + \dots) \\ &= \frac{1}{(1-.6)} \times 100 = 250 \end{aligned}$$

Table 3.6 Concept of Money Multiplier

<i>Banks</i>	<i>Increase in Checking Account Deposit</i>	<i>How It Happens</i>
ICICI	100	$100 - .4 \times 100 = ₹60$
Axis Bank	60	$60 - .4 \times 60 = ₹36$
Third Bank	36	$36 - .4 \times 36 = ₹21.6$
:	:	:
Total Increase	250	0

Source: Author's calculation.

Therefore, the money supply can be increased either by reducing the CRR, SLR, or both. A reduction in SLR and CRR brings down the required reserve component. Thus, by increasing the money multiplier, the money supply increases. During October 2013, commercial banks maintained 4 per cent of demand and time liability as CRR and 23 per cent as SLR. Commercial banks must pay penalty, also known as bank rate, if CRR and SLR fall below these mandatory reserve requirements.

In addition to the required reserves, there are two other ways in which RBI can affect change in money supply. The first is through open market operation (OMO) and the second through changing the rate at which the central bank lends money to the commercial banks.

Open Market Operation

OMO refers to the act of RBI selling or buying government bonds. To increase money supply, RBI buys government bonds from the commercial banks. This increases the reserves of the commercial banks, thereby increasing the money supply. To decrease the money supply, RBI sells government bonds which in turn reduces reserves of commercial banks, thereby reducing the money supply. There are two advantages in the case of OMO. First, RBI can control the extent of OMO and decide on the extent of increasing the money supply. Second, RBI can implement OMO quickly with no administrative delay or required changes in legislation.

LIQUIDITY ADJUSTMENT FACILITY (LAF)

RBI can also influence changes in money supply by changing the rate at which it gives loans or borrows money from commercial banks. Better known as LAF, it provides a mechanism for the injection and absorption of liquidity available to banks and to overcome mismatches in supply and

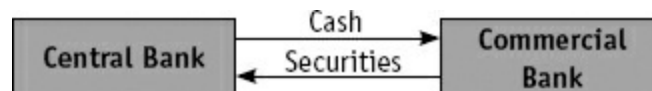
demand from time to time. Through LAF, commercial banks can obtain liquidity in a crunch and park excess funds with the central bank in case of excess liquidity.

LAF is operated through repo and reverse repo. Repo refers to a transaction in which commercial banks acquire immediate fund from the RBI by selling securities and simultaneously agree to repurchase the same or similar securities after a specified period of time at a specified price. Reverse repo is exactly the opposite to that of repo where the commercial banks can park their excess funds with RBI. Then there is inter-bank repo, where commercial banks resort to repo transaction among themselves. [Box 3.2](#) tells how LAF works and cites an example about money market corridor.

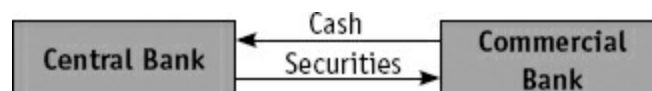
Starting 2011–12, the RBI introduced marginal standing facility (MSF) which is the rate at which commercial banks can borrow overnight from RBI without collateralizing government securities. Banks can borrow funds through MSF when there is a considerable shortfall of liquidity. This measure was introduced by RBI to regulate short-term asset liability mismatches more effectively. During October 2013, the MSF rate pegged at 100 basis points above the repo rate. Reverse repo was fixed at 100 basis points below the repo rates.

Box 3.2: Repo, Reverse Repo, and Money Market Corridor

Repo Rate: The repo is the rate at which RBI lends when banks need money.



Reverse Repo: The reverse repo is the rate at which the RBI pays banks when they keep their excess money with the RBI



Money Market Corridor Commercial banks borrow at 5% and lend at 3.5% from (to) RBI

Repo and reverse repo auctions are conducted on a daily basis except on Saturdays, with a tenor of one day, except on Fridays and preceding holidays. Interest rates in respect to both repos and reverse repos are decided through

cut-off rates emerging from auctions conducted by the RBI on a uniform price basis. In August 2000, repo auctions of tenors ranging between three to seven days were introduced. [Table 3.7](#) gives an indication about the changes in key money market instruments. By changing repo, reverse repo, CRR, and SLR, the central bank controls the money supply.

In addition to RBI, commercial banks can also borrow from or lend money to each other through call money. Call money is a method by which banks borrow from each other to be able to maintain the CRR. The interest rate paid on call money is known as call rate. Call money is short-term finance repayable on demand with a maturity period of one day to 15 days and used for inter-bank transactions. The difference between call money and LAF is that for the former, the banks do not have to guarantee any collateral such as government securities whereas LAF transactions are conducted through securities.

To sum up, money supply can be increased or decreased through changes in the required reserves, LAF and OMO. In the [next section](#), we examine the implications of changes in money supply on output and prices.

THE MONETARY SIDE

The Friedman Concept in Monetary Economics

The objective of monetary economics is to understand the relationship between money and other variables in the economy. The Friedman concept was an important breakthrough in the development of monetary economics. In order to understand the importance and relevance of the Friedman concept, it is useful to look at the traditional view on money markets. The money market balance is depicted through the following equation:

Table 3.7 Repo, Reverse Repo, CRR, and SLR (in %)

<i>Effective Date</i>	<i>Repo Rate</i>	<i>Reverse Repo Rate</i>	<i>CRR</i>	<i>SLR</i>
2010–11				
20 April 2010	5.25	3.75	5.75	25.00
24 April 2010	5.25	3.75	6.00	25.00
2 July 2010	5.50	4.00	6.00	25.00
27 July 2010	5.75	4.50	6.00	25.00
16 September 2010	6.00	5.00	6.00	25.00
2 November 2010	6.25	5.25	6.00	25.00
18 December 2010	6.25	5.25	6.00	24.00
25 January 2011	6.50	5.50	6.00	24.00
17 March 2011	6.75	5.75	6.00	24.00
2011–12				
3 May 11	7.25	6.25	6.00	24.00
9 May 11	7.25	6.25	6.00	24.00
16 June 2011	7.50	6.50	6.00	24.00
26 July 2011	8.00	7.00	6.00	24.00
16 September 2011	8.25	7.25	6.00	24.00
25 October 2011	8.50	7.50	6.00	24.00
28 January 2012	8.50	7.50	5.50	24.00
10 March 2012	8.50	7.50	4.75	24.00
2012–13				
17 April 2012	8.00	7.00	4.75	24.00
18 June 2012	8.00	7.00	4.75	24.00
11 August 2012	8.00	7.00	4.75	23.00
22 September 2012	8.00	7.00	4.50	23.00
3 November 2012	8.00	7.00	4.25	23.00
18 December 2012	8.00	7.00	4.25	23.00
29 January 2013	7.75	6.75	4.25	23.00
9 February 2013	7.75	6.75	4.00	23.00

Source: Indian Economic Survey 2012–13, Government of India.

$$MV = PY$$

where M is the money stock in the economy, V is velocity of money (number of times currency changes hands), P is the price level, and Y is the real value of output.

MV represents the total quantum of money used for transaction purposes and PY measures the total value of transactions. In equilibrium, the two sides of the above equation are equal. The debate surrounding the effectiveness of monetary policy revolves around the effect of an increase in the money supply (M) on prices P , and output (Y). It was initially thought that any change in money supply reflected a change in prices only, leaving output

unaffected, and that there was no active role for monetary policy in economic decisions. This thinking changed after the Great Depression in the USA in 1929; monetary policy was used extensively to influence output growth. Central to this line of thinking was the concept of Phillips Curve which relates price inflation to unemployment rates in the economy. The development of the Phillips Curve argument led central banks to follow an easy monetary policy to revive economic activity by allowing higher inflation.

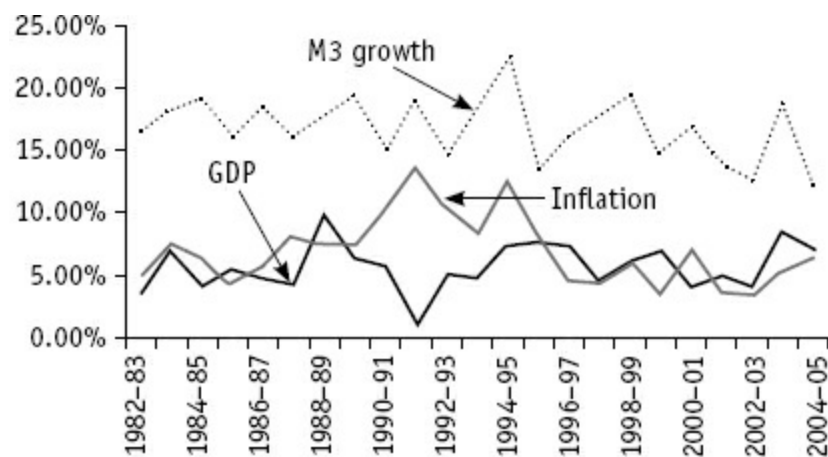
The trade-off between inflation and unemployment (output)—as presented by the Phillips Curve—came under question following the 1970s period of economic stagflation. This has already been discussed earlier. The Friedman concept is an improvement of the Phillips Curve argument, and resulted in a significant shift in monetary policy formulation. The Phillips Curve was based on the premise that when prices (including labour wages) increase, workers respond by increasing their labour supply. Friedman augmented this notion by incorporating workers' expected inflation in the Phillips Curve argument. The idea was that workers increase their labour supply only if they see an increase in their wages relative to an increase in prices, since an increase in prices erodes any higher wage income. Thus, as workers align their expected level of inflation to the new increased level, labour supply remains unchanged because there are no real gains of an increase in wages. With no effect on labour supply, any increase in inflation, though affecting output in the short run, has no impact on output in the long run. When viewed in context of the above equation, this implied that any increase in the money supply would reflect only in higher prices in the long run. Friedman therefore concluded that *inflation is always and everywhere a monetary phenomenon* in the sense that it is a result of an excess growth of money supply over and above the requirement to support the existing level of output growth. Economies affected by high inflation therefore need to keep their money supply under control. As money has no role to play, interest rate is used as an instrument to control the money supply.

APPLICATION OF FRIEDMAN'S CONCEPT IN INDIA

The theory that money has no role to play implies that the moment there is an increase in money supply in excess of growth in real output, it results in inflation. This implies that the long-run Phillips Curve will be vertical. Many

studies were undertaken on the validity of the long-run Phillips Curve in India. These studies followed two basic approaches. One was in-line with the Friedman concept whereas the other group viewed inflation as a purely non-monetary process driven by factors influencing the cost of production of output. For example, an increase in oil price affects inflation through an increase in the production cost. However, it has been argued that inflation resulting from supply-side shock is temporary in nature. Increasing the money supply under such circumstance will prolong the period of inflation. Inflation in the USA during the 1970s was characterized by a loose monetary policy adopted to prevent the economy from going into recession due to the oil price shock.

Figure 3.7 Validity of Friedman Relation



Source: Database, Reserve Bank of India.

Following the same argument, Srinivasan et al. concluded that supply shocks have had only temporary effects on inflation in India, largely because the RBI recognized these shocks as temporary and did not alter its policy stance to account for them.¹⁰ This, in some sense, validated Friedman's hypothesis by arguing that a permanent rise in the level of inflation would be purely a monetary phenomenon. Rangarajan also argued for a strong link between money supply growth and inflation.¹¹ He found that the long-run elasticity of inflation with regard to money supply was close to unity. This is the likely basis for RBI's consistent belief in the role of money supply in affecting inflation. In fact, [Figure 3.7](#) plots the growth rates of money supply (M3), output (real GDP), and prices (inflation) in India for the period 1982–83 to 2004–05. While it is difficult to arrive at any concrete conclusion from

the behaviour of the series, it does appear that peaks in money supply growth correspond with peaks in inflation.

So it seems that the Friedman's concept is valid for India. What about other parts of the world? As a consequence of Friedman's argument on the Phillips Curve, the idea of inflation as a monetary phenomenon gained increasing acceptance. In the 1970s, with major economies still suffering from stagflation, money supply targeting became a common practice among central banks. The idea was to keep a track of money supply so as to control inflation. M3 being the broadest measure of money supply was, therefore considered to be an important variable in policy formulation. The use of money supply as a policy target was based on the view that money supply changes could be strongly linked to changes in prices.

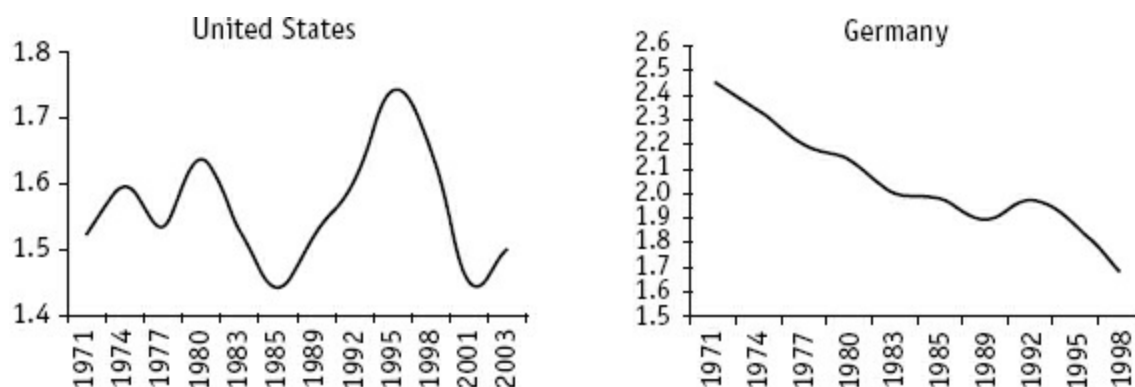
The fact that money supply increases the prices also assumes that the velocity of money is stable. According to the RBI, the velocity of money follows a U-shaped path. Velocity declines in the initial stages of economic development, thus reflecting monetization of the economy as a result of spread of the banking network. It subsequently rises in the advanced stages as parallel sophistication in financial markets reduces the need for financial intermediation by the banking system. The important thing to note is that as long as the velocity remains stable, the effect of money supply changes on prices remains predictable.

During the 1990s, in many developed countries particularly those with advanced financial systems, the velocity of money was not stable. For instance, it was observed that with the development of financial markets and alternative financial instruments in the USA, the velocity of money became unstable. When the velocity of money is not stable, money supply cannot be used as an effective tool in monetary management. With the stability of velocity of money under question, many central banks abandoned the policy of money supply targeting due to concerns over predictability. Interest rates were instead used as an instrument to control inflation. Money supply did not have any direct bearing on policy decisions.

However, the velocity in the Euro area remained more or less stable. This was mainly due to three reasons. First, financial development in Euro countries was in the form of instruments that could be classified under the definition of broad money itself. As such, the introduction of new financial products did not have any significant impact on the velocity of money. Second, the aggregation of many countries at different stages of financial

development led to a more stable velocity. Finally, Germany which has a very stable velocity of money, had a large weightage in the measurement of monetary statistics in the area (see [Figure 3.8](#)). This imparted more stability to the velocity of money for the entire Euro zone. The European Central Bank therefore believes that any excess money supply would lead to inflationary pressures and create asset price bubbles. As such, M3 has an important role to play in policy formulation in the Euro area.

Figure 3.8 Velocity of Money



Source: Reserve Bank of India, Report on Currency and Finance, 2003–04.

TAYLOR'S RULE AND MONETARY POLICY

Now that we know that in India, RBI uses the interest rate as a policy instrument to control inflation, the natural question to ask is on what basis RBI decides how much interest rate needs to be raised to control inflation. The answer to this question lies in Taylor's rule.

$$i_t = r_t + \pi_t + \beta_0 (\pi_t - \pi^*) + \beta_1 (y_t - y_p)$$

where i_t is the nominal interest rate, r_t is the real interest rate, π_t is the inflation rate at time period t , π^* is the inflation rate when actual output equals the potential output, y_t is the actual level of output in time t , and y_p is the potential level of output. β_0 and β_1 are weights given on the inflation gap and output gap.

In the above equation, the constant is the long-run equilibrium real rate of interest which is consistent with real GDP and equal to the supply-side component of GDP. According to the Taylor rule, the central bank should set

the interest rate target in such a way that it is equal to the sum of the inflation rate, equilibrium interest rate, inflation gap, and output gap. Inflation gap is the difference between current inflation and inflation corresponding to zero output gap. The inflation gap and output gap are each given weights (i.e., β_0 and β_1) that can be estimated by running the above regression. In case of India, the inflation gap is given more weight in comparison to the output gap (i.e., $\beta_0 > \beta_1$).

ON INDEPENDENCE OF THE CENTRAL BANK

The main argument for making central bank independent is to keep a check on inflation. If the central bank is not independent, which is the case when government keeps borrowing money from the central bank and follows an expansionary fiscal policy, then it may not be successful in controlling inflation. The more bonds the central bank buys, the faster the money supply grows thereby resulting in inflation. The government has its own interest in keeping unemployment low. If the government controls the central bank, it may be tempted just before the elections to increase money supply, reduce interest rates, and increase employment. Comparing the degree of central bank independence in 16 high income countries for the period between 1955 and 1988, Alberto Alesina and Lawrence Summers figured out that the more independent any country's central bank is, the lower is the inflation rate in the country and vice versa. [12](#)

Central bank independence relates to three areas in which the influence of the government must be either excluded or drastically curtailed: independence in personnel, financial, and policy matters. A central bank is said to have political independence if the influence of the government is partially or fully excluded from its appointment procedures. The degree of such independence may be determined by factors like government influence in appointment procedures, terms of office, and dismissal of the governing board of the central bank.

The degree of financial independence or fiscal independence is determined by the extent to which the central bank excludes the government from direct and indirect access to its credit. Here, direct credit arises when central bank allows the monetization of fiscal deficit and indirect credit arises when central bank participates in the management of government debt in the

primary market. Direct credit also takes the form of securitized lending when backed by negotiable securities and non-securitized form when not backed by negotiable securities.

Monetary policy independence refers to the flexibility given to the central bank in the formulation and execution of monetary policy. A central bank is said to have goal independence if it has complete discretion in setting the ultimate goals of monetary policy such as inflation, unemployment, or economic growth. European central bank exhibits this kind of independence. A few central banks have their goals jointly set by the government and the central bank (e.g., Australia, Canada, Mexico, New Zealand, etc.).

India is no exception to these developments. The historic agreement in 1994 between the Government of India and the RBI on the termination of the system of automatic monetization of fiscal deficit (ad hoc Treasury Bills) from 1997 and the introduction of a system of WMA constitutes an important milestone in the history of Indian public policy.

Second, the tabling and passing of the Fiscal Responsibility and Budget Management Act (FRBM Act 2003) which aims at medium-term management of the fiscal deficit, revenue deficit, and prohibition of central bank lending to the government, greatly adds to RBI's independence from the fiscal authority. The FRBM Act also seeks to prohibit the RBI's support of government securities in the primary market from 1 April 2006, which signals initiatives for the separation of government debt management function from monetary policy. There were also some important initiatives proposed in the Union Budget for 2005–06 for scrapping the minimum limit set for SLR and CRR by amending the RBI Act and the Banking Regulation Act. All these important initiatives have made the RBI more or less independent. In spite of its autonomous status, many a times RBI fails to tame inflation. [Case study 3.3](#) explains the reasons for that.

RELATIONSHIP BETWEEN REAL AND FINANCIAL SECTORS

Going by the classical assumption, money has no role and whatever money is pumped into the system ends up in a rise in price. This is to say that the financial sector has no role. In fact, in general equilibrium models, money is generally not modelled separately. However, of late, there are other models like the cash-in-advance model that tries to incorporate the linkage between the financial and real sectors. The cash-in-advance constraint (sometimes

known as the Clower constraint after the American economist, Robert Clower) is an idea used in economic theory to capture monetary phenomena. In the most basic economic models (such as the Walras Model or the Arrow–Debreu Model), there is no role of money as these models are not sufficiently detailed in considering how people pay for goods other than saying everyone has a budget constraint. To be able to say anything about money supply, inflation, monetary policy, and so on, economists must therefore introduce additional assumptions into their models. One possibility and the more popular one is to introduce a cash-in-advance constraint that is, a requirement that each consumer or firm must have sufficient cash available before he/she can buy goods. An alternative assumption would be a ‘Money-in-the-Utility-Function’ assumption, which states that people have a tendency to hold a certain amount of cash because they derive utility from holding it. Without these assumptions, economic theory finds it difficult to explain why people carry money which takes up space in their wallet, cannot be consumed, and does not earn any interest. Other than this, an easier way to understand the linkage between the financial sector and the real sector is through real sector's demand of credit for loan from banks to expand their business. By the same logic, banks’ profitability might also fall with a fall in demand for loans by the real sector. Talking about the real and financial sectors, we can say that fiscal and monetary policies are also related through interest rate.

Case Study 3.3: RBI Cannot Fight Inflation on Its Own*

On 29 January 2014, the RBI had a third-quarterly review of the monetary policy to take stock of the current liquidity scenario and inflation. This meeting gained importance especially at a time when India's CAD widened to 5.4 per cent of GDP in the September quarter—the widest in absolute terms since 1949. This also explains why the rupee continued to slide—something that has been a common phenomenon over the last one year. If the value of the rupee continues to decline in this fashion, RBI will have no option but to intervene, which means buying dollars and selling rupees. This can be inflationary.

So, will the widening CAD and fiscal deficits undermine RBI's efforts to control inflation? From a layman's perspective, inflation means a rise in the prices of essential commodities. In the parlance of economics, the price of any item rises when there is more demand relative to its supply. Managing inflation therefore amounts to managing the demand of the product experiencing a rise in prices or by increasing the supply of this item. In case of managing a recession, exactly the opposite chain of events takes place. Before we go into how effective the RBI has been in managing inflation, it is

important to know what constitutes these demand- and supply-side factors.

Among demand-side factors, consumption expenditure is important. In India, consumption expenditure contributes close to 65 per cent of our GDP. The other components are private investment expenditure, government expenditure, and trade. The RBI can only be successful in controlling inflation if rise in the interest rate (read repo and reverse-repo rates) reduces consumption, private investment, and government expenditure.

Three important assumptions are necessary for the RBI intervention to be successful. First, there has to be a perfect pass-through in terms of change in the repo and reverse-repo rates leading to a corresponding change in lending rates of commercial banks. However, in reality the pass-through is not perfect and happens with a lag. Second, if prices rise more than proportionate in spite of the RBI increasing nominal interest rates, it implies a fall in the real rate of interest.

This is likely to happen with the government partially deregulating diesel prices, considered an intermediate input. Therefore, an increase in nominal interest rates may not check the increase in aggregate demand as the real interest rate falls. In 2013, there were expectations that the government was going to increase the price of diesel by 10 per cent. Therefore, an important assumption for a nominal interest rate increase to be effective is price stickiness which does not hold true, except perhaps for fuel and power items in the short run.

The third and most important assumption is reduction in consumption which also depends on the types of goods that we consume. If the goods consumed are income inelastic or consumers do not care about the prices of goods consumed, then a rise in interest rates does not reduce demand.

It is to be noted that the prices of primary commodities and fuel items—something we must necessarily consume—has risen by around 13 per cent during the last three years. This figure would have been much higher with a total de-control of diesel, gas, petroleum, and kerosene prices.

Recent WPI data reveals that food items have a total weight of 24.3 per cent—14.3 per cent for ‘primary’ items such as cereals (4 per cent); eggs, meat, and fish (2.4 per cent); milk (3.3 per cent); and 10 per cent for manufactured food items such as potato chips. The other major items of consumption are fuel and power (15 per cent) and chemicals and chemical products (12 per cent). Thanks to India's growth story due to which the consumption of these ‘superior’ items has increased. The price rise in essentials shows up in a high level of general prices because of the high weights of these items in the price index.

Is it only the demand-side factors that are fuelling inflation? Inflation can also occur due to short supply of essential consumption items. For instance, there has been a major reduction in food crop acreage. Measured in terms of lakh hectares, acreage for rice, coarse cereals, pulses, and oil seeds has fallen by 10.79, 11.63, 2.09, and 2.23 lakh hectares respectively in 2011–12 over 2010–11.

Farmers complain that they do not get adequate labour to undertake farming activities; thanks to schemes such as Pradhan Mantri Gram Sadak Yojana (PMGSY)

and MGNREGA. To hire workers, farmers have to shell out anything between ₹180 and ₹300 per day—the rate varying from state to state.

The shortage is likely to continue with the implementation of the Food Security Bill. This bill, when passed, will entitle 67 per cent of the Indian population to food at a highly subsidized rate with 7 kg per person per month to BPL households and 3 kg per person per month to the general category households.

With the government continuing with its reform agenda in terms of bringing down fertilizers' subsidies, it will further dampen the realized price for the farmers and hence the incentive for farming. As a result of this legislation, the cost to the exchequer will rise to ₹1.18 lakh crore, further widening the fiscal deficit.

Over the last one decade, the annual growth of our agriculture output has been less than 3 per cent. This year, below-normal rain brought down that growth rate with around 55 per cent of our agricultural produce dependent on rainfall.

Lower agriculture produce also means higher fodder prices for livestock, leading to an increase in the prices of meat, eggs, and milk. Capacity constraints in the form of lack of storage facilities and an imperfect market due to lack of reforms in the Agricultural Produce Market Committee (APMC) Act have also contributed to a price rise in India. With so many factors at work, if RBI goes for a rate cut—which many believe will happen—it is suggested that the government lend adequate support in terms of reducing non-essential imports such as gold and take measures to control fiscal deficits. The good news is that with DCT slowly being put in place, it is expected that the government will be able to better utilize its funds and control the fiscal deficit.

*—Previously published by the author in *The Financial Express* (12 January 2013).

¹ Fiscal year starts from 1 April of every year and continues until 31 March of the next year. Calendar year is a related concept, starting from 1 January and continuing until 31 December for any given year.

² Economic Survey 2002–03, Government of India.

³ The Laffer principle posits a relationship between tax rates and total revenue collection such that as tax rates rise, the tax collected rises up to some critical point, after which further increases in the rate actually causes tax revenue to decline.

⁴ N. Banik (2005), *Supply-side India*, Nashville, TN: Laffer Associates.

⁵ See, <http://dbie.rbi.org.in/DBIE/dbie.rbi?site=home>

⁶ Robert J. Barro (1989), *The Ricardian Approach to Budget Deficit*, NBER Working Paper 2685, National Bureau of Economic Research, USA.

⁷ Ibid.

⁸ Robert J. Barro (1979), On the Determination of the Public Debt, *Journal of Political Economy*, Vol. 87, No. 5, pp. 940–71.

⁹ Robert J. Barro (1990), Government Spending in a Simple Model of Economic

Growth, *Journal of Political Economy*, Vol. 98, No. 5, pp. 103–25. Also see, Robert J. Barro (1991), Economic Growth in a Cross Section of Countries, *The Quarterly Journal of Economics*, Vol. 106, No. 2, pp. 407–43.

¹⁰ N. Srinivasan, V. Mahambare, and M. Ramachandran (2008), Dynamics of Inflation in India: Does the New Inflation Biased Hypothesis Provide an Explanation? *Macroeconomics and Finance in Emerging Market Economies*, Vol. 1, No. 2, pp. 199–212.

¹¹ C. Rangarajan (1998), ‘Development, Inflation and Monetary Policy’, in Isher Judge Ahluwalia and I.M.D. Little (eds.), *India's Economic Reforms and Development: Essays in Honor for Manmohan Singh*, New Delhi: Oxford University Press.

¹² Alberto Alesina and Lawrence H. Summers (1993), Central Bank Independence and Macroeconomic Performance: Some Comparative Evidence, *Journal of Money, Credit and Banking*, Vol. 25, No. 2, pp. 151–62.

CHAPTER 4

Inflation and Unemployment

Inflation means an overall increase in the price level. During the time of inflation, prices of all items increase. It is not that prices of only some items increase while the prices of others do not. In fact, inflation occurs when there is an overall mismatch between demand and supply of output. From a layman's perspective, managing inflation therefore is to manage the demand-side factors, the supply-side factors, or a combination of both affecting the availability of output (GDP). Demand-side factors are consumption expenditures, investment expenditures, government expenditures, and demand for exports and imports. Overall demand can come from many sources such as housewives, farmers, labourers, corporates, government, and foreigners. Supply-side factors, on the other hand, take into account the availability of food grains, manufactured items, and fuel items such as oil.

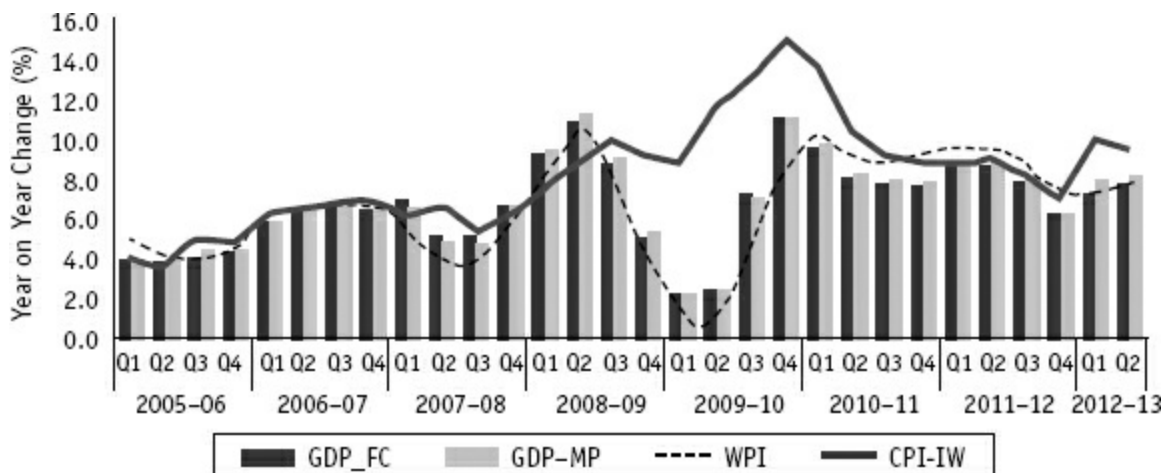
TYPES OF INFLATION

Depending upon the nature of price rise, inflation can be of two types namely, cost push and demand pull. When the cause of inflation is because of increase in the cost of production, it is categorized as cost-push type inflation. Cost of producing any good or service may rise because of higher input costs such as rise in wage rates, petrol prices, or rise in price of any other factor that goes into production. Suppose private sector employers are forced to raise wage rates because government sector employees are making more money resulting from the recommendations of the Union Pay Commission. If the rise in private sector wage rates exceeds that in labour productivity, it means loss for the private firms. This leads to a reduction in supply of goods

and services. With unchanged demand and with less supply, prices rise. The second type of inflation is demand-pull type inflation. Here the cause of inflation is because of the increase in demand resulting from the increase in purchasing power in a fast growing economy (see [Figure 4.1](#)).

Sometimes these two types of inflation occur simultaneously, with one leading to another. It is difficult to understand the nature of causation, that is, whether cost-push inflation leads to demand-pull type inflation or vice versa. For instance, excess demand of goods and services raises prices. This increased profitability in production creates excess demand for factor inputs, subsequently leading to an increase in input prices. Even though excess demand in the commodity market bids up price of goods that eventually lead to an increase in input prices such as wages, it is neither necessary that there will be any significant lag between prices and wage changes, nor in the opposite sequence of event where cost push is likely to influence demand pull. Producers may increase prices because of an increase in the price of universal inputs such as oil. At the same time, wage rates across sectors may increase because the economy is doing well. Prices may also rise because the market conditions are not competitive. As we are aware, in addition to the perfectly competitive market, there are four other types of markets—monopolistic, oligopolistic, duopoly, and monopoly. Except for under perfect competition, in all other types of markets, prices are elements of market power that further amplify the demand pull and cost push types of inflation. In general, at a time when both money wages and prices are rising, it is difficult to say whether the cause of inflation is because of demand pull or cost-push factors.

Figure 4.1 GDP and Inflation



Source: Economic Survey 2012-13, Government of India.

FC: Factor Cost and MP: Market Price.

MEASUREMENT OF INFLATION¹

There are five different measures of inflation. These are WPI, CPI-IW, CPI for agricultural labourers (CPI-AL), CPI for rural labourers (CPI-RL), and CPI for urban non-manual employees (CPI-UNME). In general, WPI measures the average prices in the wholesale market where goods are sold in bulk. The word *wholesale* is not correct as in many cases, in addition to the wholesale market, prices corresponding to farm-gate, factory-gate, and primary markets are also included in the calculation of WPI. On the contrary, CPI is the average price that any consumer pays to meet his demand. Average wholesale prices and the consumer prices may differ because of taxes, distribution, and transportation costs. Data on WPI are collected and disseminated by the Office of the Economic Advisor,² Ministry of Commerce and Industry, Government of India, whereas the data on CPI can be sourced from the Labour Bureau, Government of India.³

CPI covers around 260 items. Approximately 160,000 retail price quotes are obtained each month from 16,545 outlets and selected open markets. Ministry of Statistics and Programme Implementation collects data for CPI and WPI. Within CPI, there are four different measures. Each one of these measures comes with a different base year and a different basket of goods that it contains. For instance, CPI-IW is calculated on the basis of 2001 as the base year and usually contains more number of items in comparison to CPI-AL (1986-87), CPI-RL (1986-87), and CPI-UNME (1984-85). The numbers

in parentheses reflect the base years for these different measures of CPI. The officially published CPI-IW includes six sub-indices—clothing, food, fuel and light, housing, tobacco and intoxicants, and miscellaneous items (such as hair dressing, toilet accessories, clocks and watches, etc.). CPI-AL and CPI-RL are published with only five sub-indices and exclude housing. CPI also includes six subcategories of services. WPI, on the other hand, is more recent as it is calculated on the basis of 2004–05 as the base year and contains 676 commodities.

In terms of basket of commodities whose prices are considered to compute these indexes, food has a larger weight, ranging from 46 per cent in CPI-IW to 69 per cent in CPI-AL. The CPI weights for CPI-AL and CPI-RL are based on consumption expenditure data obtained from the NSSO surveys, whereas those for CPI-IW and CPI-UNME are based on ad hoc family expenditures in selected urban centres only. In comparison, WPI has a smaller share of food items—only 27 per cent—and this includes manufactured food items. However, fuel has a larger weight in WPI (14.2 per cent) than its share under different measures of CPI (ranging from 5.5 to 8.4 per cent). Another important distinction between WPI and CPI is that prices of service items are not included in WPI whereas they are included while calculating CPI. You can now understand that when prices of fuel items increase, it has a much larger impact on WPI than on CPI. Exactly opposite happens in the case of rise in prices for services, thus affecting CPI more than WPI.

In addition to CPI and WPI, there are two other measures of inflation. These are GDP deflator and producer price index (PPI). GDP deflator is the most comprehensive measure of inflation as it is the ratio of GDP at current prices to constant prices. On a quarterly basis, GDP deflator also reflects the extent of services inflation. PPI is more like WPI but with a difference. WPI reflects producers' average cost of production including mark-ups and taxes, whereas PPI measures the wholesale price that producers pay for procuring primary, intermediary, finished, and services input without taxes. The PPI usually covers the industrial manufacturing sectors and services such as public utilities (electricity, gas, communication, etc.).

Out of these different measures of inflation, WPI is more frequently available. This is why any news item about inflation is usually referred to as WPI. Until 24 October 2009, WPI was available on a weekly basis, with a lag of two weeks. At present, prices of two constituent sub-groups of WPI—primary items, and fuel, power, light and lubricants—are available on a

weekly basis with a lag of fortnight. The overall WPI is available on a monthly basis with a lag of fortnight. Since it is frequently available and calculated on the basis of base years which are more recent, WPI is preferred relative to CPI. In popular writings—such as in newspaper articles—WPI is termed as *headline inflation*.

There is yet another concept and this goes by the name *core inflation*. It refers to measuring inflation excluding the seasonal components and more volatile consumption items such as food, fuel, and gold. For instance, we all know that during the festive season, there is a greater demand for clothing and other consumer durable items. Similarly, prices of fuel and gold items are volatile as most of it are imported and responsive to international price fluctuations. Political tensions in the middle-east region are likely to influence the fuel prices. Again, as more than 55 per cent of our agricultural produce still depends upon rainfall, fluctuations in weather conditions can contribute to volatility in agricultural prices. The measure of inflation that does not consider these seasonal and volatile components is known as *core inflation*.

Weights of different items vary across inflation measures. For example, an increase in the prices of fuel items would increase WPI more than CPI, as fuel items have more weight under WPI than under CPI. Likewise, the prices of food items would increase CPI more than WPI, as it has got more weight under CPI than under WPI (see Tables [4.1a](#) and [4.1b](#)). However, as during inflation prices of all items rise in general, we find that more or less these different measures of inflation tend to move together (see [Figure 4.2](#)).

Although WPI is a more widely used measure of inflation in comparison to CPI, it actually does not matter which measure of inflation one uses. One major criticism of using WPI is that it does not include services. However, services constitute an important input for manufacturing and agricultural products, and hence the prices of services indirectly gets accounted in WPI. On the contrary, a scientific way of estimating inflation is to consider appropriate weights for consumption items and the demographics. For instance, the cost of living is certainly less in rural areas in comparison to urban areas. So even if services are included in the computation of CPI, we need to distinguish between the urban and the rural areas. With a view of addressing this issue, the RBI took the initiative and since January 2011, the CSO has been generating data for CPI-urban and CPI-rural (see [Table 4.2](#)).

Table 4.1a Weights of Major Items under CPI-IW

Major Groups	Weights	2010-11	2011-12				2012-13		
			Q1	Q2	Q3	Q4	Q1	Q2	Q3
General	100.0	10.45	8.91	9.16	8.39	7.17	10.14	9.76	10.1
Food group	46.2	9.89	7.58	7.29	6.05	4.52	10.57	11.49	11.41
Pan, supari, tobacco and intoxicants	2.27	12.42	13.91	15.23	16.87	15.21	14.9	15.13	14.94
Fuel & light	6.43	9.81	13.73	14.17	15.37	17.82	18.97	12.06	12.8
Housing	15.27	21.12	12.17	10.95	10.95	8.96	8.96	6.73	6.73
Clothing, bedding and footwear	6.57	6.73	12.94	14.43	15.61	13.11	10.79	9.35	8.44
Miscellaneous group	23.26	5.26	6.75	7.73	8.03	7.05	7.35	7.57	8.61
Non-food	53.8	11	10.23	11.01	10.75	9.77	9.73	8.11	8.84

Source: Economic Survey 2012-13, Government of India.

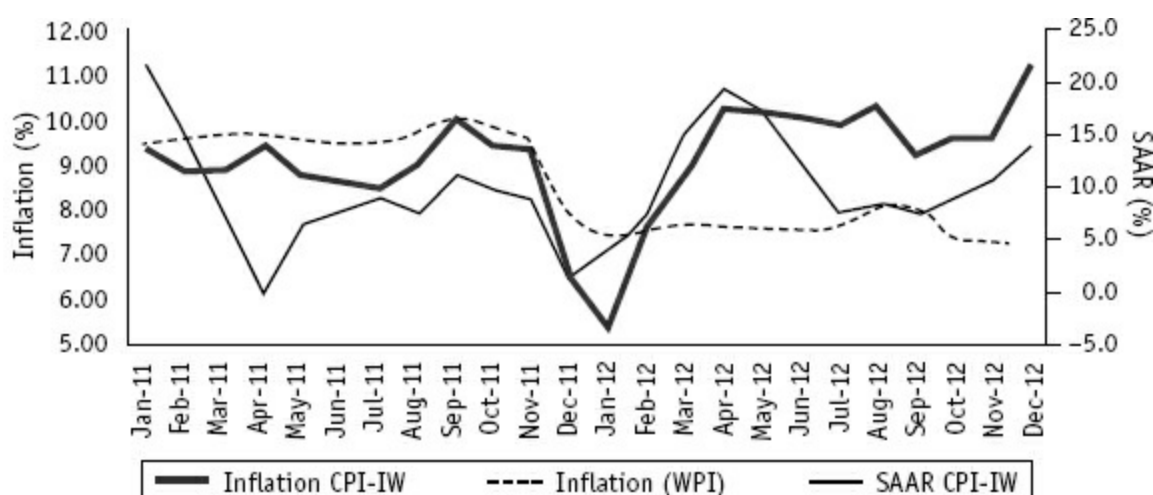
Table 4.1b Weights of Major Items under WPI

Major Groups/ Composite Groups	Weight (%)	Average (April-March)		2011-12				2012-13		
		2010-11	2011-12	Q1	Q2	Q3	Q4	Q1	Q2	Q3P
All	100.0	9.56	8.94	9.60	9.71	9.01	7.50	7.54	7.87	7.25
Commodities										
Primary Articles	20.12	17.75	9.80	13.09	12.05	7.76	6.70	9.87	10.32	9.27
Fuel and Power	14.91	12.28	13.96	12.74	12.99	15.08	14.94	11.90	9.72	10.34
Manufactured Prod.	64.97	5.70	7.26	7.38	7.87	7.95	5.89	5.29	6.23	5.46
Composite Groups										
All food	24.31	11.10	7.24	8.36	8.81	6.60	5.30	9.12	9.07	9.05
Non-food Non-manufacturing	20.69	15.67	14.51	16.20	14.97	13.72	13.33	10.52	10.79	10.37
Non-food Manufacturing	55.00	6.11	7.29	7.35	7.80	8.13	5.92	5.15	5.71	4.64

Source: Economic Survey 2012-13, Government of India.

P: provisional estimates.

Figure 4.2 Movement of WPI and CPI-IW



Source: Economic Survey 2012–13, Government of India.
SAAR: Seasonally Adjusted Annual Rate.

Table 4.2 Inflation—CPI for New Series

Areas	Groups	Weights (%)	2011–12	2012–13		
			Q4	Q1	Q2	Q3
Rural	General	100.00	8.11	9.63	9.82	10.20
	Food	56.59	6.01	10.10	11.62	12.27
	Non-food	43.41	10.86	9.03	7.53	7.59
Urban	General	100.00	9.33	11.02	10.00	9.86
	Food	35.81	6.76	11.13	12.16	11.74
	Non-food	64.19	10.81	10.95	8.79	8.81
Combined	General	100.00	8.62	10.18	9.87	10.07
	Food	47.57	6.25	10.47	11.81	12.10
	Non-food	52.43	10.8	9.92	8.13	8.26

Source: Central Statistical Organization.

HOW IS INFLATION CALCULATED?

The official price indices in India are calculated using the Laspeyres formula. Let me illustrate this. Suppose consumer expenditure data reveals that during 2005–06, a typical family purchased 1 Airtel mobile calling card at ₹50, 20 kilos of potatoes at ₹10 per kilo, and 20 kilo of rice at ₹25 per kilo. These are just representative baskets of goods that our consumer bought during 2005–06. We can add more such items to the existing list. Now assuming 2005–06 as the base year, the expenditure required for consuming these goods (potatoes and rice) and services (Airtel calling card) at 2005–06 prices is

$1 \times 50 + 20 \times 10 + 20 \times 25 = ₹750$. To calculate inflation between 2010–11 and 2011–12, we calculate the price index in 2010–11 and 2011–12. For doing this, we consider the prices of these same items for the years 2010–11 and 2011–12. Let us assume that in 2010–11, the price of 1 Airtel mobile calling card was ₹30, 20 kilos of potatoes was ₹15 per kilo, and 20 kilos of rice was ₹30 per kilo. In 2010–11, the representative consumer spent $1 \times 30 + 20 \times 15 + 20 \times 30 = ₹930$. Similarly, for 2011–12, let us assume that the price of 1 Airtel mobile calling card was ₹30, 20 kilos of potatoes was ₹20 per kilo, and 20 kilos of rice was ₹35 per kilo. In 2011–12, the same consumer spent $1 \times 30 + 20 \times 20 + 20 \times 35 = ₹1,130$. Going by the Laspeyres formula, the CPI in 2010–11 was:

$$\frac{\text{Expenditure in 2010–11}}{\text{Expenditure in 2005–06}} \times 100.$$

That is, $\frac{930}{750} \times 100 = 124.$

Similarly, CPI for 2011–12 is: $\frac{\text{Expenditure in 2011–12}}{\text{Expenditure in 2005–06}} \times 100.$

That is, $\frac{1130}{750} \times 100 = 150.6.$

The CPI for every year after the base year is determined by dividing the amount necessary to purchase the same basket of goods during that year by the amount required in the base year, multiplied by 100. Note that while calculating the price indices, it is assumed that the quantities purchased (and hence the weights) during the base years are same as during all the subsequent years for which indices are calculated. Going by this example, between 2010–11 and 2011–12, price increased by $\left(\frac{150.6 - 124}{124} \right) \times 100 = 21.45$ per cent. That is, inflation was 21.45 per cent.

The index for the base year 2005–06 is 100. Like above, we can calculate indexes for subsequent years that is, 2010–11 and 2011–12. These indexes are free of units and serve as good proxy for changes in the price levels. We cannot use these indexes to tell us how high the price level is, but only how much it changed over time. Inflation is measured as the percentage increase in the index say CPI, from one year to the next.

INFLATION IN INDIA

In India, both macro policies like monetary tightening by the RBI as well as commodity-specific measures by different branches of the government (trade policies and domestic interventions) have been used to control inflation. Monetary tightening means there will be lesser amount of money available in the system and this raises the interest rates. A higher interest rate means the cost of borrowing goes up, reducing the ability or willingness to buy consumer durables. Lesser demand drives down the prices. Under assumption of perfect competition, producer will not be able to supply goods at a price below the marginal cost of production. A fall in price, especially when the market condition is competitive, also results in fall in production and investment. A fall in investment helps to reduce the output gap, and hence inflation. Controlling inflation is more pronounced if the fiscal policy acts in a complementary fashion favouring the monetary policy. Fiscal measures such as lowering the minimum support price (MSP)—the price at which the government procures agricultural items from farmers—and increasing the tax rate (that reduces disposable income) by reducing the overall demand can control inflation. On the contrary, fiscal measures such as slashing of direct tax rates for income up to ₹8 lakh and imposition of Central Excise Duties on diesel/petroleum items, as during the National Budget 2010, actually contribute to inflation and may reduce some of the effects of a contractionary monetary policy.

CAUSES OF FOOD PRICE INFLATION IN INDIA

The major causes of inflation, especially that of food inflation in India, can be explained by inefficient supply chain management and global food price hikes. With a large section of the Indian population still living near or BPL, it is important that policymakers take measures to control food price inflation. There are instances when a high fraction of food grains meant to be given to the poor and vulnerable through our public distribution system (PDS) or ration shops get diverted—some of which are sold in black market and the other portion gets wasted. In 2001–02, 39 per cent of the food grains meant to reach the poor through the PDS were lost due to leakages and diversion. Going forward, things did not improve. In 2007–08, 43.9 per cent of the food grains were lost due to leakage and diversion.⁴ As if leakages and diversions were not enough, in 2004–05, only 17 per cent of the poorest quintile of households received food from the PDS stores. And for some states such as

Bihar and Uttar Pradesh, this figure was as low as 2 per cent and 6 per cent respectively.⁵ Such leakages, diversions, and inefficient ways of distributing food not only increase fiscal expenditure but also contribute to inflation as the funds are not properly utilized. Severe mismanagement of cereal stocks by the PDS led to rise in cereal prices, rising to around 18 per cent in 2012–13 as compared to 3.4 per cent in 2011–12. Let us look at the mismanagement in supply chain logistics⁶ and how it contributes to inflation.

Supply Chain Logistics

In India, if farmers are to sell their produce, they have two options. First is to sell directly to the government. The central government procures 24 essential food items from the farmers through its agencies such as National Agricultural Cooperative Marketing Federation of India Limited (NAFED) and Food Corporation of India (FCI). The second option is to take their produce to the nearby government-designated *mandi* (central market)⁷ where in front of state officers they can auction the produce to the middleman.

The Central Government functions as a welfare state. It generally procures these essential items at a higher price and sells these procured items through PDS at a cheaper price relative to the market. The basic assumption for the welfare state to function is that the farmers are able to sell all that they want to NAFED or FCI collection centres at the MSP. MSP is the minimum price for a product established by the government and supported by payments to producers in the event of the market price falling below the specified minimum. From the consumers' side, poor people are able to procure these essential items from the ration shops at a subsidized rate, thereby making them better off.

However, in reality things are little different. Typically, MSP is higher than the market price and one would think that farmers gain every time the government announces the MSP. However, seldom farmers are able to sell their produce at the MSP. First of all, every village does not have NAFED or FCI outlet. FCI currently procures a major portion of rice and wheat from a few selective states. 70 per cent of rice procurement is done from Punjab, Andhra Pradesh, Chhattisgarh, and Uttar Pradesh while 80 per cent of wheat procurement is done from Punjab, Haryana, and Madhya Pradesh. Other major rice and wheat producing states such as Bihar, West Bengal, Assam, and Orissa have lesser presence by FCI. Even if there is a NAFED or FCI

outlet, the government may not procure if the farmers bring their produce before/after the dates of procurement. The government generally announces the dates of procurement and many a times the farmers are not aware of these dates. Worse still, sometimes the government announces procurement dates a month or two after the harvest time, making it impossible for the small farmers to sell their produce at MSP. In India, as much as 80 per cent of the farmers are small with less than 1 hectare of landholding. These marginal farmers do not have access to cold storage (and hence waiting capacity), and have no option but to sell their produce to the middlemen or traders. Without any political connection, it is impossible for them to get a space in the state godowns offering storage facilities.

What about the items such as fruits and vegetables that typically the central government does not procure? Here, the farmers have the option of taking these products to the nearby government-designated mandi. There are around 7,700 government-designated mandis spread across India. The middlemen are commissioned licensed agents in these government-designated markets. So that the farmers get a fair price and are not exploited, the APMC Act was enacted. Under the APMC Act, state government officers are meant to oversee activities related to auctioning such as whether the middlemen give the right price to the farmers, the commodities traded are homogenous in quality, the markets are equipped with basic infrastructure for taking correct weights and for making payments, and so on. In reality, these middlemen form a cartel and at the time of auction offer a substantially lower price to the farmers. In addition, these middlemen also pass on the mandi fee to the seller. The mandi fee including various charges in some regulated mandis is as high as 13 to 14 per cent of the value of the produce. Although ideally the buyers should pay for the mandi fees, in reality this price is passed on to the farmers. Typically, the farmers have weak bargaining powers. Over 80 per cent of the farmers in India are small and marginal who do not have access to cold storage or to supply of institutional credit. Most of them depend upon village traders who are also money lenders, giving them crop loans and pre-harvest consumption loans. The superior bargaining powers of the village traders and the middlemen means that the prices received by the farmers are low. Such imperfection in the procurement process leads to inflation. To a certain extent, food inflation can be controlled by addressing the inefficiency in supply chain management.

First, there is a need to increase the bargaining power of the farmers. Many

a time, needs of the actual users such as consumers, producers, and exporters may not coincide with the needs of the farmers. So that the agricultural produce can be procured directly from the farmers and to make this procurement logically feasible, it is necessary that the farmers get together and supply a minimum quantity of produce. Therefore, it is essential that the farmers form a cooperative on the lines of the milk cooperative initiated by AMUL and sell the produce directly to the procuring agencies. Cooperatives help in aggregation of the produce and thus bring about efficiency in marketing. These cooperatives should be given trader license in all mandis so that they can sell directly to the retailers instead of selling to the middlemen.

Second, there is a need to undertake further reforms. The Task Force on Agricultural Marketing Reforms set up by the Ministry of Agriculture in 2002, Government of India, suggested the promotion of new and competitive agricultural markets in private and cooperative sectors to encourage direct marketing and contract farming programmes, facilitate industries and large trading companies to undertake the procurement of agricultural commodities directly from the farmers' fields, and to establish effective linkages between farm production and retail chain. Mahindra Shubhlabh Services, Tata Kissan Kendra, ITC e-Choupal, Godrej Aadhar, and DSCL Hariyali are all outcomes of such reform measures. The APMC Act was also modified and some states took initiatives such as direct marketing, private mandis, and contract farming. The idea behind direct marketing is to eliminate the middlemen so that farmers enter into a direct selling agreement with the corporates.

However, the reform measures undertaken by various states have been ineffective as a number of rules and regulations of the amended acts are restrictive in nature. Consider this: In Uttar Pradesh, the APMC license issued to ITC to buy through e-Choupals is valid for one year. In both 2008 and 2009, the renewed license was issued after the peak wheat marketing season was over, thus making it redundant. In Madhya Pradesh, there is a stipulation that the buying point cannot be inside a factory, which leads to increased transaction costs and does not serve the very purpose for which buying points were set up. In Rajasthan, buying points have to be far away from mandis/town limits, making Chaupal Sagar an unviable proposition. In Gujarat, Premium Farm Fresh Private Limited has six licenses for establishing private markets. Each market is designed to have a minimum of 20 collection centres, making a total of 120 collection centres spread across the entire state. Filling of applications separately for each collection centre is

too cumbersome as it implies submitting 120 separate application forms, depositing securities, bank guarantees, etc. The state should realize this difficulty and issue a ‘unified license’ to the private entity.⁸

Problems such as the ones stated above will continue to persist without further modification and harmonization of the APMC Act across states. It is interesting to note that the states that vehemently oppose FDI in multi-brand retails are yet to execute any reforms in their APMC Act (see [Table 4.3](#)). Reforming the APMC Act means farmers can sell their produce directly to retailers and corporates, thus bypassing the middlemen. Given that most middlemen in the mandis are also full-time party workers, it is a no-brainer that any further reforms of the APMC Act will negatively impact their payoffs. West Bengal is one such state where in fact, no reform has been initiated to amend the APMC Act. FDI in retail is going to hurt the already protected domain for the middlemen/party workers (see [Case Study 4.1](#)).

Table 4.3 Progress of Reforms in Agricultural Markets as on 31 May 2011

	<i>Stage of Reforms</i>	<i>Name of States/UTs</i>
1	States/UTs where reforms to APMC Act have been effected for direct marketing: contract farming and markets in private/cooperative sectors	Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Goa, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Maharashtra, Mizoram, Nagaland, Orissa, Rajasthan, Sikkim, Uttarakhand, and Tripura
2	States/UTs where reforms to the APMC Act have been effected partially	a) Direct marketing: National Capital Territory (NCT) of Delhi, Madhya Pradesh b) Contract farming: Madhya Pradesh, Haryana, Punjab, and Chandigarh c) Private market: Punjab and Chandigarh
3	States/UTs where there is no APMC Act and hence not requiring reforms	Bihar, Kerala, Manipur, Andaman and Nicobar Islands, Dadra and Nagar Haveli, Daman and Diu, and Lakshadweep
4	States/UTs where APMC Act already provides for reforms	Tamil Nadu
5	States/UTs where further action is required for the reforms	Meghalaya, Haryana, Jammu and Kashmir, West Bengal, Pondicherry, NCT of Delhi and Uttar Pradesh

Case Study 4.1: The Big Picture on FDI in Retail*

India's FDI inflows improved since 2005, perhaps at China's expense. In this context, the expected FDI inflows from retail are not significant. However, retail FDI can lead to FDI flows in other sectors and improve our BoP situation.

FDI in the retail sector has been at the epicentre of national debate. Much has been said on India possibly losing out on investment by sending a wrong policy signal. But

do we really need to get so worked up?

INDIA AS FDI DESTINATION

Considering the anticipated level of inflows on account of FDI in retail, there may not be much reason to worry. During 2000, India attracted significantly lower FDI (US\$ 3.5 billion) than many other Southeast Asian countries, such as South Korea (US\$ 10.5 billion), Thailand (US\$ 6 billion), and Malaysia (US\$ 5 billion).

However, an interesting pattern started to emerge since 2005. FDI inflow in India increased by leaps and bounds, from US\$ 7.6 billion in 2005 to US\$ 35 billion in 2009. FDI flow in the whole of East Asia and the Pacific remained more or less constant during this period—US\$ 104 billion in 2005 and US\$ 102 billion in 2009.

For China, the figure was US\$ 79 billion in 2005 and around US\$ 78 billion in 2009. In 2000, India's share among middle-income countries—in terms of attracting FDI—was only 2.4 per cent compared to China's 26 per cent. In 2009, China's share fell to 22 per cent whereas India's share increased to 10 per cent (Global Development Finance: Country and Summary Data 2011). India's gain has been at the cost of China losing out in terms of being a favourable FDI destination.

CHINA'S PROBLEMS

India has outdone China due to the high inflation rate in the latter country. Wages of migrant workers, land, property rents, and power prices have all registered an increase in China.

Measured as a year-on-year basis as of November 2010, labour costs went up by 21 per cent and the home prices across 70 cities in China went up by 7.7 per cent. Property prices have also been on a rise, despite the government having ownership rights over land, thus indicating a real-estate bubble.

What is evident from the data is also being witnessed in reality. Multinationals such as Ford and Hyundai are shifting their manufacturing base from China to India. During the early part of last fiscal year, India exported 230,000 cars, vans, sports utility vehicles, and trucks—a growth of 18 percent—whereas Chinese exports tumbled 60 per cent to 165,000 units. Perhaps due to these reasons, Nokia and Lotte are also setting up their manufacturing base in India.

It is no surprise therefore, that India attracted, on an average, an annual FDI inflow of US\$ 20.4 billion per annum between 2006 and 2009.

The estimated inflow from FDI in retail of US\$ 3 billion over the next five years seems modest in comparison. To get a sense of proportion, the RBI generally uses this sum of money daily in the foreign exchange market.

Even so, there are reasons to be concerned if FDI in retail were to be stalled in the long run. So, what are the problem areas?

SUPPLY LOGISTICS

FDI in retail will bring down inflation by investing in supply chain logistics, that is, by investing in transportation and refrigerated storage necessary for perishable items. Typically, if a farmer is to sell his produce, he needs to bring it to the local market where he usually auctions it to the retailer, who in turn, sells to the final consumers.

This process of auctioning in the *mandi* is facilitated by the middleman, who charges a commission from the farmers. Add to this the cost of bringing the agricultural produce to the local market; the price difference between what the farmers get and what the consumers pay is what society loses out due to inefficiency.

By investing in supply chain logistics, the players in multi-brand retail will reduce the cost and bring down inflation. They will procure the produce directly from farmers, keep it in their storage, and transport it directly to their retail outlets. It is worthy to note that there is a huge investment involved to get the supply chain logistics in place—something that FDI in retail promises.

Those who have been arguing that the local *kirana* (small grocery stores) and the marginal farmers may be hurt—the former losing out on business and the latter not getting the right price—are not correct. Currently, the local *kirana* and retail outlets such as Reliance Fresh, Tata–Tesco, and Spencer to name a few, are co-existing comfortably with each other.

Marginal farmers also stand to gain. Recent evidences suggest that marginal farmers who have entered into contracts with Pepsi India, have on average, realized double the price in comparison to the local *mandi* and the local *mahajan* (in the absence of the local *mandi*). This is an eye-opener for those suggesting that multinationals will squeeze the farmers by not offering them the right price.

Experiences from around the globe suggest that the local *kirana* needs to worry about the spread of e-commerce, and not the presence of corporates in the retail sector. India badly needs corporatization of the agricultural sector to even out the distribution of income. The ITC and Pepsi examples have shown that in their best interest, corporates directly get in touch with the farmers and give them the necessary information on how to increase crop output and productivity.

It is to be noted that the agricultural sector receives minuscule investments while supporting the livelihood of around 55 per cent of the population.

RIGHT POLICY SIGNAL

The UPA government also stands to gain substantially by sending the right policy signal. Moreover, FDI in retail can bring in forms of FDI, at a time when our trade figures are not doing really well. The trade deficit for April–October 2011–12 was estimated at US\$ 94 billion—higher than the deficit of around US\$ 85 billion during April–October 2010–11.

India's credit-worthiness can improve with more FDI inflow resulting from reforms. International rating agencies usually look at the total foreign exchange reserves and the

FDI inflow as criteria for rating any country.

Tailpiece: Mamata Banerjee being smart, played her cards right. She already got ₹ 8,750 crores, out of her demand of ₹19,000 crores, as part of the Bengal package.

Who knows, she might actually give in if the UPA government meets her demand.

* Previously published by the author in *The Hindu Business Line* (14 December 2012).

The Foreign Factor

If the economy is *open*, meaning there is limited control on Indian farmers to trade (buy or sell) in the world market, then it is very likely that the domestic prices will be aligned with the world prices. But the agricultural market in India is restricted. Although India ranks second worldwide in farm output, it however, is one of the high cost producing nations because of lower agricultural productivity. For instance, India is the second largest producer of rice in the world. However, our rice yields are one-third of China's, and about half of Vietnam's and Indonesia's. Even India's most productive states lag global averages. For example, Punjab's yield of rice in 2010 was 3.8 tonnes per hectare against the global average of 4.3 tonnes. The average yield of apples in India (Jammu and Kashmir) is about 11 tonnes per acre compared to the USA, New Zealand, Israel, or China where yields range 30–70 tonnes per acre.⁹ Besides, in many developed nations especially in EU and in North America, agriculture is highly subsidized. Higher agricultural productivity and subsidies explain why the world prices of many agricultural items are low compared to India and opening up the agricultural sector, to a certain extent, may bring down agricultural prices.

However, policymakers in India are not keen about opening up the agricultural sector. Cheaper agricultural imports may jeopardize the income of 58 per cent of India's 1.14 billion population that earns their livelihood from agriculture and agriculture-related informal sectors (such as cooperatives, fishing, dairies, etc.). This fear accounts for the fact that although the overall average applied tariff on Indian imports fell from over 32 per cent in 2001–02 to almost 16 per cent in 2006–07 in case of agricultural products, the average duty remained at 40.8 per cent. It is also worth noting that India does not provide any direct subsidies to its agricultural exports.

Although global prices of some of the agricultural items are lower, recent trends suggest an increase in the global prices of food items. Food inflation continues to be very high at around 10 per cent per year and threatens to go

out of control. According to the World Bank's quarterly food price report, drought in USA and dry spells in Argentina, South Africa, and Australia could see the global food prices go back to August 2012 record levels.¹⁰ This report also suggests that in general, a 1 per cent rise in the global food price index causes a 0.3 per cent hike in the domestic food price index.

But how does one reconcile the alignment of global food price with that of domestic price in India, especially when the market is fully not opened. The answer lies in world oil prices and other commodity prices. Higher global oil prices may affect domestic food prices with increasing transport costs being passed on to retail food clients. Remember that oil is a key intermediate input. Correlation indices clearly point to a strong link between the international prices of wheat and rice and lagged oil prices, with a correlation coefficient of 0.71 during 1990–2010. The correlation tended to increase during the 2000–10 period compared to the longer 1990–2010 period.¹¹

SUPPLY-SIDE AND DEMAND-SIDE SHOCKS

Food price inflation also results from supply- or demand-side shocks. We define shocks as *exogenous*—something outside the control of policymakers. Understanding the source of fluctuation in agricultural output is important to understand the story of food price inflation, and more importantly, what type of demand management policy should be undertaken.

Agricultural output gap or the cause of food price inflation can happen because of an increase in demand-side factors. Increase in income surely contributes to the consumption of high-protein items such as meat, milk, and eggs. In general, the consumption of these high-protein items increases with increase in income. Advocates of demand-side factors causing inflation believe in this story—increase in food price inflation is because of demand-side factors or higher income resulting from India's growth story and increased payments made through schemes such as MGNREGS and MSP. However, consumption of food items cannot move beyond the steady-state level of consumption. This is particularly true for basic cereals and vegetable items. Interestingly, weights of these basic food items are more than high-protein items in the WPI—a popular measure of inflation.

Agricultural output gap can also increase if for a given demand, the supply of output falls below the trend level. Trend level refers to the supply side,

what the economy can produce for a given level of factor endowments (labour and capital), and technology. It takes time to develop better technology that will improve agricultural productivity. Policymakers therefore have little or no control as to how much an economy can produce in the short run. On the contrary, the supply of agricultural output in India can fall below the trend level because of drought and capacity constraints such as lack of physical infrastructure leading to inefficient supply chain management.

Given this information that supply-side shocks (such as rainfall) may affect the agricultural output gap, it makes sense to examine whether there is any association between agricultural output gap and rainfall. Inadequate rainfall can be treated as supply-side shock, especially because 55 per cent of our agricultural produce depends upon rainfall. It is expected that rainfall during previous year may affect this year's agricultural output gap.

We did a simple statistical exercise, regressing present year's agricultural output gap over last year's rainfall.¹² As heavy rainfall (flood) without proper irrigation facilities may harm crop production (some crops cannot withstand water stagnation), we took into consideration rainfall square as an additional explanatory variable. We considered agricultural GDP data for four different states in India, namely Bihar, Punjab, Uttar Pradesh, and West Bengal. As we did not have matching rainfall data for other states in India, we limited our analysis to these four states only. The agricultural output data consisted of 46 annual observations from 1960–61 to 2005–06 measured in 1993–94 prices. Since it takes time to build rural infrastructure especially irrigation facilities, we believe that our results will not change much, thus carrying forward this exercise for the later years. It is to be noted that although allocation towards agri-infrastructure went up during the 11th Five Year Plan, most part of it was used for rural electrification.

We find evidences in favour of association between agricultural output gap and rainfall data. The results are particularly robust for the states of Bihar, Uttar Pradesh, and West Bengal. This is also congruent with the fact that these three states lack the basic irrigation facilities. The agricultural outputs in these states are more dependent upon rainfall than in the state of Punjab with a relatively better irrigation framework.

To check the robustness of our result, we did a counterfactual experiment by surveying the market managers employed with the wholesale food and vegetable association in Chennai. The survey pointed out that in the event of

poor harvest and bad rainfall, the number of trucks bringing vegetables to the city's wholesale market fell drastically. There was a high correlation between bad harvest/poor rainfall year and the number of trucks bringing produce to the wholesale market. According to these market managers, the demand for vegetables and cereals remained stable throughout the year, with prices becoming more volatile during summers. A poor rainfall during the previous year meant lesser produce available during summer. There was evidence that the number of trucks bringing agricultural produce from neighbouring states like Kerala and Karnataka to Chennai fell drastically if there was inadequate rainfall during the previous year. In fact, there were instances of hoarding by big retailers and middlemen during bad harvest years. Hoarding and inefficient supply chain management leads to price volatility, price escalation, and hence food price inflation.

In the presence of supply-side shock, it actually does not make sense to follow a contractionary demand management policy to control food inflation. Contractionary demand management policy such as monetary policy can become successful during the time of expansion or demand-side shock. For instance, to control inflation during economic expansion starting in 2005 and lasting until the early part of 2007, RBI followed a contractionary monetary policy. The tighter credit policy of April 2007 was influential in reducing inflation rates from 6.7 per cent to 3.5 per cent within the next four months. However, contractionary demand management policy may not be a good idea to control inflation, especially when the cause of food price inflation is because of a supply-side factor such as inadequate rainfall. What is required is the use of supply management policies such as investment in suitable infrastructure, developing new technology to improve agricultural productivity, and efficient supply chain management.

WHY IS INFLATION BAD?

Inflation lowers the purchasing power of people. If we witness a rise in price by 10 per cent every year, it means what people could buy with ₹100 last year, would cost them ₹110 this year. So if income does not increase concomitantly, then the wage earners will be able to buy less quantity of goods and services this year.

Costs of inflation is likely to be borne most heavily by the poor. The underlying argument is that the poor are typically wage earners and their

incomes change slowly. As argued in Fisher and Modigliani, 'it has typically been believed that wages lag behind inflation, and that inflation therefore implies a shift away from wage earners and towards profits'.¹³ In India, the poor spend a large proportion of their income on food, are typically net buyers of food, and have incomes that tend to be fixed.

Fischer presents cross-country evidence to show that growth is negatively associated with inflation and that the causality runs from inflation to growth.¹⁴ The mechanism through which high inflation can reduce growth is through declines in investment and productivity growth.

In spite of empirical evidences pointing towards the growth-decelerating effects of inflation, we see that inflation persists in many countries. In many developing countries with inadequate and inefficient tax collection system, governments use inflation to tax people. In economics, using inflation as a way of collecting money from the people is known as *seignorage*. How inflation is a tax for the people? Suppose that the government knows that the market clearing price for a particular item is ₹100. All of a sudden if government starts to spend money through deficit financing, it means there will be additional demand for this item because of government creating additional demand. To match this additional demand, the market clearing price of this item increases, let us say to ₹150. With no change in nominal income, everyone's real income now falls as the price has increased. Deficit financing on part of government in effect reduces the real income for the people, similar to what imposing a tax would do.

LIMITATION OF THE INDEXES

There are some limitations in using CPI and WPI as a measure of inflation. These measures tend to overstate inflation in presence of substitution, quality, and new product bias, whereas understating inflation in the presence of income bias. Let us see how.

Substitution Bias. When CPI or WPI is calculated, it is implicitly assumed that the weights do not change and the consumers continue to buy the same basket of goods year after year. However, many a times if price of oranges increase, people may substitute it with apple. So, to assume same weights or to assume that quantities of goods purchased during the base year remain same for every other following year is not correct. WPI or CPI cannot take

into account such element of substitution bias when consumers shift their preferences from more expensive items to low cost items.

Quality Bias. CPI or WPI cannot take into account quality bias. Due to fast-pace technology, there has been a vast improvement in the quality of electronic items. Every alternate year, we find that by shelling out the same amount of money, we can buy a better configured computer or a telephone handset with more features. Such improvement in quality is not taken into account while calculating these indexes. If one were to account for the quality factor, then in fact the reported inflation numbers will actually come down by few percentage points. So if CPI indicates a 10 per cent inflation rate, then it may be actually around 8 per cent.

Income Bias. There is also income effect on food items resulting from changing dietary habits. When the economy grows with higher income, there is a tendency to consume high-protein items such as milk, pulses, eggs, and meat. If the weights of these items do not change accordingly and remain understated, it could lead to an underestimation of food prices. So unlike in the previous cases (quality and substitution bias), in this case we find underestimation of inflation.

New Product Bias. New products are not accounted for while calculating any index. Fall in prices with the introduction of newer products is not considered. For some measures—especially CPI—the base years are not so recent and to assume that peoples’ consumption patterns have not changed over years is also not true. For instance, base year for CPI-UNME is 1984–85. At that time electronic gadgets such as computers and cell phones were not used by the Indian household. Therefore, if we calculate CPI-UNME, then it fails to take into account the introduction of newer products, and hence may not be totally correct.

MEASURING UNEMPLOYMENT

The unemployment rate is an important indicator about the state of the economy. When the economy does well, as happens during expansion, the unemployment rate is low. Politicians all the time talk about job creation. In India, NSSO, under Ministry of Statistics and Programme Implementation, collects data on unemployment in India.¹⁵ NSSO conducts survey at an

interval of every five years. We can also get information about the state of unemployment from population census that is carried out at an interval of every 10 years. We will talk more on this later. But at first, let us discuss how the unemployment rate is calculated.

Please note that all persons are not considered as part of the labour force, such as infants and children below 16 years of age, elderly people who are retired from service, crooks and thugs serving jail sentences, homemakers, full-time students, sick and mentally unstable persons, and people who are on active military services. Also, people who are available for work but are not working currently are not in the labour force. Anyone who is tied-up because of childcare responsibilities, or has stopped searching for jobs because of transportation difficulties, or believes that because of present recessionary trend there are no jobs available for them and hence no point in actively looking for job, are not considered as part of labour force. Therefore, to get an estimate about India's labour force, we have to exclude all these aforementioned categories of people (including discouraged workers) from our population. Within labour force, some people are employed while others are not. Those who are not employed, actively look for jobs. The unemployment rate is the percentage of the labour force that is unemployed.

There are four major criteria, namely time, income, willingness, and productivity, on the basis of which a person can be classified as employed or unemployed. Let us briefly consider each one of these criteria.

The Time Criterion. Under this criterion, a person is considered to be employed if he is gainfully occupied during the year for a number of hours (or days) more than some normal hours (or days) defined as full employment hours or days. The time criteria is the most widely used criteria and is used by the NSS to classify any person as employed, unemployed, and underemployed. A person is defined as employed if he is gainfully occupied for at least one day during one week used as a reference period. A person is unemployed if he has no gainful employment during the reference week and was either seeking work or was available for work at current remuneration for at least one day during the reference week. A gainfully occupied person is defined as *severely* underemployed if he has worked for 28 hours or less, and *moderately* underemployed if he has worked for more than 28 hours but less than 42 hours during the reference week. The NSSO defines 'work' or 'gainful' activity as anything pursued for pay, profit, or family gain or in

other words, the activity which adds value to the national product. Normally, it is an activity which results in the production of goods and services for exchange.

The Income Criterion. Under this criterion, a person is considered to be employed if his income during the reference period—usually one year—is more than some desirable minimum. If a person earns this minimum level of income, then he is not classified as unemployed.

The Willingness Criterion. Under this criterion, a person is unemployed if he is willing to do more work than he is doing at present—he may either be actively searching for more work or be available for more work if he is offered on terms to which he is accustomed. A neo-classicist argues that so long as the wage rate is positive, the failure to get work must be voluntarily.

The Productivity Criterion. Under this criterion, a person is unemployed or underemployed if he is removable from his present employment in the sense that his contribution to output is less than some normal productivity and therefore his removal would not reduce output if the productivity of the remaining workers remains constant. Economist Joan Robinson termed this as *disguised* unemployment—a situation in which the marginal productivity of labour is zero so that some labour can be removed from its present occupation without any loss of output.

DATA ON UNEMPLOYMENT

There are two important sources for data on unemployment in India. The first one is the decennial population census (published every 10 years) providing information about the working population in the country. However, an operation as large as population census in India cannot be expected to generate reliable data on detailed aspects of unemployment for the simple reason that intensive enquiries at the level of individual respondents cannot be carried out on a massive scale. In lieu of this limitation, the standard practice is to consider the second source of data, which is the quinquennial sample survey on employment in India. As quinquennial indicates, this data is published every five years by the NSSO. Three different methods are used to derive the estimate of labour force, employment, and unemployment in India. The first is the usual principal activity status (UPS) concept where the

reference period is one year. Persons working during at least part of the reference period are considered employed and those who are not working but seeking work or are available for work during the major part of the reference period are regarded as unemployed. The employed are classified by the type of employment—self-employment, regular wage employment, and casual wage employment—on the basis of time-use criterion. A somewhat broader concept is the usual principal and subsidiary status (UPSS) criterion. It was introduced to widen the UPS concept to include even those who were outside the labour force on the basis of the majority time criterion but had been employed during some part of the year on a usual basis. In the NSS 61st Round, all those who were either unemployed or out of labour force but had worked for at least 30 days over the reference year were treated as subsidiary status workers. UPSS is thus a hybrid concept incorporating both the major time criterion and priority to work status.

In addition to UPS and UPSS, there are two other ways of deriving estimates of unemployment. These are the current weekly status (CWS) criterion with a week as the reference period and the current daily status (CDS) criterion with a day as the reference period. Under the CWS criterion, a person is considered unemployed if he is unable to find work even for one hour during the reference week. Likewise, under the CDS criterion, a person is considered unemployed if he has not worked for more than four hours on a given day.

UNEMPLOYMENT RATE IN INDIA

Detailed data on unemployment and employment started to become available only from 1972–73 (27th Round of NSS), when NSSO started its quinquennial survey. Before 1972, the idea about the extent of unemployment in India could be taken from the work of Papola in 1992.¹⁶ Between 1955 and 1972, employment grew at the rate of 2 per cent per annum. However, labour force increased comparatively faster at the rate of 2.5 per cent per annum. This resulted in an increase in the unemployment rate from 2.6 per cent to 3.8 per cent between 1955 and 1972. According to the quinquennial survey and taking the reference period as one year, that is, using usual status concept, the unemployment rate increased further to 4.23 during late 1970s (1977–78). This figure is much higher if we are to measure unemployment on the basis of CWS and CDS criteria. For the year 1977–78,

the corresponding figures were 4.48 (CWS criterion) and 8.18 per cent (CDS criterion) respectively. Going by the CWS and CDS criteria, the figures were more or less the same during the 1980s, with a marginal drop in unemployment rates during the 1990s. This marginal drop in the unemployment rate is attributed to increase in employment mainly in the unorganized labour market involving construction, transport, and self-employment.

Here it is important to make a distinction between the organized (formal) and the unorganized (informal) labour markets. Labour market in India is primarily informal, with more than 93 per cent of the labour force working in the informal sector. These are the labourers who are engaged in small-scale enterprises, construction activities, transport sector, hotels and restaurants, casual wage labours (with formal schooling of less than two years), and also the ones who are self-employed. Unlike the labourers in the organized sector, these labourers do not enjoy privileges such as pensions, health benefits, travel allowances, house allowances, medical leaves, and access to trade unions. Wage rates in the informal sector are typically a function of market demand and supply conditions, and certainly less than the unionized wage rates as found in the organized sector. In 2004–05, the total work force was estimated to be around 415.27 million, with an estimated labour force of 428.37 million. Of this, 26.4 million was in the organized sector, 8.2 million in the private sector, and 18.2 million in the public sector.

In general, the overall level of unemployment in the organized sector remained below 6 per cent. Between July 2011 and June 2012, the levels of unemployment using UPS, UPSS, CDS, and CWS criteria were 2.85 per cent, 2.57 per cent, 5.47 per cent, and 3.59 per cent respectively (see [Table 4.4](#)). The day-to-day registration at employment exchanges and notification of vacancies by employers generate comprehensive information about the organized labour market. The statistical returns from employment exchanges relating to various characteristics of job seekers—fresh or otherwise—and the demand pattern of employment in industries and services sector provides a broad indication of the unemployment situation in the organized labour market. In the private sector, most of the jobs are still generated by the private manufacturing sectors followed by community, social, and personal services (see [Table 4.5](#)).

In the private sector, approximately 10 to 15 million jobs were created in 2011–12 but not all could be filled up as 75 per cent of these jobs required

skills such as vocational training which could not to be found among the prospective applicants. Moreover, there was a substantial reduction in self-employed employment, shrinking from 56.4 per cent to 50.7 per cent of the workforce between 2004–05 and 2009–10. In absolute numbers, the self-employed decreased from 258.4 million to 232.7 million in this period while regular salaried workers rose from 69.7 million to 75.1 million. The ranks of casual labour rose from 129.7 million to 151.3 million. Collectively, the total workforce increased from 457.8 million to 459.1 million—a rise of just 0.3 per cent over this period.¹⁷ This represents a scenario of jobless growth, especially when the Indian economy grew at a rate of 7.9 per cent during the 11th Five Year Plan (2007–12). Importantly, the reduction in the self-employed sector is worrisome as it indicates that informal employment that accompanies new real estate development, industry, and urbanization in general, is falling. This would typically include service providers such as road-side eateries, local transports, small shops, and services like appliances' repair.

Table 4.4 Per 1,000 Distribution of Persons of Age 15 Years and Above by Broad Activity Status according to Different Approaches in Rural and Urban Areas in India (July 2011–June 2012)

Types	Employed		Unemployed		Unemployment Rate	Not in Labour Force	
	Male	Female	Male	Female		Male	Female
Scheduled Castes							
UPS	771	282	22	13	2.77	207	705
UPSS	780	329	19	12	2.38	201	659
CDS	720	262	48	21	6.25	233	717
CWS	771	322	28	18	3.5	201	660
Scheduled Tribes							
UPS	790	352	17	14	2.11	192	634
UPSS	802	453	14	11	1.72	184	537
CDS	731	349	39	26	5.06	230	625
CWS	793	449	23	24	2.82	184	527
Other Backward Class							
UPS	762	242	20	15	2.56	219	744
UPSS	769	289	18	13	2.29	213	698
CDS	715	232	40	20	5.3	245	748
CWS	759	285	26	19	3.31	215	696
General							
UPS	714	169	28	25	3.77	258	806
UPSS	723	204	25	23	3.34	252	773
CDS	686	170	38	27	5.25	276	802
CWS	717	208	31	30	4.14	252	762
Overall							
UPS	751	236	22	17	2.85	226	746
UPSS	759	285	20	16	2.57	221	700
CDS	708	229	41	23	5.47	251	748
CWS	751	282	28	23	3.59	221	695

Source: Ministry of Labour and Employment, Government of India.

Table 4.5 Growth of Employment by Sectors in Private Establishments* in India

<i>Sectors</i>	<i>1993</i>	<i>1994</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>
Agriculture and Allied	9.16	8.83	8.94	9.2	9.12	9.04	8.71	9.04
Mining and Quarrying	0.96	1.01	1.03	1.07	0.92	0.91	0.87	0.81
Manufacturing	45.45	46.3	47.06	50.5	52.39	52.33	51.78	50.85
Electricity, Gas, and Water	0.38	0.4	0.4	0.4	0.41	0.42	0.41	0.41
Construction	0.73	0.51	0.53	0.5	0.54	0.74	0.71	0.57
Trade	3.01	3.02	3.08	3.2	3.17	3.21	3.23	3.3
Transport, Storage, and Communications	0.55	0.56	0.58	0.6	0.63	0.65	0.69	0.7
Financing, Insurance, Real Estate	2.77	2.82	2.93	3.1	3.22	3.41	3.58	3.58
Community, Social, and Personal Services	15.5	15.85	16.03	16.6	16.44	16.77	17	17.23
Total	78.51	79.3	80.58	85.1	86.86	87.48	86.98	86.46
<i>Addendum Table</i>								
<i>Sectors</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
Agriculture and Allied	9.31	8.55	8.95	9.17	9.83	10.28	9.5	9.92
Mining and Quarrying	0.79	0.68	0.66	0.65	0.79	0.95	1	1.11
Manufacturing	50.13	48.67	47.44	44.89	44.89	45.49	47.5	49.7
Electricity, Gas, and Water	0.52	0.42	0.5	0.47	0.49	0.4	0.5	0.51
Construction	0.57	0.56	0.44	0.45	0.49	0.55	0.7	0.69
Trade	3.39	3.35	3.6	3.51	3.75	3.87	4.1	2.72
Transport, Storage, and Communications	0.76	0.76	0.79	0.81	0.85	0.87	1	1.04
Financing, Insurance, Real Estate	3.7	3.91	4.26	4.58	5.23	6.52	8.8	10.36
Community, Social, and Personal Services	17.34	17.42	17.56	17.92	18.2	18.78	19.5	21.73
Total	86.52	84.32	84.21	82.46	84.52	87.71	92.4	98.38

Source: Centre for Industrial and Economic Research (2012).

* Private sector employs 10 or more persons.

The huge number of Indian youths are not only unemployed but also unemployable, whereas large number of white-collar jobs wait for suitable candidates. Going by the NSSO Report 2011–12, unemployment figures range from 11 million to 25 million and unemployment rate between 3 and 5 per cent. In 2009–10, nearly 75 million were invisibly under-unemployed—40 million wanted additional work and 35 million, alternative livelihoods. The World Bank's poverty head count ratio shows that in 2010, nearly 69 per cent earned less than US\$ 2 per day (PPP estimate). Clearly, being employed alone does not guarantee a quality life. The employment yet poor paradox can be understood by analysing employment categories. In 2011–12, 52 per cent were self-employed and 30 per cent were casual labourers. Schemes such as MGNREGA are a drop in the ocean—it provides work for an average 46

days only.

According to a report¹⁸ published by the industry association Associated Chambers of Commerce and Industry of India (ASSOCHAM) in 2010, though 90 per cent of jobs in sectors like information technology (IT) and IT-enabled services (ITES), biotechnology, and the services sector, were skill-based and required training, only 6 per cent of the total workforce received such training.

¹ For a detailed analysis on different types of inflation see, Deepak Mohanty (2010), Measures of Inflation in India—Issues and Perspectives. Available at: <http://www.bis.org/review/r100125f.pdf>

² Available at: <http://eaindustry.nic.in/>

³ Available at: <http://www.labourbureau.nic.in/schemes.html>

⁴ Kaushik Basu (2011), Understanding Inflation and Controlling It, *Economic and Political Weekly*, Vol. XLVI, No. 41, 08 October, pp. 50–64.

⁵ Ibid.

⁶ A supply chain is a system of organizations, people, technology, activities, information, and resources involved in moving a product or service from supplier to customer.

⁷ Mandis are markets in small towns and cities to which farmers from nearby villages bring their agricultural produce to sell. In India, mandis have traditionally fulfilled the requirement of aggregation of small quantities of production into larger lots which the wholesaler procures.

⁸ See, Sanjay Kaul (2012), *India Commodity Year Book 2012*, ed. Sanjay Kaul, New Delhi: Ane Books Private Limited.

⁹ *India: Priority for Agriculture and Rural Development*, World Bank Report (2013), Available at: <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/EXTSA>

¹⁰ World Bank (2012), Quarterly Food Price Report, November. Available at: <http://www.worldbank.org/en/news/press-release/2012/11/29/world-bank-warns-against-complacency-amid-high-food-prices-hunger>

¹¹ B. Carrasco and H. Mukhopadhyay (2012), Food Price Escalation in South Asia, *Economic and Political Weekly*, Vol. XLVII, No. 46, November, pp. 59–70.

¹² N. Banik and B. Biswas (2013), Food Price Inflation and the Weather God, *The Empirical Economics Letter*, Vol. 12, No. 2, February, pp. 191–201.

¹³ S. Fisher and F. Modigliani (1978), Towards an Understanding of the Real Effects and Costs of Inflation, *Weltwirtschaftliches Archive*, Vol. 114, No. 4, pp. 810–33.

¹⁴ S. Fischer (1993), The Role of Macroeconomics Factors in Growth, *Journal of Monetary Economics*, Vol. 32, No. 3, pp. 485–512.

¹⁵ We use the terms unemployment and employment interchangeably. For a given labour force, collecting data on unemployment will automatically reveal information about employment.

¹⁶ T.S. Papola (1992), 'The Question of Unemployment', in Bimal Jalan (ed.) *The Indian Economy: Problems and Prospects*, New Delhi: Viking, Penguin Books India Pvt. Ltd.

¹⁷ *Times of India* (2013), 'Jobless Growth during UPA-1 Admit Centre', *Times of India*, 22 April 2013.

¹⁸ Available at: <http://www.assochem.org/prels/shownews-archive.php?id=2693> (accessed on 2 February 2011).

CHAPTER 5

Reforms in India

EXPLAINING REFORMS

In the English dictionary, the word ‘reform’ means, ‘to improve by alteration, correction of error, or removal of defects; put into a better form or condition.’ From time to time, large-scale policy changes become necessary for the betterment of the society and economy. The last such initiative was undertaken in 1991; and of course before that, referring to changes in the existing economic system happened during the period immediately after independence.

THE PRE-1991 REFORM PHASE

What necessitated these changes at each juncture? In 1947, our society was predominantly rural and feudal, with a minuscule urban educated class. The industries were insignificant, barring jute, steel, and textiles. Income distribution was skewed. In an effort to equalize income distribution, the government dismantled the feudal system. It is to be noted that during the colonial rule, the economy was outward-looking (India's share in the world trade was around 7 per cent during the end of the 19th century), but deprivation, unequal income distribution, and lack of industrial self-sufficiency motivated post-independence policymakers to look for a change, which was to adopt an import substituting inward-looking socialist model of development.

High import tariffs were put in place (in line with infant industry argument), shielding domestic industry from global competition. Imports were divided into different categories, namely consumer goods, intermediate

goods, and capital goods. Each category was again subdivided into non-permissible (banned), limited permissible with mandatory certification about product quality and clearance from the Chief Controller of Imports and Exports (CCI&E), automatically permissible without mandatory certification but requiring clearance from CCI&E, and open general license (OGL) without mandatory certification and clearance. Foreign-owned companies came under the ambit of Foreign Exchange Regulations Act (FERA) 1973. Under FERA guidelines, Indian companies with more than 40 per cent of foreign holdings were required to obtain permission from the RBI for operating or opening up new offices in India.

To bring in inclusivity in the growth process, agriculture was given more priority as opposed to capital-intensive manufacturing and extractive sectors such as mining. To improve agricultural productivity, government doled out subsidies in the form of cheaper fertilizers, power, water for irrigation, bank credits, and at the same time not taxing agricultural income. However, to undertake nation-building activities, government needs money. It could have raised money through taxation or finance spending by creating money, that is, monetized its spending. Accordingly, taxation was used as an instrument for transferring resources to government to enable it to undertake nation-building activities. To reduce income inequality, a progressive tax system was put in place. The maximum marginal rate of income tax was kept as high as 97 per cent during the 1960s and 1970s. On the external front, high tariffs were put in place so that precious foreign exchange was not spent on foreign goods, to keep BOP under control, and more importantly, whatever money India earned through exports could be used for nation-building activities. Aiming at bringing a balanced regional growth, the government established the National Planning Commission in 1950 to oversee disbursement of funds from the centre to the states.

On the finance side, domestic banks were asked to keep a portion of their demand and time liabilities for priority sector lending (such as agriculture and small enterprises). On July 1969, 14 largest commercial banks were nationalized—the rationale being easier access to credit for important sectors. Around 58,000 new bank branches were opened between 1969 and 2005.

Government also resorted to deficit financing. It asked the RBI to lend money in exchange of government securities (Treasury Bills). Government was creating money because it was taking money from the RBI with no obligation of returning back the same. Such an act of deficit financing is

inflationary, rendering monetary policy quite ineffective to control inflation. To control inflation, the limited option was to administer a very high rate of interest. Not only high interest rates were administered but much of the banking and insurance sector was under government's control. The irony is that this high interest rate actually denied credit to millions of farmers, traders, and small businessmen, thus making financial inclusion far from reality.

The government enacted the Industries Development and Regulation Act (IDRA) in 1951 so that scarce economic resources could be used properly in the nation-building process. The IDRA laid down the rules for licensing. A license was required to establish a new firm, to manufacture a new product, for the expansion of existing capacity, and for changing the existing location. It is to be noted that the IDRA was applicable to large-scale manufacturing units employing 50 or more workers if using power, or 100 or more workers if not using power.

The initial sets of results through this socialist style of development were encouraging. There was an increase in the growth rate. In comparison to the pre-colonial period, the growth rate increased by three folds during the period following independence. In the period between 1950 and 1980 popularly known as the 'Hindu Rate of Growth',¹ the Indian economy registered an average growth rate of 3.56 per cent, which was three times the 'Colonial' rate of growth during the previous 30 years. However, this improvement in growth rate did not translate much into growth of per-capita income, growing between 1 and 1.5 per cent. This was primarily because of increasing population growth and a decline in mortality. Also, the economy grew at a slower pace of around 3.5 per cent in comparison to the planned targeted growth rate of 5 per cent.

Bugs in the Pre-1991 Reform Phase

The socialist model of development, perhaps appropriate to the specific context of post-independent India, turned into an obstacle to growth and development in the later years. Too much government control and discretionary power of the bureaucracy led to corruption. The power of the bureaucracy emerged from the ability to grant licenses, many of which were done on a case by case basis. The discretionary nature of the job in terms of granting licenses led to rent-seeking activities among the bureaucrats. Bribes

were demanded for granting licenses relating to domestic investments and imports.

Large industrialists making super-normal profits in a protected market, lined the pockets of corrupt bureaucrats and pampered them. The industrialists gained from the protected market with high tariffs put in place to restrict foreign competition (in line with infant industry argument). There were wide varieties of promotional measures, such as provision of infrastructure like industrial estates, consultancy and training services, and easier access to credit and raw materials for the domestic entrepreneurs. While legitimate, the discretionary characteristics of many of these promotional measures opened up opportunities for rent-seeking activities by the bureaucrats. A virtually closed economy with policy-induced entry barriers in the domestic market offered opportunities for super normal profits to the industrialists.

Next in the line are the trade union leaders and the government employees. The trade union leaders made sure that government employment came with generous social security packages and time-bound promotions with little or no emphasis on productivity. Their bargaining power was further bolstered by the strategic and sectoral location in public sector where a strike could disrupt the economy badly. The share of the public sector in total organized employment rose from 58 per cent in 1961 to 71 per cent in 1991.² In comparison, employment in the more productive private sector increased marginally. We discussed earlier in our section on unemployment that workers in the organized sector account only for a single-digit share of the total workforce in India.

Banks which were nationalized with the intention of making credit easily available on priority basis also did not meet the desired objectives of financial inclusion. Most of these nationalized banks were asked to lend money to the favoured interest groups and this directly contributed to piling up of bad loans. When the favoured lenders were not able to pay back the loans, the banks were asked to waive them off. Most of the agricultural loans given to big farmers with political clout during the 1980s translated into bad loans.

Farmers not only demanded continuation of subsidized farm inputs but also started bargaining for higher MSP and a rise in input subsidies during the 1980s. Gulati and Narayanan find that the input subsidies on power, fertilizer, and irrigation as per cent of agricultural GDP rose steeply from 1.8 per cent during 1980–81 to 8.6 per cent in 1990–91.³

Stated briefly, inability of the government to control these interest groups—big farmers, industrialist, and trade union leaders—transformed India into a high-cost economy. Industrialists forgot about performance. Trade union leaders and government employees also neglected their performance. Large farmers cared little about increasing agricultural productivity. They were happy about getting free power, highly subsidized fertilizers, a higher MSP, and paying no tax. The result of this government largesse did not help to enhance productivity but resulted in a high fiscal deficit during the late 1980s. After averaging less than 4 per cent of GDP till the 1970s, the gross fiscal deficits of central government started to widen up from 5.77 per cent in 1980–81 to reach a peak of 8.47 per cent in 1986–87, and ending up at 7.85 per cent during 1990–91. The growth rate decreased from 3.91 per cent in the 1950s to 3.70 per cent during the 1960s, and further down to 3.08 per cent during the 1970s.

On the external front, as a result of the breakdown of rupee trade agreement with the Union of Soviet Socialist Republic (USSR) and slowdown of the OECD economies during the late 1980s, India's export growth slowed down to 9.2 per cent of the GDP in 1990–91 from 18 per cent in 1989–90. Import bill also increased because of an increase in the international price of petroleum products resulting from war in the Middle East, with Iraq invading Kuwait during August 1990. India's oil import bill increased from US\$ 3 billion in 1988–89 to US\$ 6 billion in 1990–91. The outflow of Gulf migrants because of war also led to reduction in remittances of foreign exchange reserves. As if this was not enough, two elected governments fell in quick succession between 1989 and 1991, leading to increase in political uncertainty. These events fuelled expectations about imminent devaluation, resulting in heavy pre-redemption withdrawals of non-resident Indian (NRI) deposits and drying up of commercial borrowings. In the event of increase in capital outflow, the government increasingly resorted to short-term borrowing, which shot up from 5.3 per cent of foreign exchange reserves at the end of 1988–89 to 23.1 per cent at the end of 1989–90 and further to 146.5 per cent at the end of 1990–91. The foreign exchange reserves could barely cover 2.5 months of imports.

To save the economy from defaulting on external debt, the Indian government with Chandra Sekhar Singh as Prime Minister borrowed US\$ 1.8 billion from IMF under the Contingent Compensatory Finance Facility (CCFF) on 23 January 1991, and US\$ 400 million from the Bank of England

by shipping India's gold stocks in the spring of 1991, and sales of US\$ 200 million of gold at the same time. Between 1980 and late 1989, India's foreign debt quadrupled from US\$ 21 billion to US\$ 84 billion. India had to pledge its gold reserves to discharge foreign obligations. IMF agreed to give this loan under two tranches with conditionality that the Indian government had to undertake corrective measures.⁴

These measures included steps for reducing fiscal deficits and undertaking structural reforms such as increase in the domestic price of petroleum products (which was earlier heavily subsidized with state-run oil companies bearing the debt burden), a rise in the tax–GDP ratio by 0.5 per cent, disinvestments up to 20 per cent equity in some public sector enterprises to yield 0.4 per cent of GDP, a cut in the central subsidy bill such as fertilizer subsidies and export subsidies, a reduction in defence expenditure by 0.5 per cent of GDP, and a cut of 0.3 per cent in budgetary support to PSUs.⁵ This called for another set of changes that the Indian economy was to experience—the much touted economic reforms of the 1990s. But before the Chandra Sekhar Singh-led government could resort to undertake these reform measures, the government fell, paving way for the P.V. Narasimha Rao-led Congress government, with Dr Manmohan Singh as its finance minister. The onus of undertaking these reform measures fell on this government which resumed power in June 1991.

THE 1991 REFORM ERA

The much-discussed economic reforms started from 1991. Tendulkar and Bhavani⁶ nicely summarize the reform measures that were undertaken.

The wide-ranging and systemic nature of the 1991 reforms can be seen in their extensive coverage and directional persistence for more than a decade and half—external sector (trade flows, exchange rate, capital inflows including private direct investment), fiscal consolidation with reform on the revenue and expenditure side, monetary and financial sector (freeing of interest rates, reduction in statutory liquidity and cash reserve ratios, introduction of capital adequacy norms, reduction in direct lending, limited privatization, significant expansion in the variety of financial instruments of intermediation), industrial sector (virtual abolition of comprehensive investment licensing, abolition of restrictions on monopoly houses, significant opening up of activities previously reserved for public sector), infrastructure (expansion of investment in roads, limited privatization of ports, privatization and

introduction of competition in telecommunication), partial/full privatization of public-sector commercial enterprises, and so on. (pp. 1–2)

Examining these reform measures in greater detail tells us that most of these were undertaken primarily aiming at controlling fiscal deficit and making the Indian economy more competitive. Towards the end, government initiated steps towards curtailing the profit of the interest groups and bringing in competition through liberalization and globalization. Liberalization means the removal of government control and allowing markets to determine the price. Globalization means removing tariff and non-tariff barriers and thereby exposing domestic players to foreign competition. The change or reforms that were undertaken this time can be summarized under three major sub-headings, namely the stabilization of fiscal deficit, globalization through trade liberalization, and financial sector liberalization.

Stabilization of Fiscal Deficit⁷

In terms of priority, controlling fiscal deficit was given the utmost importance. Much of the reason requiring the change through reforms during 1991 had to do with controlling high fiscal deficit, which was 8.3 per cent of GDP during 1990–91. Towards this end, efforts were undertaken to reduce monetized deficit, curtail subsidies, disinvestments in public sector undertakings, and reduction in capital expenditure.

As mentioned earlier, during the pre-1991 reforms period, government at its will used to finance its deficit using ad hoc Treasury Bill. Central bank had little autonomy but to finance government expenditure in return of these Treasury Bills. Most of the money created in this fashion was not used productively and resulted in transforming India into a high-cost economy. Following reforms, the practice of issuing ad hoc Treasury Bill was abolished and replaced with WMA from the central bank. That is, the governments—both at the Centre and at the states—had to borrow money from the RBI, as opposed to directing the RBI to create money for their budgetary allocation. In addition, FRBM Act was passed by the Centre in 2003 with similar legislation subsequently passed by the states. This originally required a fiscal deficit to the GDP ratio of 3.0 per cent and bringing down revenue deficit to 0 per cent by 2008–09. However, this did not happen.

Government also took initiatives for disinvestment in PSUs. A part of this

decision was to improve productivity, and the rest to use the proceeds towards controlling fiscal deficit. As pointed out earlier, many PSUs were characterized by low productivity, unsatisfactory quality of goods, excessive manpower utilization, inadequate human resource development, and low rate of return on capital. For instance, between 1980 and 2002, the average rate of return on capital employed by PSUs was about 3.4 per cent as against the average cost of borrowing which was 8.66 per cent. Disinvestment of the PSUs was seen as a solution for controlling government deficit. However, the actual receipts through disinvestment have often fallen far short of their target. During the period 1991–92 to 2002–03, the government targeted the mobilization of about ₹78,300 crores through disinvestment but it could actually mobilize only ₹30,917 crores. In [Chapter 3](#), we saw how the government often fell short of target during post-2003.

To make industry more competitive, licensing requirement was abolished. As a result of de-reservation, sectors that were earlier reserved for public sector were opened up for the private sector. To facilitate the expansion and diversification of large firms, the Monopolies and Restrictive Trade Practices (MRTP) Act was amended. Prior to 1991, under the MRTP Act, all firms with assets above ₹100 crore (in 1985 prices) were required to take permission from the government to operate and to undertake new investments.

So that domestic industry has access to better foreign technology, FDI norms to invest in Indian firms were relaxed. Grant of automatic approval for equity investment up to 51 per cent was allowed. Foreign investors were allowed to invest in industries such as power and fuel, electrical equipment, transport, chemicals, food processing, metallurgical, drugs and pharmaceuticals, textiles and industrial machinery, as well as in a range of commercial service activities such as telecommunication, banks, etc. In October 2012, the government undertook further reforms in the insurance and pension sectors. The government increased the FDI cap meant for insurance and pension sectors from 26 per cent to 49 per cent.

In addition to liberalizing inward FDI inflows, India also liberalized its procedure for outward FDI.⁸ Indian residents are permitted to make investment in overseas joint ventures (JVs) and wholly owned subsidiaries (WOSs) under automatic route and approval route. Under the automatic route, an Indian party does not require any prior approval from the RBI for setting up a JV and WOSs abroad. India's overseas investment which initially

began with the acquisition of foreign companies in the information technology and related services sector later spread to include manufacturing, financial, and non-financial services.

There were protests from the Left and Trinamool Congress (regional political parties in India) arguing that allowing more FDI in the pension and insurance sectors would lower the income of the common people. A higher proportion of FDI into the pension sector would mean a more volatile income or even lower return from the pension fund. The foreign fund managers are likely to use pension funds in stock market, which is more volatile in comparison to any government debt fund. How true is this argument? Let us examine. In India, less than 1 per cent of the population enjoys the benefits of pension. To argue that allowing additional foreign investment from the existing 26 per cent to 49 per cent in the pension and insurance sector is going to hurt the interest of the common man is not correct. People who are dependent on the agricultural sector and private sector do not get pension. In fact, those who joined government jobs post 2004 would not get pension either. Even for the sake of argument if we agree that the money kept in pension would lose value because it would be linked with equities, requires further discussion. Under the existing rule, not more than 15 per cent of the total pension amount can be kept under equity. The rest 85 per cent has to be allocated under the government and corporate bonds. Even with this kind of division, there are talks that the bare minimum amount of returns from the pension fund will be kept in the neighbourhood of 8.5 per cent (that existed before the pension reform). Hence, scientifically there is no reason to believe that allowing additional foreign investments in the pension sector are going to hurt the common man.

In fact, if foreign capital comes in the pension and insurance sectors, the government can actually use part of the money for investment in long-term projects such as infrastructure. The common man gains not only from better infrastructure but also by getting work opportunities in building infrastructure. Likewise, more competition because of foreign participation in the insurance sector is likely to bring down insurance premium and make insurance products covering health, automotive, fire, etc., more affordable.

Globalization through Trade Liberalization

During the pre-1991 reforms period, the economy was closed.⁹ The idea was

to protect domestic industry from foreign competition and to give them sufficient time to stand on their own—something in line with the infant industry argument. The post-1991 reforms period saw a marked policy change with dilution of import control. Tariff barriers were reduced from the high of 300 per cent during 1991 (peak tariff stood at 355 per cent, mean of all tariff rates at 79.8 per cent, and the import-weighted mean tariff rate at 56.1 per cent) to around 12 per cent in 2011 (mean of all tariff rates at 16 per cent and the import weighted-mean tariff rate at 18 per cent).¹⁰ More items were brought under OGL, meaning that these items could be imported without any license. It is to be noted that during pre-1991, imports required obtaining licenses (permission) from the government and only the designated firms or persons with license could import. By 1 April 2003, around 9,120 items were brought under OGL. During 1993, this number was 1,339. Starting 2004, quantitative restrictions, especially on imports of textile items and trading rights were also discontinued. Except a handful of goods disallowed on environmental, health, and safety grounds, and a few others that were canalized (i.e., imported through specific government agencies) such as fertilizers, cereals, edible oils, and petroleum products, all other goods were allowed to be imported without any licences or any restriction.¹¹

In line with external sector liberalization, government also made exchange rate market determined. During the pre-1991 phase, the economy was inward looking and the exchange rate was overvalued mainly to discourage exports. In 1991, the government devalued Indian rupee by 22 per cent against dollar. In February 1992, a dual exchange rate system was introduced which allowed exporters to sell 60 per cent of their foreign exchange in the free market and 40 per cent to the government at a lower official price. Starting 1994, rupee was made fully convertible for current account transactions. However, there are some restrictions in the capital account. For instance, any individual cannot walk up to any bank's branch and buy and sell foreign currencies. The foreign investors are also not allowed to invest in the government bond market and there are restrictions on how much any individual firm can invest abroad. With full capital account convertibility, all these restrictions will be gone.

Financial Sector Liberalization

Financial sector reforms were implemented in a phased manner starting

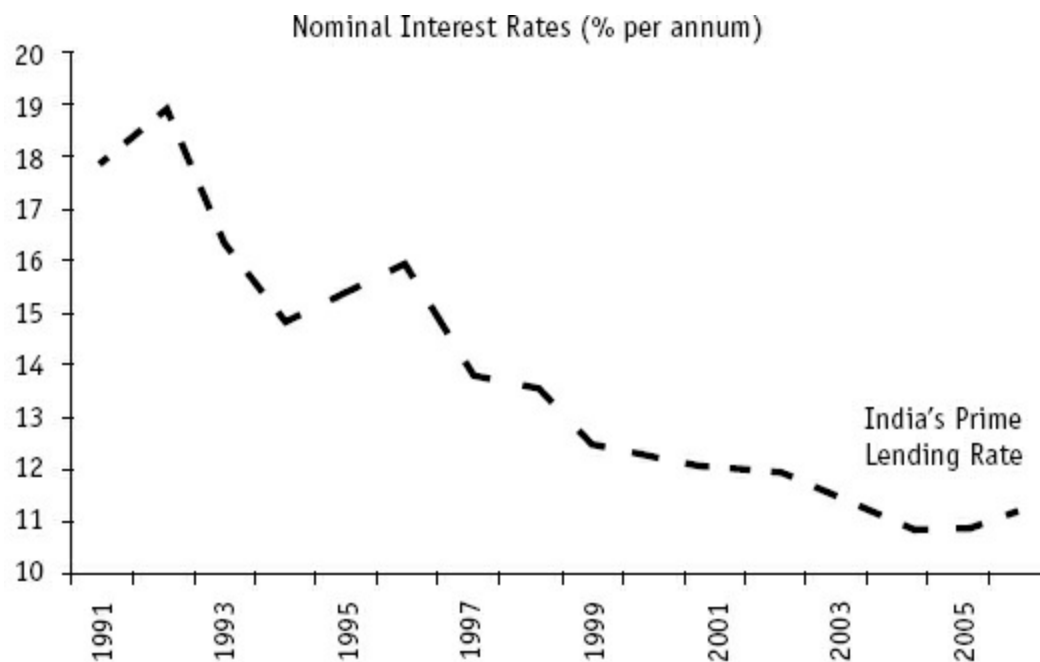
1996–97 following the recommendations of Mr M. Narasimham, Chairman of the Committee of the Financial System, which was set up in 1991. The outcome of the reforms process in financial sector came in the form of dismantling of the administered interest rate. Because of the deregulation of interest rate, there was a sharp reduction in CRR and SLR. Price of government securities became market determined and government could no longer borrow from the market without any limit. To ensure recovery of bad loans, the Securitization and Reconstruction of Financial Assets and Enforcement of Securities Interest (SARFAESI) Act was passed and saw setting up of *Lok Adalats* (people's courts), debt-recovery tribunals, asset reconstruction companies, and corporate debt restructuring mechanisms. A range of non-bank financial companies including private mutual funds were allowed to operate. Firms could freely seek finance through capital market subject to regulations of the Security and Exchange Board of India (SEBI). Indian companies were allowed to access international markets through dollar and euro equity shares. Investment norms for NRIs were liberalized and FIIs were allowed to register and invest in Indian stock markets. Government also did away with higher rate of capital gain taxation which applied to foreign and NRI investments.

There are few important takeaways from the above discussion. Because of liberalization, the government welcomed more private participation. Globalization, by opening up the economy, also made sure that the domestic firms faced foreign competition. So that the domestic firms get a level playing field, interest rates were cut and domestic firms were allowed to borrow from the foreign capital market. Slashing down interest rates was part of financial sector liberalization. Globalization also meant lower tariffs on imported inputs. It also meant that foreign manufacturing technology could be imported in a labour-abundant economy. This gave incentives to foreign manufacturing companies such as Ford, Nokia, Hyundai, Lotte, etc., to establish their manufacturing operation in India. Improved foreign technology improved domestic labour productivity. On the domestic front, the introduction of modified VAT reduced tax liability, and the abolition of octroi speeded up the movement of goods across states in India. All these certainly gave boost to the domestic corporate performance. The following few figures (see Figures [5.1–5.5](#)) narrate how performance of the manufacturing sectors improved because of globalization.

The sudden growth in domestic entrepreneurship is well-illustrated by Mr

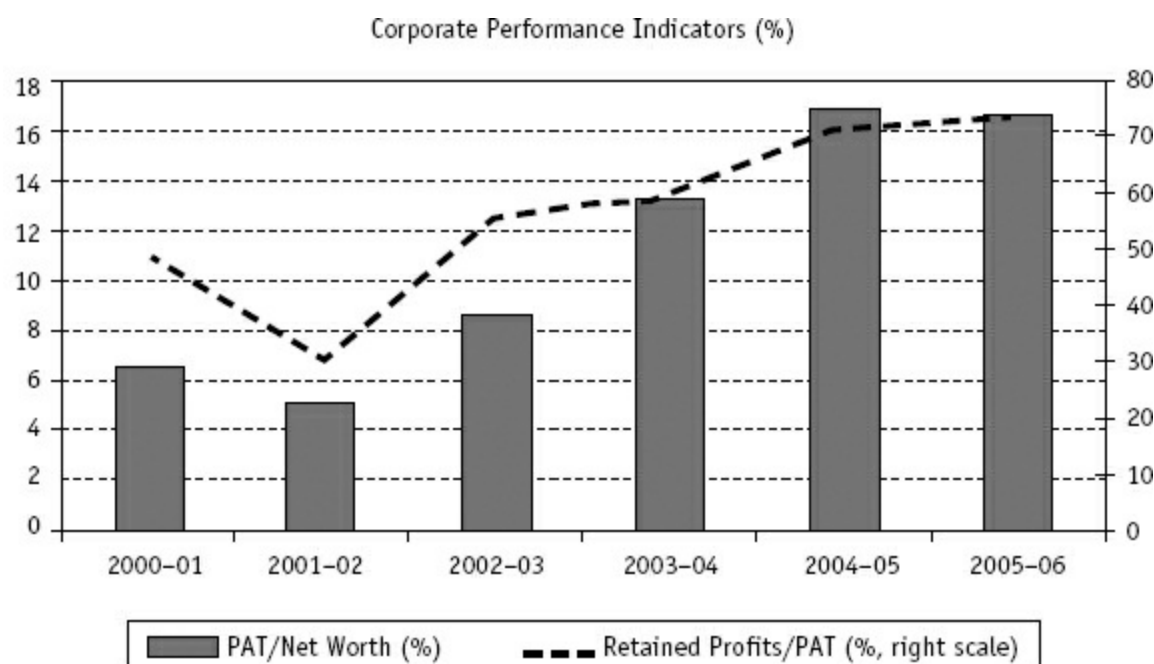
Gurucharan Das in his book.¹² He cites the example of a company, NICCO, in Kolkata. Mr Abhijit Sen of NICCO gave 11 reasons for his company's growth after deregulation. When the licensing restrictions were removed in 1991, the company raised its capacity five times by merging his units (since the Monopolies and Restrictive Trade Practices [MRTP] Act) was abolished. He now had one part-time employee for liaison work in Delhi while earlier he required four to liaise with the steel controller, the aluminium controller, the copper canalizing agency, and State Trading Corporation (STC). He did not have to approach the controller of capital issues for capital expansion, being done by his merchant banker in half the time through SEBI. He neither needed approvals for imports nor approval from directors for loans above ₹5 crore. He could travel abroad without an RBI permit, which earlier used to take a month. Travel decisions can be made at the last minute as there are more airlines in India now. With so fewer hurdles in the way, businessmen are encouraged to invest, employ, and produce more.

Figure 5.1 Financial Sector Liberalization and Interest Rate



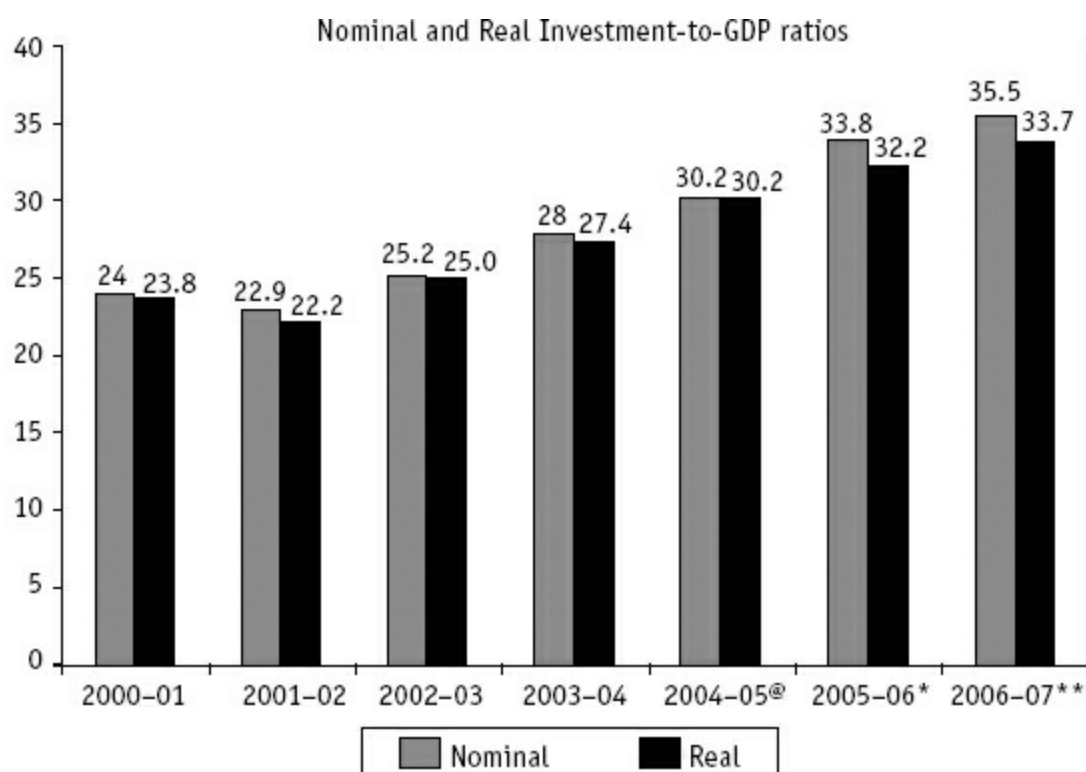
Source: Author's calculation.

Figure 5.2 Lower Interest Rate and Corporate Performance



Source: Handbook of Statistics on the Indian Economy 2008-09, Reserve Bank of India.

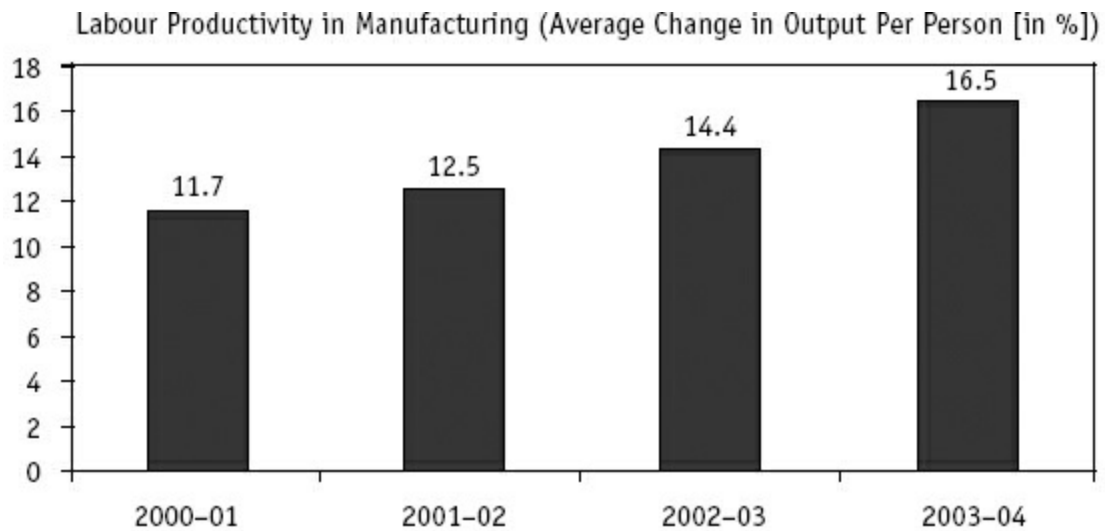
Figure 5.3 Increase in Investment



Source: Handbook of Statistics on the Indian Economy 2008-09, Reserve Bank of India.

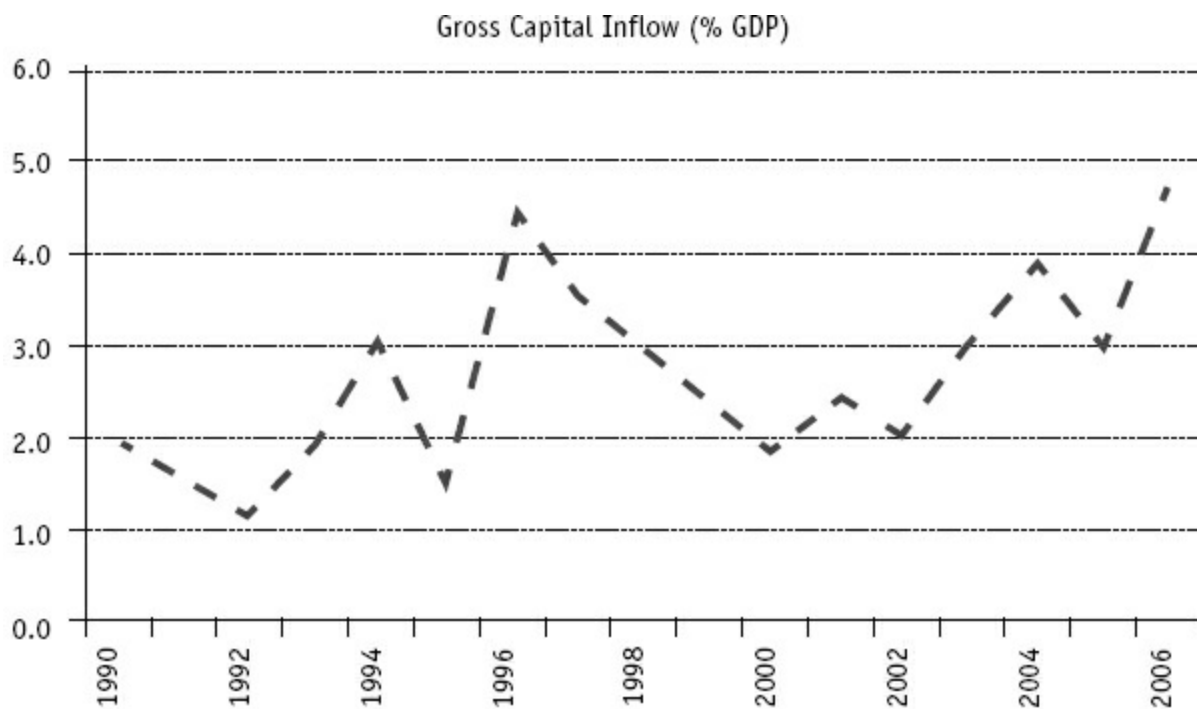
Notes: [@] Provisional, ^{*}Quick, ^{**} Revised Estimates.

Figure 5.4 Labour Productivity



Source: Annual Survey of Industries, Ministry of Statistics and Programme Implementation, Government of India.

Figure 5.5 More FDI Inflow



Source: Handbook of Statistics on the Indian Economy 2008-09, Reserve Bank of India.

Many Indian firms became global leaders. This becomes evident looking at outward FDI—something unheard of during the pre-1991 phase (see [Table 5.1](#)). Over the years, the number of proposals approved for outward FDI from

India in JVs and WOSs increased from 1,214 in 2003–04 to 1,817 in 2006–07. The amount of approved proposals increased from US\$ 1,466 in 2003–04 to US\$ 15,060 million in 2006–07. The rise in both the number and the amount of approved proposals is reflective of large overseas acquisition deals by Indian corporates facilitated by progressive liberalization of external sector policies. In the total outward FDI proposals approved during 2007, about 96 per cent were of large investments (US\$ 5 million and above). Sector-wise, 43 per cent were in manufacturing followed by non-financial services (10 per cent) and trading (4 per cent).¹³

Table 5.1 India's Outward Investment

<i>Acquirer</i>	<i>Foreign Target</i>	<i>Target Industry</i>	<i>Target Country</i>	<i>Approximate Deal Value (US\$)</i>
Tata Steel Ltd.	Corus Group PLC	Steel	UK	14.85 billion
Hindalco Industries Ltd.	Novelis Inc.	Aluminum	Canada	6 billion
Sterlite Industries India Ltd.	Aserco Inc.	Mining	USA	2.6 billion
Tata Motors Ltd.	Ford Motors Co.'s Jaguar Limited and Land Rover Holdings	Automotive	UK	2.3 billion
Essar Steel Ltd.	Algoma Steel Inc.	Steel	Canada	1.57 billion
United Spirits Ltd.	Whiyte and Mackay Ltd.	Food and Beverages	UK	1.18 billion
Tata Power Company Ltd.	30% stake each in PT Kaltim Prima Coal and PT Artumin Indonesia	Energy	Indonesia	1.1 billion
Tata Chemicals	General Chemical Industrial Products Inc.	Chemicals	USA	1.0 billion
Tata Sons Ltd. Tata Tea Ltd.	30% stake in Energy Brands Inc.	Food and Beverages	USA	677 million
Dr. Reddy's Laboratories Ltd.	Betapharm Arzneimittel GmbH	Pharmaceuticals	Germany	571 million
Wipro Technologies Ltd.	Infocrossing Inc.	Technology	USA	568 million
Suzlon Energy Ltd. through its subsidiary AE-Rotor Holding BV	Hansen Transmissions International NV	Industrial Machinery	Belgium	521 million
Ranbaxy Laboratories Ltd.	Terapia S.A.	Pharmaceuticals	Romania	324 million
Videocon Appliances Ltd.	Thomson Multimedia cathode ray tube business	Technology	France	292 million
Jubilant Organosys Ltd.	Draxis Health Inc.	Pharmaceuticals	Canada	258 million
Tata Coffee Ltd.	The Eight O'clock Coffee Co.	Food and Beverages	USA	220 million
Aditya Birla Nuvo Ltd.	Minacs Worldwide Inc.	Technology	Canada	172 million
United Phosphorous Ltd.	Cerexagri S.A.	Chemicals	France	142 million
Subex Systems Ltd.	Azure Solutions Ltd.	Technology	UK	140 million
United Phosphorous Ltd.	Advanta Netherlands Holdings BV	Food and Beverages	The Netherlands	119 million

Source: D. Rajpal and S. Parekh (2008), India Looks Outward: Cross-Border M&A by Indian Corporations—Canadian Considerations, Stikeman, October. Data from Capital IQ.

Therefore, the initial effects of reforms, with government acting more as a facilitator and allowing active private participation in the economy through liberalization and globalization, were beneficial. At a macro level, broader economic indicators showed marked improvement. Immediately following these reform measures, the ratio of short-term debt to foreign exchange reserves fell from the high of 146.5 per cent during 1990–91 to 18.6 per cent in 1993–94. The import coverage of foreign exchange reserves improved to a healthy 8.6 months from 2.5 months. Since 1991, real GDP growth picked up to an average of around 6 per cent. But what is more interesting is a further pick-up in growth from 2003, attributed largely to a decline in interest rates.

Average growth was 8.8 per cent from 2003–04 to 2007–08, translating into per capita income growth of 7.3 per cent. More specifically, growth was 8.5 per cent in 2003–04, 7.5 per cent in 2004–05, 9.5 per cent in 2005–06, 9.7 per cent in 2006–07, and 9.0 per cent in 2007–08. This increase in the per capita income growth rate is quite remarkable especially when compared with the per capita growth rate of around 1 and 1.5 per cent during 1950 and 1980 to 3.5 per cent during the 1980s.

Gross domestic saving steadily increased from 21.6 per cent of GDP in 1991–92 to 37.7 per cent in 2007–08. Gross capital formation also steadily increased to 39.1 per cent of GDP in 2007–08 from around 22 per cent in 1991–92. Nonperforming loans (NPLs) as a ratio of total advances and assets declined substantially. The ratio of net NPLs to net advances stood at 1 per cent in 2009–10 which is comparable to developed countries with an advanced financial system. The ratio of total exports of goods and services to GDP doubled from 7.3 per cent in 1990 to 14 per cent in 2000. The rise was less pronounced for imports because increased external commercial borrowing was still financing a large proportion of imports in 1990, which was not true in 2000. Consumers benefitted most from the competition. Today, a consumer has far greater choices regarding all consumer durable goods—cars, audio systems, refrigerators, washing machines, television sets, and air-conditioners—in comparison to those in the pre-reform period.

In 2003, Indian economy became the second fastest growing economy in the world. As the economy had already opened up and the market was growing, more foreign companies became interested to invest in India. This prompted more foreign investment and inflow of FDI. Inward net FDI inflow increased from 0.1 per cent of GDP in 1992–93 to 3 per cent of GDP in 2008–09. Net capital inflow continued their upward trend reaching a record high in excess of 9 per cent of GDP (US\$ 107 billion) in 2007–08.¹⁴

Buoyed by an increase in economic activities, the total tax collection also increased during 2004–05. This is interesting. As part of reforms, because of lower tariffs, the ratio of central tax to GDP fell. Direct tax was also reduced as a way to give incentive to people to save and invest more. However, total tax collection increased because of expansion in economic activities during post-1991 reforms. Talking about development indicators, in comparison to the 1980s, there had been a marked improvement. Per capita income in constant 1999–2000 prices increased from ₹8,594 during 1981 to ₹25,954 in 2009. The head count ratio fell from 43 per cent during 1981 to 28 per cent in

2005. Life expectancy improved from 50 years in 1981 to 64 years in 2007.¹⁵ Continuing forward, between 2005 and 2012, there was a decline in the number of percentage of population below poverty lines. Between 1993 and 2004, poverty declined at 0.8 percentage points per year, whereas between 2004 and 2011, it declined at 2 percentage points per year. Real wages after 2007 went up four times faster. Standard of living has gone up, and this becomes evident from the increase in consumption of superior items such as fruits, milk, fish, mutton, daal, etc. During the 12th Five Year Plan, public investment in agriculture such as electricity in rural area, rural road, irrigation etc., has increased in comparison to that in the 11th Five Year Plan. There is an effort on part of the government to sustain the growth process.

BUGS IN THE PRESENT 1991 REFORM ERA

However, there is a bug in the post-1991 reform and this came in the form of rise in income inequality. As mentioned in [Chapter 2](#), although regional income inequality fell, but within any given region or district, the gap between rich and poor increased. Have reforms benefitted everyone? The answer is ‘No’, if we are to measure effect of reforms benefitting everyone to the extent it should have. The growth process has not reached every section of the population.

Did the government put in place policies to reach out to those who are left behind because of market playing a dominant role in determining return to factor inputs? The answer is ‘Yes’. Understanding market would reward people with more skills or those who are employed in the export-oriented sector. The UPA government started intervening in the market through various social welfare programmes. SSA was launched to impart necessary skills and to spread education among the masses. Labour market intervention came in the form of Integrated Rural Development Programme (IRDP), Swarnajayanti Gram Swarozgar Yojana (SGSY), and MGNREGA. For example, in MGNREGA, a member from a poor household is guaranteed a minimum of 100 days of employment. Health intervention came up in the form of NRHM. Microfinance also came up in a big way.

The problem is that most of these policies which were launched with good intention had questions raised about their effectiveness as some of them were not well-implemented. Consider the case of health and education—two important pillars of development. Few interesting things have emerged. There

has been an increase in the numbers of outcome variables. For instance, more number of schools and hospitals are built, more participation in terms of students going to school, proportion of tribal women delivering in government hospitals has increased, etc. Looking at this, intervention has yielded results. However, when we talk about quality of services provided, the general perception is that there has been no improvement.

First, let us talk about education. SSA has been successful in terms of raising the literacy and gross enrolment ratios (at the primary level). Public Report on Basic Education in India (PROBE) suggests that social disparities in school enrolment have considerably been narrowed. For instance, the gap between boys and girls has virtually disappeared at the primary level. Enrolment rates among Scheduled Castes (SCs) and Muslim children are very close to the sample average. Nearly three-fourths of all primary schools now have drinking water facilities. Toilets have been constructed in over 60 per cent of all schools.

But these achievements do not tell us whether the quality of education has improved or not. In 2012, India first participated in worldwide tests of reading and arithmetical ability of school children. India competed desperately with Kyrgyzstan for the last two places.¹⁶ These tests confirmed the results obtained earlier by another organization: In school learning outcomes in 2003, India was among the five worst countries in the world. In eight years between these tests, we had only deteriorated. In fact, the Annual Status of Education Report (ASER) 2013 tells us that the proportion of class V students who could not solve basic division problems of Class II, increased from 58.6 per cent to an alarming 77.4 per cent. There is still a large number of vacant positions for school teachers. Interestingly, if all these vacant positions for school teachers are to be filled, then some state governments may go bankrupt.

The picture that emerges from the health sector is even more interesting. The NSSO and Ministry of Health and Family Welfare conducted surveys about health sector. According to NSSO Report,¹⁷ on average, 70 per cent of the people prefer to visit private hospitals. The perception is they can get better medical facilities in private hospitals/polyclinics. One can argue that the increase in income may be the factor responsible for people inclining towards private hospitals. However, this is not the case. What is interesting to note is that two-thirds of the poor do not feel confident about government's health-care facilities.

The figure is worst for Bihar with 93.3 per cent of the people not visiting government hospitals and health-care units. However, there are few exceptions. For instance, the government health-care system seems to function well for Sikkim, Mizoram, Himachal Pradesh, Arunachal Pradesh, Orissa, and Tripura, with 91.8 per cent, 90.6 per cent, 82.7 per cent, 82.5 per cent, 76 per cent, and 80 per cent of the people respectively, visiting government hospitals.

As to why this apparent apathy for visiting government hospitals, there are three primary reasons. First is the perception that the government's health-care system does not function. On average, 57.7 per cent of the people feel this way. Ideally, one would have expected a positive correlation between higher income state providing better health-care facilities. However, data suggest that 41.4 per cent of the people do not visit government hospitals in West Bengal (middle-income state), whereas the number is 42.6 per cent for Gujarat (high-income state).

Second, the waiting time before getting attended to is another deciding factor. On average, 24.8 per cent of the people consider waiting time as a factor for not visiting government hospitals. For the state of Delhi, Kerala, Gujarat, Tamil Nadu, and West Bengal, these numbers are 57.4 per cent, 34.2 per cent, 31.6 per cent, 32.3 per cent, and 35.2 per cent, respectively. In this respect, the availability of doctors per thousand population plays an important role. Smaller number and less efficient doctors are likely to increase the waiting time for the patients.

Third, on an average, only 10 per cent of the population attributes the availability of paramedics as a factor for not visiting government hospitals. This number is even less for West Bengal (4.3 per cent), Delhi (2.3 per cent), Tamil Nadu (3 per cent), Sikkim (4.7 per cent), Goa (4.4 per cent), and Maharashtra (5.3 per cent). An important implication for this is that people care less about the availability of paramedics. What matters more than the number is the quality of service that these paramedics provide. A sample respondent felt that paramedics are more responsible in private-run hospitals (as they are better monitored) than in government-run hospitals.

The last NSSO report was published in 2006. It would be interesting to note whether this perception changes when NSSO conducts its next round of survey (National Family Health Survey) in 2014–15 (a large-scale, multi-round survey conducted in representative sample of households throughout India). A change in perceptions will say whether government health-care

interventions in the form of schemes such as NRHM and Janani Suraksha Yojana have been effective.

Hence the bottom line is, what matters most in education and health is the quality of services and not merely building more schools and hospitals. Healthy children are less likely to miss schooldays and thus have better learning and cognitive abilities, eventually translating to better educational outcomes such as higher school completion rates, higher average years of schooling, etc. More educated cohorts are likely to recognize the importance of good health. For instance, 32 per cent of the world's children's population who do not get regular vaccination live in India.

Government's outlay in areas of health and education without improving services and productivity will lead to inflation. On the contrary, a more effective healthcare and educational system will enable the citizens of any economy to assimilate knowledge more efficiently, thereby translating into higher productivity and growth.

Besides effectiveness, there also seemed to be lack of awareness and many of the intended beneficiaries were not aware about these programmes. For instance, the UPA flagship MGNREGA scheme witnessed a sharp slide in job creation. Between 2009–10 and 2011–12, the total work generated by this flagship scheme declined from 284 crore person-day to 211 crore person-day. One person-day is one person working for a day. This fall was about 25 per cent at pan-India level. Some states that showed major decline in jobs over this period were Karnataka (65 per cent), Rajasthan (58 per cent), Assam (52 per cent), Gujarat (47 per cent), Bihar (45 per cent), and MP (40 per cent).¹⁸ Only a handful of states such as Maharashtra, Tamil Nadu, Kerala, Haryana, Chhattisgarh, and Jammu and Kashmir showed an increase in jobs created under this scheme. This decline took place partly because of the lack of awareness that MGNREGA work is a 'right' rather than something that the 'system will provide'. In addition, the effectiveness of such programmes is always questioned because of corruption, deficit financing as source of funds, poor quality of infrastructure built under this programme, and governance.

According to the United Nations (UN) working group report,¹⁹ India during the period of high economic growth between 2007 and 2011 averaged a growth rate of 8.2 per cent. However, although the poverty rate declined, the absolute number of people living BPL increased. India also houses the largest population of internally displaced persons, either due to armed conflicts (5.06 lakh), or as a result of development projects since

independence—60 to 65 million of the population comprising of 80 per cent *dalits* and tribals. This amounts to around 1 million people being displaced every year. Around 23.1 crore of our population goes hungry every day at a time when 67,000 tonnes of food grains rot in the government godowns. The PDS excludes many genuinely poor households. 51 per cent of the population defecate in the open and have a dismal record of access to clean drinking water and sanitation. Around 34 per cent of the Indian population does not have access to proper sewage facility. Sewage mixing with drinking water is not uncommon in India.

A *Times of India* article blames lack of sanitation facilities as the main culprit behind atrocities against women.²⁰ In 2012, at least 400 rapes in rural Bihar could have been avoided had the state government provided toilets to households under Total Sanitation Scheme (TSC) or Nirmal Bharat Abhiyan (NBA). Police records showed that there were 980-odd rape cases every year in Bihar between 2006 and 2011, out of which around 40–45 per cent of the rape happened when the women went out of their homes to answer nature's call.

In addition to inequality and governance bugs, there are certain other factors such as corruption, rising fiscal deficit, and red tape in the infrastructure sector that are slowing down the Indian economy. It is to be noted that the growth rate of the Indian economy slowed down from 9.3 per cent in 2010–11 to around 6.2 per cent in 2011–12, and further to around 5.7 per cent during 2012–13. The per-capita income (per annum) in real terms (at 2004–05 prices) was estimated at ₹38,037 for 2011–12 as against ₹54,151 in the previous fiscal year, to mark a lower growth of 13.7 per cent as compared to an increase of 17.1 per cent posted in 2010–11 (CSO, 2013). The FRBM Act 2003, about fiscal consolidation, aiming at bringing down fiscal deficit to 3 per cent of GDP, and wiping out revenue deficit to zero per cent was never achieved. In fact, government is finding it hard to control fiscal deficit. A rise in fiscal deficit and failing to keep it under control is bad, especially from the perspective of sovereign rating agencies. In fact during July 2012, Standard and Poor's hinted at downgrading the Indian economy to junk status from the present BBB. If this happens, then the Indian economy is likely to lose out as a favourable destination for the FDI, further worsening both CAD and fiscal deficit. Already CAD was at a record high, shooting up to 6.7 per cent of GDP during the third quarter of 2012–13.

Just before the UPA government took over in 2004, fiscal deficit was 3.8

per cent. During fiscal 2011–12, although the Ministry of Finance wanted to limit the fiscal deficit to 4.6 per cent, it eventually shot up to 5.9 per cent. For the fiscal year 2012–13, the government planned to borrow ₹5.69 trillion to further its development agenda. This borrowing was based on the assumption that the economy would grow at 7.6 per cent with a lower inflation of 6.5 per cent. We all knew that this was unlikely to happen.

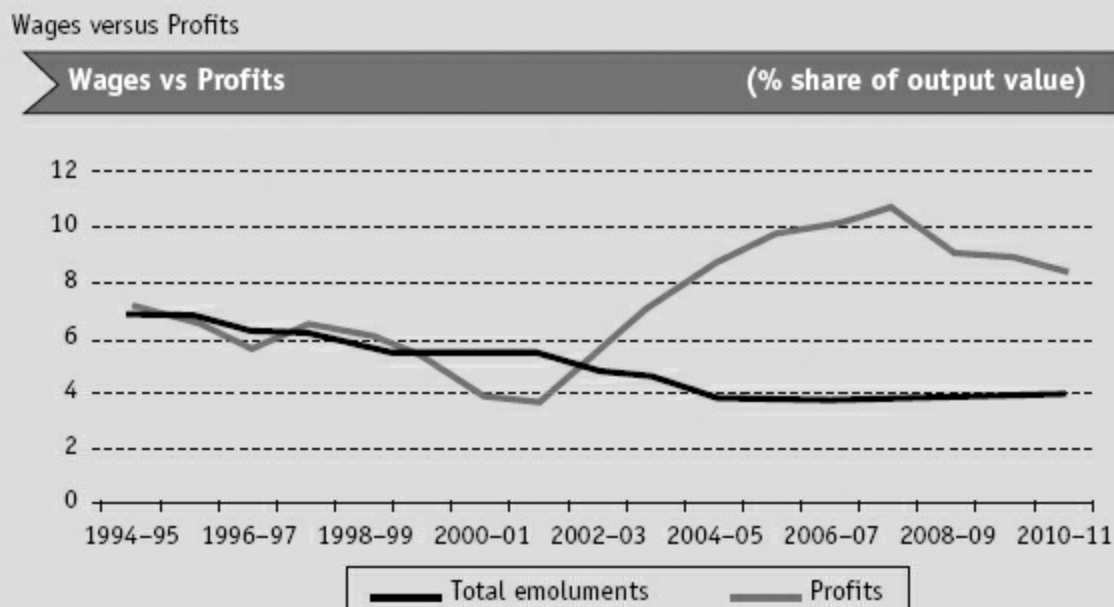
India's economy grew at 5.5 per cent in the April–June quarter of 2012, which is lower than last year's corresponding figure of 8 per cent. Breaking it down into sectors, agriculture grew at 2.9 per cent, manufacturing at a dismal 0.2 per cent, and services at 6.9 per cent, compared to 9.3 per cent a year ago. In the third quarter of 2012, growth rate further slowed to 5.3 per cent—a 9-year low. During March 2013, India's consumer inflation rate based on the all-India general CPI (urban and rural combined) stood at 10.39 per cent.

Four points need to be made about these deficit figures. First, these are central figures alone and do not include a gross fiscal deficit contributed by the states. Second, they do not include off-budget items such as expense on account of aids, natural disaster, terrorism, etc., that have the same effect as deficits. Third, this widening of deficits is attributed to fiscal packages introduced after September 2008. The deficit would have been much higher if we were to include public expenditure through flagship programmes such as the NREGS, farmers' debt relief, and the 6th Pay Commission for government employees, all of which predated September 2008. Fourth and the most important point is the perception about deficit. The common perception about deficit building up is because of government spending money on account of Food Subsidy Bill and employment guarantee schemes for the poor. In reality however, government spends more money on account of non-merit subsidies such as subsidies on electricity, fuel, and fertilizers for the relatively better-off section of the society. In 2012, subsidy on food cost 0.85 per cent of GDP and on MGNREGA cost 0.29 of GDP, totalling to 1.14 per cent of GDP. The cost of subsidizing electricity, fuel, and fertilizers for the relatively better-off section of the society comes to around 2.63 per cent of the GDP.²¹

Therefore, increase in fiscal deficit may be because of these three reasons: Slowing down of Indian economy, money not being spent productively such as in health and education, and non-merit subsidies not coming down. A cause for this slowdown in growth rate is structural in nature, particularly because of lack of investment in infrastructure. Other reasons such as scams,

policy paralysis, and lack of appropriate reforms have brought down GDP growth. There is an apprehension about the economy slowing down; there could be fewer opportunities to earn, fewer to spend, weaker demand, and hence lesser incentive to invest. The common man is worried, as low investment (as is evident from the stagnating index of industrial production numbers) leads to an increase in the unemployment rate. India's factory output (IIP) grew at a modest 1.1 per cent annually in August 2012, after barely growing at all in July 2012. Between 2009 and 2013, India was passing through a period of stagflation, characterized by lower job creation and higher inflation. This is contrary to the trend in the decade that ended in 2004, where emphasis was more on growth than development, causing socio-economic distortions such as inequality. A cause for this slowdown in growth rate is structural in nature, particularly because of lack of investment in infrastructure (see [Case Study 5.1](#))

Case Study 5.1: Profits, Wages, and the Business Cycle*



Liquidate labour, liquidate stocks, liquidate farmers, liquidate real estate...it will purge the rottenness out of the system.

Andrew W. Mellon, US Treasury Secretary, during The Great Depression

The current slowdown in the Indian economy goes back to July 2011. That was when investments started drying up, captured by the negative-to-low growth rates in the IIP for 'capital goods'.

The slowdown is more recent if viewed through the lens of consumption; it is only after July 2012 that income and job losses from flagging investments began to show up in the IIP for ‘consumer durables’ as well.

But slowdowns are not just about investment or consumption *goods*. They are also about *people*—capitalists, workers, and farmers. The anatomy of the present downturn is, hence, worth examining from the perspective of its main dramatis personae.

A good starting point could be the Annual Survey of Industries (ASI)—the most comprehensive source of industrial statistics extending to all factories employing ten or more workers (20, if these do not use power). The last ASI for 2010–11 covered as many as 2.13 lakh establishments.

ROLLERCOASTER

The accompanying graph maps the share of profits and wages in the ex-factory output value of ASI units between 1994–95 and 2010–11. Wages here refer to the total emoluments inclusive of all expenditures, direct or in-kind, incurred on employees.

The graph shows profits going up every year between 2001–02 and 2007–08, from a low of 3.6 per cent of output value to a high of 10.7 per cent. But this share registered a secular decline since then, touching 8.3 per cent in 2010–11. We have no ASI data thereafter, but the profit ratio is likely to have dipped even more in 2011–12 and 2012–13.

One indication of it is the RBI's latest Performance of Private Corporate Business Sector report, based on data relating to 3,000-odd listed non-financial companies (see *RBI Bulletin*, October 2013).

The average net profit margin for these firms fell from 9.4 per cent in 2009–10 to 9, 6.4, and 5.9 per cent in the following three years, after scaling a peak of 11 per cent in 2007–08. This, more or less conforms to the pattern from the ASI numbers.

PROFITS AND INVESTMENT

The above shares are significant for their strong correlation with investment activity. Capital spending decisions of capitalists are influenced by profit expectations. These are, in turn, a function of actually recorded profit rates. As profits go up, so do investments, usually with a lag.

Thus, while profit shares rose from 2002–03, private corporate sector investments really picked up only in 2004–05, crossing 10 per cent of GDP for the first time and soaring further to over 17.3 per cent by 2007–08.

The process works in the reverse when margins are under squeeze.

The ratio of private corporate capital formation to GDP plunged to 11.3 per cent in 2008–09, though this may have been more an outcome of the global economic meltdown specific to that year. The corporate investment rate in fact, recovered to 12.1 per cent and 13.4 per cent in the following two years. The actual fall—to 10 per cent and below—took place only from 2011–12, matching our hypothesis about the lagged

response of investments to recorded profit rates.

All this also adds up to a general theory of the business cycle. To the extent growth in output and employment are dependent on investment activity is ultimately determined by profit rates. The ebbs and flows of the business cycle are also closely tied to the latter.

This 'theory' can explain how the preceding investment boom from 1994–95 to 1997–98 ended as profit shares in output declined *and* when that became obvious to businessmen. The next boom took off only in 2004–05 when they clearly saw profits rising again.

And at that point, their animal spirits simply took over.

We are now at a stage of the business cycle where the profit squeeze that corporates truly started feeling from 2011–12—reflected in their capex programmes—is still continuing. But the unusual thing this time is that it has not percolated to wages.

According to the ASI data, total emoluments have actually increased marginally as a percentage of factory output after hitting a low in 2006–07. The ratio of staff cost to sales for the RBI sample companies has likewise gone up from 7 to 7.3 per cent between 2010–11 and 2012–13.

The last downturn, by comparison, saw the share of both profits and wages decline almost simultaneously. Moreover, the latter's fall, as the graph suggests, did not stop even after the former's recovery.

The fact that there has been no wage squeeze corresponding to the shrinking margins experienced by firms—at least till 2012–13—makes the current slowdown different from the earlier ones.

The reason for it has to do with food prices. High food inflation—averaging 9.9 per cent annually from 2005–06 to 2012–13, as against only 3.9 per cent in the preceding eight years—has made wages sticky and less amenable to downward adjustment even in a slowdown.

This phenomenon is also linked to general improvement in terms of trade for the farm sector, which as I argued elsewhere, has been a distinct feature of the nine years under the UPA dispensation ('Hardly a *muqabla*', *The Hindu Business Line*, 21 July 2013).

The previous slowdown during 1998–2004, in marked contrast, coincided with a period of severe agricultural distress and depressed crop prices. The situation was therefore conducive to wages to make the requisite downward adjustments to set the stage for the subsequent recovery.

TIGHTENING THE SCREWS

Today, double-digit food inflation means that forcing down wages is not all that easy for employers.

They are then increasingly resorting to the only option of shutting down factories. As layoffs grow and the chances of reemployment recede, workers are bound to accept wage cuts at some point. The RBI's current monetary tightening—unprecedented

during a time of slowdown—will only further aid this process.

We are possibly already witnessing the beginning of a wage squeeze in real terms. Growth in real rural wages has indeed moderated to 2.2 per cent in August, while there is anecdotal evidence of modest salary hikes happening across sectors.

If 2011–12 and 2012–13 were the years of profit squeeze, the current fiscal year and the one following it could turn out the same for wages and may be for crop prices as well.

Only when capitalists are convinced that profits are firmly headed upwards and the squeeze is truly over will we see them once again putting shovels in the ground.

* – Authored by Harish Damodaran in *The Hindu Business Line* (6 November 2013).

LOOKING AHEAD: SCOPE FOR FUTURE REFORMS

Indian economy has a long road ahead as far as converting our status to rich income nations with per-capita income more than US\$ 10,000 per annum is concerned. Reforms are a continuous process and will continue to happen. To sustain economic growth at a 6 plus per cent level, it is necessary that the policymakers and the politicians look at the following issues.

Infrastructure

The economic reforms are still to reach the infrastructure sector. The only exception is telecommunication. Without privatization or commercialization of infrastructure (power and port), the full potential of the industrial sector cannot be realised. At present what is preventing participation from the private sector has to do with red tapism in the infrastructure sector. The problem basically is to coordinate among various stakeholders. A reason for cost and time overrun for infrastructure projects has to do with delays in land acquisition, inter-ministerial coordination and clearance, shortage of funds, and contractual disputes.

For instance, for power sector projects it requires clearances from 56 different authorities and ministries. These authorities spread across all three levels of constitutional devolution—federal, state, and local bodies such as village panchayats and municipalities. Some of the ministries involved are of coal, railways, environment, state environment committee, state pollution control board, forest department, central electricity authority, power grid corporation, central electricity regulatory commission, state electricity

regulatory commission, state transmission commission, irrigation department, civil aviation, power ministry, port authorities, chief controller of explosives, custom department, and in some cases clearance on account of impact on wildlife, coastal zone, and archaeology. It is to be noted that each one of these ministries operate independent of one another and an obstacle in getting clearances from any one of these departments can delay the process of setting up a power plant.

In addition to coordination failures involving various stakeholders, there are issues related to pricing and successful completion of power projects. The political leadership is responsible for making the state electricity board go bankrupt. For instance, the liberalization of power began in 1994 when private investment was permitted in power generation. In 1998, liberalization was allowed in power transmission and distribution. The Central Regulatory Commission was created in 1998. Commissions for each state (in some cases, group of states) followed. However, this reform in the power sector did not stimulate the power sector. A major constraint was the irrational belief that electricity should be available to all and also to those who cannot afford it. This is true even when we consider a more progressive state such as Tamil Nadu. The political leadership—whether headed by AIADMK or the DMK government—did not permit the state electricity board to raise tariffs even to meet costs. The utilities were asked to supply power free of cost to a large number of consumers. Agricultural connections and those who lived in huts were supplied with free electricity. The Tamil Nadu Electricity Board did not have money to buy power from the private sector as it was a costly proposition. After a gap of nine years, electricity tariffs were raised in Tamil Nadu in 2012, and that too when things became unmanageable.

As to how a better infrastructure can provide impetus to growth, the stark example is that of Golden Quadrilateral. This project started by Atal Bihari Vajpayee-led NDA government in 2001 was aimed at building four- and six-lane highways to connect four metros namely, Kolkata, Chennai, Mumbai, and Delhi. Other major cities which got connected included Bangalore, Pune, Ahmadabad, Surat, and Kanpur. According to the National Highway Authority of India, 99.71 per cent of the project work was finished during January 2013. The impact of this road completion was telling. Travel time by road between Kanpur and Kolkata fell from 48 to 36 hours.²² In addition to the easiness of movement of goods and people, there are other economic benefits such as more choice of locations for initiating industry activity and

reduced wastage of the agricultural sector.

Labour Market

Another factor that comes in the way of inclusive growth is the inability to pursue reforms in the labour market. Lack of labour market reforms prevents India to properly use its demographic dividend. Labour relations have to be rationalized and made more flexible. India has a vast pool of young working population which also explains why labour cost is cheaper in India. As per the NSS estimate, between 1983–84 and 1993–1994, workforce in India grew at the rate of 2.09 per cent per year. Between 1999–2000 and 2009–10, this figure was 2.48 per cent. However, existing rigidities in the labour market create disincentive for India's manufacturing sector to hire labourers.

The legislative authority over labour issues falls with both the central and the state governments. The *concurrent* nature of the labour laws causes problems. The state governments have the authority to amend central legislations or to introduce subsidiary legislations. In addition, the enforcement of many labour regulations, even those enacted by the central government, lie with the state government. There is lack of unification and harmonization of labour laws across states. Even definitions of wages, workman, employee, factory, and contract labour vary from one state to the other.²³ The variability in labour laws across states leaves room for large degree of discretion to interpret these laws and thereby encourages corruption and rent-seeking activities. Because of this, firm owners become an easy target of labour inspectors. There are 51 central and 170 state labour statutes, some of which pre-date independence, to demonstrate how they make it hard for firms with more than a handful of staff to fire people and allow disputes to become legal endurance tests. To bypass labour laws, corporates have started hiring labourers from third parties and uses 'contract' workers. But in doing so, they have also blunted their own incentive to train their workers and lead to more abuse.

In the manufacturing sector there are considerable impediments in the hiring and firing of workers. As per the Industrial Disputes Act (IDA), it is necessary for firms employing more than 100 workers to obtain the permission of state government to retrench or lay off workers. Until 1976, the IDA allowed firms to lay off or retrench workers as per economic circumstances as long as requirements such as provision of sufficient notice,

severance payments, and the order of retrenchment among workers (last in first out) were met. An amendment in 1976 (the introduction of Chapter VB) made it compulsory for the employers with more than 300 workers to seek prior approval of the appropriate government before workers could be dismissed. A further amendment in 1982 widened the scope of this regulation by making it applicable to employers with 100 workers or more.

Corporate Law

Even if a firm is bankrupt—as the experience from Kingfisher Airlines suggests—the firm owner cannot simply close the firm and pay off the debt. This is because laws governing corporate insolvency are different than the ones governing bankruptcy. In fact, if one has to deal with corporate insolvency and bankruptcy, then it basically deals with four major laws—the Companies Act (1956), the Sick Industrial Companies Act (1985), the Securities and Reconstruction of Financial Assets and Enforcement of Securities Interest Act (2003), and the Recovery of Debts due to Banks and Financial Institutions Act (1993). There is a difference between bankruptcy and insolvency. Insolvency is a situation where the debtor company is unable to meet its obligations. Bankruptcy is a legal manoeuvre in which an insolvent debtor or company seeks relief for its existence.

The directors of a sick company can approach the Board of Industrial and Financial Reconstruction (BIFR)—a quasi-judicial body under the Sick Industrial Companies Act. The law stipulates that a company older than five years can approach the BIFR if it has accumulated losses equal to or exceeding its net worth. The BIFR in turn can either revive the potentially viable units by giving soft loans, or if it feels that they are unviable, refer the matter to the High Court to decide the closure of the company. The erosion of the net worth is too late a stage to attempt restructuring. By the time net worth is eroded, the company is too sick to be revived.

There are few other problems. First, the BIFR talks about reviving the sick unit under the same management who has already failed in the first place. It is like asking an incompetent civil engineer to save an old house from falling which is about to collapse. Second, some senior bureaucrats with limited knowledge of how a company runs and yet deciding on viability of the firm, may not always be rationale. Third, not allowing the firm to venture into new businesses and thereby paying off the debt is also not logical. Under the

current bankruptcy law, if Vijay Mallya, the Chief Operating Officer of Kingfisher Airlines, wants to make an exit from the airlines industry and start a new business to pay off his debt, he will not be allowed to do so. Fourth, under the present bankruptcy law, only manufacturing units can apply for relief. Since services did not form a major part of the Indian industry when SICA was enacted, services firms are kept outside the purview of bankruptcy law. Hence Kingfisher Airlines cannot approach BIFR for restructuring and instead will have to approach creditors.

India could learn a thing or two from the US law on bankruptcy. Popularly called Chapter 11—after a chapter on bankruptcy code—it provides for court-led protection from bankruptcy through reorganization of the company. The bankruptcy court in USA can consult all stakeholders and employ professionals to suggest remedies. The court-mediated restructuring plan is legally binding on those who approach it. And the company can venture into new businesses, unlike in India, where the company has to continue with the same business to liquidate its assets.

All these resulted in making our labour market quite rigid, making the employer resort to capital-intensive mode of production. Most of the success stories in India's manufacturing sector—be it Tata, Birla, Godrej, or Reliance—are about the capital-intensive mode of production.²⁴ In fact, because of the lack of labour market reforms, around 92 per cent of labourers find employment in the unorganized sector where protective labour legislation is often non-existent. Growth process would have been inclusive with the labour-intensive mode of production—something that is expected to happen with labour market reforms.

Judiciary

Another important component of growth is the law and order situation, or issue of governance. Weak governance emerges from a weak judiciary. Investors will not be willing to invest if there is delay in settlement of disputes and weak governance. In 2008, more than 50,000 cases in the Supreme Court, more than 4 million cases in the High Courts, and over 27.5 million cases in subordinate courts were awaiting disposal. Considering the total number of outstanding cases, every judge in the country has an average load of about 2,147 cases. India has 14,576 judges as against the sanctioned strength of 17,641 including 630 High Court judges. This works out to a ratio

of 10.5 judges per million population.²⁵ This ratio will have to rise as literacy rate increases, which tends to raise rates of litigation. For example, in a relatively more literate state like Kerala, there is an addition of 28 new cases per 1000 population per annum, as against three new cases per 1,000 population per annum in case of Bihar.²⁶ The limited number of judges is certainly a reason and so is greater acceptance of appeal for hearing. Between 2005 and 2008, around 12 per cent cases (6,900 out of 57,000) were accepted for hearing in the Supreme Court. For the USA, this figure is around 1 per cent. It is very easy to appeal from a lower court to a higher court, say the Supreme Court. Added to this is the high acceptance rate and thus one can explain the reason for such backlogs. Investors are not willing to invest if there is delay in settlement of disputes and weak governance (see [Case Study 5.2](#)).

Case Study 5.2: Corruption Scares Away Foreign Investors*

India still ranks high in terms of corruption. Transparency International publishes a report in which it ranks countries on the basis of corruption.

Last year, 'corruption perception index' ranked India 94 out of 176 countries. India earned a very low score of 36 on a scale of 0 (most corrupt) to 100 (least corrupt) with the cause of corruption principally being attributed to the amount of bribe paid to government officials.

Although there is no specific macro-level study quantifying the impact of corruption on a country's growth rate, there is a strong correlation between rich countries and the lower level of corruption.

Countries such as Denmark, Finland, Sweden, and Singapore are some of the richest economies in the world and with minimal levels of corruption.

At another extreme, we find economically poor countries such as Somalia, Afghanistan, and Myanmar with very high levels of corruption. Countries like Italy, Greece, and Ireland, which are mired in financial crisis, have fallen rapidly in terms of their ranking on the corruption index.

JUDICIAL REFORM

Since the corruption index is based on perception, countries with higher corruption are also less attractive to foreign firms. Richer countries are the more trusted ones in terms of FDI inflow. Scams and corruption in India have not only brought down our GDP growth, but have also resulted in lower FDI inflow. For 2008, India's gross FDI inflow was US\$ 48 billion; it was down to US\$ 27 billion for 2013.

To stem corruption, there is a need for both political and judicial reforms. Investors will not be willing to invest if there is delay in settlement of disputes.

Recent data on disposal of court cases are not available. But in 2008, more than 50,000 cases in the Supreme Court, more than four million in the High Courts, and over 27.5 million cases in subordinate courts were awaiting disposal.

Considering the total number of outstanding cases, every judge in the country has an average load of about 2,147 cases. India has 14,576 judges as against the sanctioned strength of 17,641, including 630 high court Judges. This works out to a ratio of 10.5 judges per million population. This ratio is going to become more adverse with more and more people becoming literate.

For example, in a relatively more literate State, Kerala, there is an addition of 28 new cases per 1,000 population per annum, as against three new cases per 1,000 population per annum in Bihar. Between 2005 and 2008, around 12 per cent (6,900 out of 57,000 cases) of the appeals were accepted for hearing in the Supreme Court.

For the USA, this figure is around 1 per cent. It is easy to go in appeal from a lower court to a higher court, say, Supreme Court. This adds to the backlog. To improve the investment climate, judicial reforms are needed.

INSTITUTIONAL FACTORS

Now after corruption, the political environment and the judiciary; the recent verdict by the Supreme Court banning politicians in jail or in police custody from fight elections is a welcome move. Judgements on political issues should be delivered in within few years. Political funding is opaque and non-transparent. It is mobilized by looting the exchequer, extorting money from the public, or by selling patronage.

Another alternative is the creation of some institution that will shoulder part of the courts' burden. The National Human Rights Commission and the Child Rights Commission have been set up because the judiciary failed to check the rise in atrocities. Similarly, institutions such as Election Commission, Telecom Regulatory Authority of India, Central Electricity Regulatory Commission, and the Securities and Exchange Board of India have set examples of good governance. Finally, the Public Procurement Bill 2012 is also expected to reduce the number of scams arising from government procurement such as in the Commonwealth Games.

^{*} – Previously published by the author in *The Hindu Business Line* (18 September 2013).

POLICY PRESCRIPTIONS

Infrastructure

The problem with infrastructure is lack of coordination. A solution to this coordination problem is to create a sovereign entity that would coordinate across different ministries and departments and act independently towards

implementing infrastructure projects. For example in Japan, the infrastructure ministry covers land, infrastructure, and transport. In France, the infrastructure ministry covers transport, spatial planning, tourism, and sea.

Government can save money by awarding projects on the basis of public-private partnership contracts. Not only does the government get part of the money from private parties needed for funding the project, but also the fact that the private parties have to operate and maintain the project after completion makes it mandatory for them to use good quality materials at the construction phase. Otherwise, the cost of maintaining the projects after completion increases. However, such incentives of supplying good quality materials during the construction phase are not there under item-rate (IR) or fixed price (FP) type contracts. It is to be noted that under FP contract, the procuring department promises to pay a fixed payment to the contractors for the works specified in the contracts, and for the IR type, contractors are paid on per item basis and the total outlay depends on the number of items supplied. In both FP and IR type contracts, once the project gets completed, government undertakes the task of maintenance and operation.

The government can also think about some financial innovations such as in case with the power sector. In 2012, the central government announced bailout package for the debt-ridden state electricity boards. Under this scheme, the state governments had to take over half of the outstanding loans and convert it into bonds that would be issued to lenders and which would be backed by a government guarantee. The lenders would restructure the balance amount and offer a three-year moratorium on repaying the principal. There is a need for running the state electricity boards as independent commercial entities with targets set for capacity addition and viability.

Like in the power sector, there is a need for bringing independent regulators in other areas of energy such as coal and petroleum. The need for an independent coal regulator has long been debated. While Coal India Limited (CIL) is the sole producer in the country, a large number of firms have been given captive blocks and some have even been allowed to trade the surplus output. There have been complaints of mispricing and abuse of monopoly power by CIL and counter acquisitions of the government twisting its arm to favour private buyers. There is a need for a coal regulator who would be empowered to come out with pricing for coal on the basis of market auction of coal blocks. On petroleum and crude oil, the regulator should be empowered to decide on crucial issues such as production sharing contracts

for discovered fields and exploration blocks, promotion of investment in exploration in the oil and gas sector, and performance review of producing fields. Bringing in independent regulators is expected to reduce much of the waste and corruption in the energy sector. Selection and staffing of the commissions should be done independently and its membership should not be confined to retired bureaucrats. Penalties should apply to government departments that delay clearances beyond a certain period (for land, environment, forests, and so on).

Land Acquisition

Getting land for infrastructure or for building industry is the real problem and this slows down growth. Policies for releasing agricultural land for non-agricultural purposes should be designed in a fashion so that farmers continue to remain as stakeholders. Farmers do not want to give land as it serves them a sense of collateral—something that makes their income sustainable. The land acquisition process cannot be left to the market because the transaction costs would be much higher, particularly when the buyer has to negotiate with numerous tiny sellers and land records are spotty. It should not be left to the government either, as the price the government offers is quite arbitrary and may not reflect the true price. Often the price rises more than the market price because of third party intervention such as land brokers with strong political connections. These land brokers typically procure land in bulk before the start of the project. So even if the farmers have wilfully given land to the government and land brokers before the start of the project, they may now start to agitate when they see the price of land skyrocket after the start of the project. Farmers' agitation over land acquisition in Greater Noida, Uttar Pradesh, during May 2011 was of this type. Those who had earlier given land wilfully, now felt left out or cheated as the price of land increased manifold upon the completion of the Yamuna expressway (highway connecting Delhi–Agra).

Given how the land market operates in India, market price is not an adequate anchor for compensation or efficient use of scarce resource. Economist Pranab Bardhan put forward the concept of an independent, quasi-judicial regulatory authority to oversee land acquisitions. In many parts of the economy, regulatory provisions are set up. For example, telecom and the stock market are such sectors. Land is another sector where there could be a

quasi-judicial body. The whole matter of land transfer, administering of compensation, and settlement has to be handled by an independent quasi-judicial authority, independent of political influence but subject to periodic legislative review. According to Ghatak and Ghosh,²⁷ this problem can be solved through land auction, covering both project area and the surrounding farm land. If properly implemented, this procedure will allow farmers to choose compensation either in cash or in land and determine their own price instead of leaving it for the government to decide.

Bottom line is that to prevent agitation and to procure land without any trouble, farmers have to be made stakeholders. Farmers can be given part of the land in developed form. For instance, Mayawati—a political leader from Uttar Pradesh—promised giving 13 per cent of the land in developed form. Another way is to offer jobs, something that the ex-Gujarat chief minister and the present Indian Prime Minister, Mr Narendra Modi did. If a factory is built on the procured land, one member from the family gets a job.

The land acquisition bill was passed on 29 August 2013 where it was stated that for procuring land to set up a private industry, the consent of 80 per cent landowners and people on government-assigned land had to be taken (see [Case Study 5.3](#)). Consent of people dependent on land for their livelihood was not required. For public-private partnership projects, consent of 70 per cent landowners and people on government-assigned land had to be taken. Government retained ownership of land in public-private partnership projects. The time limit for acquiring land was set as one year. Provisions were added to ensure that speculators who purchased land at low price did not get benefits. Tenants living off share-crop above a certain period got compensation. States finalized the modalities.

Case Study 5.3: Small Landholdings Make Acquisitions Costlier*

As per the Land Bill, government will not only have to pay several times the cost of the land, but also Rs 1.36 lakh for the displaced household and Rs 5 lakh for sustaining livelihoods

If recent numbers about the state of the Indian economy are any indication, then all is not well. Growth of Indian economy slowed down to 5.3 per cent in the third quarter of 2012, a nine-year low. Savings are falling, and so is investment. In September, the IIP fell by 0.4 per cent from a year earlier. Exports fell for the sixth months in row, taking the October trade deficit to a 12-month high. In November, foreign exchange reserves

dipped to US\$ 293.6 billion, down by US\$ 20.32 billion compared to a year earlier.

Gauging in terms of these base indicators, there is a clear indication about the economy slowing down and there is a dearth of private investment. In 2011–12, out of the targeted budgeted receipt of ₹40,000 crore from PSU disinvestments, the government was able to garner only ₹13,894 crore. This financial year, the target was ₹30,000 crore and we are yet to cross the ₹10,000 crore mark, and this includes receipts from the 2G auction where the government managed to sell only 22 out of the 122 licenses. Even with FDI in multi-brand retail sailing through the winter session of Parliament, it will be interesting to see how many eventual takers emerge. The euphoria surrounding the big-bang reforms announced in October seems to have been short-lived.

Now that we have a problem and the government is finding it hard to manage its fiscal deficit, proper policy measures should be taken to fix it. It is to be noted that just before the UPA government took over in 2004, the fiscal deficit was 3.8 per cent. During the fiscal year 2011–12, the fiscal deficit shot up to 5.8 per cent. For the fiscal year 2012–13, the government planned to borrow ₹5.69 trillion to further its development agenda. This borrowing was based on the assumption that the economy would grow at 7.6 per cent with a lower inflation of 6.5 per cent, which was unlikely to happen.

Like personal finance, the control of government finance can be done through innovative policy designs. To maintain a 6 per cent-plus growth rate, the government should act as a facilitator—assisting growth of the manufacturing and services sector with an eye on absorbing excess labourers from the shrinking agricultural sector. However, some faulty policies come in the way of development.

Take for instance, the new Land Acquisition, Rehabilitation and Resettlement Act, 2011. As per this legislation, when it comes to acquiring land, the state has to pay two times the market price if the land is in urban areas, and two to four times the market price if the land is in rural areas. In addition, for rehabilitation, a sum of ₹1.36 lakh has to be given to the displaced households, and for sustaining livelihood a job to one member in the household has to be provided or a one-time payment of ₹5 lakh has to be made.

To put in some numbers, if a piece of land costs ₹1 crore in Chennai and the government wants to procure this land, then it has to shell out ₹2 crore plus ₹1.36 lakh for rehabilitation, plus ₹5 lakh as a way towards sustaining livelihood for the displaced household. The calculation gets a little more complicated for the displaced people living in rural areas. As average landholding sizes vary from one state to the next, the amount of money that the state government has to shell out for building industries is far greater when the landholding size is small in comparison to when it is big.

This is because with smaller average size landholding, more people are entitled to rehabilitation and sustaining livelihood reimbursement, relative to when the average landholding size is higher. The average landholding size for farmers in Punjab is around five times that of West Bengal, which makes the cost of procuring land higher in West Bengal relative to Punjab.

Now this can create problems. If the government wants to build some project on the basis of public-private partnerships, then naturally the cost of the project goes up in West Bengal—a relatively backward state in comparison to Punjab. Quite naturally, private companies may be reluctant to enter into collaborations with the government for nation-building activities in relatively backward states, thus leading to further regional disparities.

Small landholdings can also create coordination problems. In West Bengal, the National Highway Authority of India so far has been able to procure only 1.93 per cent of the land required for the expansion of National Highway 34 and National Highway 31. Rail construction work between Nasirpur (a place of historical importance) and Azimganj in Murshidabad district of West Bengal is held up just because of 7.5 acres of land.

Scarcity of land not only hampers expansion of industry and tourism, but also has other secondary effects. Take education, for instance. Despite the success in enrolling students in primary education, there is still a vast pool of population stuck in the agricultural sector. In fact, 75 per cent of unemployment lies in the agriculture sector. The government can initiate public-private partnerships and make an attempt towards the provision of vocational education. Students when pass out with a degree in polytechnic or hotel management have takers in the fast-expanding services sector. In this way, excess labourers from the agriculture sector can be used to facilitate growth of the services sector.

But here also the problem is regarding acquiring the land. For opening any polytechnic institute, AICTE mandates a minimum of 1.5 acres of land in urban municipal areas and a minimum of 5 acres in rural areas. Last month, the West Bengal government was scouting for land to set up polytechnic schools but with no luck.

At a time when the future expansion of business activities is getting stymied because of faulty policies and additional revenue realization is not forthcoming, the government needs to find ways to control fiscal deficit. The recent move initiated by the prime minister to directly pay cash subsidies to beneficiaries from 1 January 2013 is a good one. The subsidy amount would be transferred to beneficiaries' bank accounts linked to Aadhar cards. The government is also thinking about integrating the banking system with the post office network, especially in the rural parts of the country to make Aadhar viable. In this way, much of the administrative cost of running government welfare programmes can be reduced and at the same time all the schemes relating to pension, education, and healthcare can be brought under one umbrella. DCTs will bypass state, district, and panchayat administrative hurdles, and indeed can save the government much-needed moolah to contain its fiscal deficit. Of course, the success of cash transfers will depend upon financial literacy and financial inclusion. It is at least a step in the right direction.

*— Previously published by the author in *The Financial Express* (14 December 2012).

Corruption

To curb corruption there is a need for both political and judicial reforms. Presently, political funding is opaque and non-transparent, and almost exclusively drawn from corruption. Political funding is mobilized by looting the exchequer, extorting money from the public, or by selling patronage. Likewise, to improve governance and for building a better investment climate, there is a need to undertake judicial reforms. Once prosecution starts, it should not go beyond few years and judgement should be delivered. Another alternative is the creation of some effective institution that would share part of the burden with the courts. For instance, human rights commission such as the National Human Right Commission or the Child Rights Commission have been created because the judiciary failed to check the rise in atrocities against these groups. Similarly, institutions such as Election Commission, Telecom Regulatory Authority of India, Central Electricity Regulatory Commission, and the Securities and Exchange Board of India are playing an important role in providing good governance.

Administrative and Labour Market Reform

Administrative reforms such as civil service reforms are important for improving governance. There is a need to make bureaucracy and police independent of the legislature (politics). Governments routinely use the police and prosecutors as pawns in political games. Consider the Taj Corridor case against Mayawati (leader of Bahujan Samaj Party). The Congress-led UPA government went slow when it wanted to appease Mayawati and threatened toughness when she resisted manipulation. The same can be said about the Central Bureau of Investigation's (CBI) probe into Mulayam Singh Yadav's (leader of Samajwadi party) assets. It is no co-incidence that Mayawati and Mulayam, who usually disagree on everything, both agreed on keeping alive the Manmohan Singh government (which lost its parliamentary majority when another regional ally, Mamata Bannerjee, exited from the UPA government during September 2012). To curb corruption, there is a need to create a statutory, independent police commission, along the lines of the election commission, to supervise crime investigations and prosecution. Ideally, we should also have an independent state police commission in every state. That will end political interference and curb corruption.

Additionally, there is also a need for downsizing, identifying surplus

manpower, retraining, voluntary retirement schemes, contractual appointment, and lateral entry that are expected to improve efficiency of the bureaucracy. There is also a need for labour market reforms. Because of labour market rigidities, the manufacturing sector in India usually employs capital-intensive mode of production and there is demand for job only in the high-skill-type manufacturing sector. Labour market reforms will open up opportunities for low-skill-type manufacturing workers as well.

To plug leakages in the system, an important reform push is the direct cash transfer scheme. Direct cash transfer will initially focus on scholarships and pensions but later will be used for subsidies on fertilizers, cooking gas, payouts for MGNREGA, school education (including teachers' salaries, mid-day meals, textbooks, and uniforms), and other schemes such as Indira Awaas Yojana, Janani Suraksha Yojana, and the Integrated Child Development Services. During November 2012, direct cash transfer was started on an experimental basis and initially covered only 20 districts. The target was to roll out this system among all the 600-odd districts by the end of 2013.

How can the benefit of these schemes reach the target groups? Each element of cash transfer, on account of pensions or scholarships, is linked to an individual bank account using the *Aadhaar* Card (Unique Identification Number). As each individual has a unique identification number, the scope for duplication is plugged and fund transfer can be monitored.

For instance, a person getting money because of MGNREGA should not ideally get pension benefits as he is working. But because of corruption, the 'connected ones', withdraw money from various schemes simultaneously. Also, the funds do not reach the intended group.

Earlier, if one were to collect his scholarship money, one would wait for a long while and pay bribe to the official concerned. With Aadhaar and direct cash transfer, all these will perhaps go. For example, in the State of Andhra Pradesh, money lost on account of duplication ranges between 20 per cent and 40 per cent. Direct cash transfer can save the government exchequer these losses.

It will also have a tremendous impact on financial inclusion. The number of people with bank accounts will explode. The RBI has given directions to banks that anyone with Aadhaar Card will have a 'no-frills' account. The central bank introduced 'no-frills' accounts in 2005 to provide basic banking facilities to the poor and promote financial inclusion. The accounts could be

maintained without or with very low minimum balance. In fact, the RBI asked commercial banks to convert the existing 'no-frills' accounts into 'basic savings bank deposit accounts'. While there was no limit on the number of deposits that could be made in a month, basic savings bank deposit account holders were allowed a maximum of four withdrawals in a month, including through ATMs.

Critics argue that access to bank branches may be a problem. Owing to the administrative cost, it is not profitable for banks to open bank branches in every village. As a way out, it is now mooted to have a banking correspondent in every village. Banking correspondents are people who get commission from banks for every transaction that they facilitate between the recipient of cash transfer and the banks. Government is also thinking of using post offices for direct cash transfer. In comparison to the number of banks, there are more post offices in villages. There are 139,040 post officers in rural areas. That is, one post office every 22 square kilometre for 5,992 people.²⁸ Reach of banks is limited. Nearly 40 per cent of India's population is unbanked. Post offices can fill this gap. In fact, INFOSYS has been roped in to computerize and develop a single technology platform for post offices (similar to core banking services) so that debit or credit in any post office branch can be connected to all other branches.

A person in whose account the government transfers money can approach any banking correspondent visiting his village. The banking correspondent carries a mobile device where the recipient can give his thumb impression or electronic signature and get the money.

This process is more like village retail shops selling telephone calling cards. To ordinary people, this would save half the day and the hassle of visiting and collecting money. Around 147 million no-frill accounts have been opened during the last five years. Within the next two years, this number is expected to touch 500 million, thus making financial inclusion a reality.

Still there can be an element of corruption through deception—when a worker's account is operated by NREGA functionaries without his or her knowledge. When there are bogus beneficiaries (ghosts or duplicate), other types of biometric technologies may be of help. Cheaper technologies such as computerization can also help to get rid of bogus cards and help plug other leakages. Tamil Nadu has a fully computerized database and overall PDS leakages are very small (4 per cent in 2009–10). In states like Chhattisgarh,

overall leakages in the PDS fell from 50 per cent (in 2004–05) to 10 per cent in 2009–10 without the use of Aadhaar but through computerization and other measures.²⁹

¹ The term Hindu Rate of Growth was coined by Professor Raj Krishna.

² Suresh Tendulkar (2004), *Organised Labour Market in India: Pre and Post Reforms*, paper presented at the Conference on Anti-Poverty and Social Policy in India organized by the Mac Arthur Research Network on Inequality and Economic Performance, 2–4 January.

³ Ashok Gulati and Sudha Narayanan (2001), *Subsidy Syndrome in Indian Agriculture*, New Delhi: Institute of Economic Growth.

⁴ S.D. Tendulkar and T.A. Bhavani (2007), *Understanding Reforms—Post 1991 India*, New Delhi: Oxford University Press.

⁵ Ibid.

⁶ Ibid.

⁷ This section draws from Tendulkar and Bhavani, 2007.

⁸ RBI publishes data on FDI—both inward and outward—as part of India's BOP position. Since, 2000–01, the coverage of FDI has been expanded to include more disaggregated data such as foreign exchange flow on account of equity capital, reinvested earnings, and other direct capital (inter-corporate debt transaction between related entities).

⁹ Some initiatives taken by the Rajiv Gandhi government in 1985 such as slashing down import duties on hardware exports by 60 per cent, computerization of bank operation, decline in the share of canalized imports, etc., are commented by many as start of the reforms process in India in a staggered fashion.

¹⁰ World Development Indicators (various years).

¹¹ T.P. Bhat (2012), India and China The Trade Policy Dynamics, *India Quarterly*, Vol. 68, No. 1, pp. 69–87.

¹² Gurucharan Das (2000), *India Unbound*, Gurgaon: Viking, Penguin.

¹³ Reserve Bank of India, *Handbook of Statistics on the Indian Economy* (various issues), Mumbai: Reserve Bank of India.

¹⁴ Ibid.

¹⁵ Data on development indicators mentioned here are taken from Economic Survey (various years), Ministry of Finance, Government of India.

¹⁶ India ranked second last among the 73 countries that participated in the PISA, conducted annually to evaluate education systems worldwide by the OECD Secretariat. The survey is based on a two-hour test testing reading, maths, and science abilities of nearly half a million students.

¹⁷ National Sample Survey Organisation (2006), *Morbidity Health Care and the Condition of the Aged*, Report Number 507.

¹⁸ Subodh Varma (2013), 'UPA Flagship NREGS Sees Sharp Slide in Job Creation', *Times of India*, 3 February.

¹⁹ UN Human Rights Council (2012), *Report of the Working Group on the Universal Periodic Review: India*, 9 July Report Number A/HRC/21/10.

²⁰ Madan Kumar (2013), 'Loo-lessness to Blame for 40% of Bihar's Rapes', *Times of India*, 21 January.

²¹ Amarty Sen (2014), Keynote Lecture delivered at Jaipur Literary Festival.

²² *Business Today* (2013), Highway to Prosperity, p. 16, May.

²³ See, B. Debroy (2005), *Issues in Labor Laws Reform in Reforming the Labor Market*, eds. B. Debroy and P.D. Kaushik, New Delhi: Academic Foundation.

²⁴ For more on this see, Mrinal Datta Chaudhuri (1996), *Labor Markets as Social Institutions in India*, IRIS-India Working Paper No. 10, University of Maryland at College Park.

²⁵ Nick Robinson (2009), Expanding Judiciaries: India and the Rise of the Good Governance Court, *Washington University Global Studies Law Review*, Vol. 8, No. 1, pp. 1–70.

²⁶ http://articles.timesofindia.indiatimes.com/2010-03-06/india/28143242_1_high-court-judgesliteracy-rate-backlog

²⁷ Maitreesh Ghatak and Parikshit Ghosh (2011), *The Land Acquisition Bill: A Critique and a Proposal*, Centre for Development Economics Working Paper No. 204, Delhi School of Economics, September.

²⁸ Fortune Book (2013), *Fortune India-Can INFOSYS Help Congress Win 2014?* p. 106, Kolkata: ABP Group.

²⁹ Reetika Khera (2011), Revival of the Public Distribution System: Evidence and Explanations, *Economic and Political Weekly*, Vol. 46, No. 44–45, 5 November.

CHAPTER 6

Trade

WHY DO COUNTRIES TRADE?

Is it fair to suggest that countries are trading, rather than saying that the firms across national boundaries are trading? Actually, there is no anomaly in both these statements. Trade figures for any particular country are the summation of trade done by all individual firms operating from that country. But first, we will have to understand why countries trade. A country trades because it is able to import a product at a cheaper price and export a product at a higher price than what it would realize in its own domestic market. There are various theories in trade literature trying to explain as to why a country can produce goods at a cheaper price relative to others. An initial attempt in this direction was made by two economists, Adam Smith (*The Wealth of Nations*, 1776) and David Ricardo (*On the Principles of Political Economy and Taxation*, 1817). Both of them tried to explain trade incorporating theories of absolute advantage (Adam Smith) and comparative advantage (David Ricardo). Advantage is measured in terms of price difference—ability of some countries to produce goods cheaper than others.

Absolute advantage exists when one country is efficient at producing one item while another country is efficient at producing another item. An efficient producer will be able to produce goods at a lower price in comparison to others. When technology is given, what differentiates an efficient producer from an inefficient producer is the level of productivity. So it is the difference in productivity which drives trade. The best policy in this case is to allow producers and consumers from both countries having unlimited access to goods from each other to maximize the number of advantageous trades that can occur.

Unlike the theory of absolute advantage, comparative advantage suggests that countries trade and flourish on the basis of relative cost differences. Nations should specialize in, and export goods in which they are relatively more efficient, where the absolute advantage is greatest. Please note that here too, more efficient means more productive. One can very well argue that American farmers are more productive than their Indian counterparts because they have access to high yielding variety (HYV) seeds—American farmers sow land with HYV seeds whereas Indian farmers sow land with traditional varieties. So it may not be the right kind of comparison. Interestingly, both Adam Smith and David Ricardo assumed technology to be the same, that is, both Indian and American farmers sow HYV seeds. It is just that one group of farmers is more productive (efficient) in sowing and ploughing land relative to the other. These two theories also assumed that the market works perfectly (better known as classical assumption), that there is one factor of production which is labour, and it is the difference in labour productivity which drives trade. Empirically, as we see later, both these theories explain a small part of international trade. We do not live in a world where the market is perfect, there is only one factor of production, and there is homogenous technology. Another problem with the classical model is that it assumes constant opportunity type production possibility frontier. Production possibility frontier shows the maximum specified production level of one commodity that results given the production level of the other. When the production function is constant opportunity type, then trade leads to complete specialization. In a two-commodity world, a country will produce only a single commodity. This is quite a restrictive assumption.

In reality, we have more than one factor of production and a country producing more than one commodity. A step in that direction was taken by three economists namely, Heckscher, Ohlin, and Samuelson. Better known as the Heckscher–Ohlin–Samuelson (HOS) model, they tried to explain trade by incorporating two factors of production. Some countries may have more labour and others may have more capital. It is the difference in these factor endowments (labour and capital) that causes differences in productivity among countries, and hence the ability to produce goods at a lower cost. In the HOS model, countries use factors in different proportions—the one with more labour goes for labour-intensive mode of production and the one with more capital goes for the capital-intensive mode of production. The reasoning is simple. More labour means that labour is relatively cheaper in comparison

to capital, and so it makes sense to go for labour-intensive mode of production and produce goods cheaply. By a similar logic, a country with more capital will be able to produce goods cheaply by undertaking the capital-intensive mode of production. HOS also tried to address the issue relating to complete specialization. To this end, they introduced increasing opportunity cost type production possibility frontier that allows countries to produce more than one commodity (incomplete specialization) in the presence of trade.

When trade happens between countries with differential factor proportions, the labour-abundant country starts exporting labour-intensive goods, and the capital-abundant economy starts exporting capital-intensive goods. As the labour-abundant economy exporting labour-intensive goods, the price of labour-intensive goods goes up. Under perfect competitive assumption (which is the case with the HOS model), this would mean the price of labour (wages) will increase in the labour-abundant economy. Similar is the case with the relatively capital-abundant economy where return to capital will increase. *Trade is expected to equalize return to factor incomes across countries.* And within any country, trade causes changes in income distribution, which is better known as the ‘Stolper–Samuelson’ effect. Returns to factors of production used extensively for production of exports go up and returns to the factors of production used extensively for the production of imports go down.

Although the HOS model was able to relax some of the restrictive assumptions of the classical model, it still had some problems. If we are to go by the prediction of the HOS model, then there will be convergence of wages between the developed and the developing countries. But real world data suggest otherwise. Wage differences between most developing countries and their developed counterparts have actually diverged rather than converged. Also, there is problem with the perfectly competitive assumption. We all know there are few markets which are perfectly competitive.

Both the classical and the HOS models also perform poorly in trying to explain intra-industry trade: a two-way trade in a similar commodity, for example, India exporting Tata cars and importing Ford cars. In addition to the automotive industry, we can find instances of intra-industry trade in other industries like computer, household appliance, telecommunication, chemical, and food and beverage industries. Because the HOS model was built on the premise of differential factor endowments, it only explains inter-industry

trade and not intra-industry trade. Under HOS assumption, India specializes in textile industry since it has abundant labour and the USA specializes in computer industry since it has abundant capital. Similarly under the classical assumption, some countries will specialize in a particular industry in which they enjoy comparative advantage (i.e., more productive). As resources shift to the industry with comparative advantage, it will pull out resources from industry having comparative disadvantages. As a result of specialization, a nation experiences a growing dissimilarity between the products that it exports and the products that it imports. So trade between India and the USA involves trade in dissimilar commodities—a case of inter-industry trade.

Krugman's new trade theory addresses these limitations. His model was able to explain intra-industry trade by allowing increasing return to scale to factor inputs, in the form of fixed costs over a larger volume of output. Doing this basically relaxes the perfectly competitive assumption, because a bigger firm can spread its fixed costs over a larger volume of output, reducing its average costs, and thereby charge lower price which will displace its competitors. Because a firm has to produce more to reduce its average cost, the target of the firm will be to cater to the needs of the majority of the customers with certain specialized demand. For example, most of the Indians have a liking for fuel-efficient small cars and hence prefer Maruti Suzuki's *Alto* or Hyundai's *Santro*. However, there are few others who may have a liking for big or medium cars and hence will prefer to own Ford or Honda. Ford and Honda survive by catering to the minority group of customers in India and supplying the rest to other parts of the world. Remember, for Ford or Honda to survive (i.e., reduce their per unit production cost) they will also have to attain economies of scale and whatever they fail to sell in India can be sold outside India.

Therefore, intra-industry trade leads to trade in differentiated products, as in the case with monopolistic industry. A nation may enjoy cost advantage over its foreign competitors by specializing in a few varieties of products, whereas its competitors enjoy cost advantages in certain other varieties. Because of increased return to factor inputs through specialization, firms are able to produce goods at a lower per unit cost and survive by selling in each other's market. This leads to intra-industry trade in slightly differentiated products, as in the automotive industry.

In the case of homogenous products, intra-industry trade can be explained through transportation costs. For instance, people of West Bengal (a state in

the eastern part of India) have a great preference for Hilsa fish—something they can import from neighbouring Bangladesh rather than buy from Tamil Nadu (a state in the southern part of India). Hilsa fish from Tamil Nadu can be exported to neighbouring Sri Lanka. In this case, India is exporting and importing the same homogenous commodity (Hilsa fish), owing to transport costs.

Now we have some intuitive understanding of why trade happens between nations. But in what way trade is beneficial for any nation? The [next section](#) addresses this issue.

FACTORS AFFECTING TRADE

Trade affects income of a country in three fundamental ways. First, trade encourages a flow of resources from low productivity sectors to the high productivity sectors, leading to an overall increase in output. Export growth may affect total productivity growth through dynamic spillover effects on the rest of the economy. The possible sources of this positive dynamic spillover include more efficient management styles, better forms of organization, labour training, and more knowledge about technology and international markets. Since exports is a component of GDP, rapid export growth leads to even faster growth of GDP through the Keynesian multiplier process. Secondly, with unemployed resources, an increase in export sales leads to an overall expansion of production and a fall in unemployment. As production increases, firms generate economies of scale and hence become more efficient. Thirdly, international trade also allows for the purchase of capital goods from foreign countries and exposes an economy to technological advances in the developed countries. Recent theoretical work suggests that capital goods imported from technologically advanced countries may increase productivity and thereby growth, since knowledge and technology are embodied in equipment and machinery and therefore transferred through international trade.

Despite these positive aspects, free trade is opposed mainly because workers and producers associated with an inefficient industry (recall the Stolper–Samuelson effect) stand to lose out. There is a considerable amount of lobbying pressure by the inefficient producers demanding more protection and opposing any further trade liberalization. As raising tariff barriers (bound tariff rates) is not allowed under the WTO framework, individual

governments try to protect their respective economies by raising NTBs such as anti-dumping measures, sanitary and phytosanitary sanctions, import licenses, etc. We will talk more about these measures in [Chapter 8](#). So although free trade is desirable, in reality it is not.

THE INDIAN CASE

India's trade figures improved during post-1991. Although there were few reforms in the 1980s, comprehensive reforms in true sense of the word started in earnest in 1991. The effect of reforms on India's external sector have been positive considering the following facts:

1. India's trade deficit as a percentage of GDP fell from 4.6 per cent in 1980–81 to 3 per cent in 1990–91 and further to 1.1 per cent in 2005–06.¹
2. Since 1947 (the year of India's independence), the rupee value of exports increased more than 10 per cent in each of the following three successive periods (financial year): 1972–73 to 1976–77, 1981–82 to 1984–85, and 1986–87 to 1996–97. However, as of 2001, the rupee value of exports on average has grown in excess of 20 per cent annually.
3. From 1949–50 to 1999–2000, India had a current account surplus in only two years: 1972–73 and 1976–77. Since 2000, India has had current account surpluses for three consecutive years: 2001–02, 2002–03, and 2003–04.
4. India's share in world merchandise exports increased from a mere 0.4 per cent in 1981 to 0.5 per cent in 1991 and further to 0.91 per cent in 2006. The rise in service exports has been more impressive, having increased from 0.59 per cent of world service exports in 1991 to 2.32 per cent in 2006.
5. India's exports figure crossed the US\$ 100 billion mark in 2005–06. There has been an increase in both the volume and the value of exports. During 2005–06, exports in terms of volume increased by a record 45.4 per cent and the export unit value increased by 20.4 per cent (Reserve Bank Bulletin, Reserve Bank of India, various years).

Improvement in trade figures continued during most part of 2000s. As is evident from [Table 6.1](#), India's progress in terms of exporting goods and

services has been remarkable since the early-2000, especially when compared with India's position in the early 1990s. With the outbreak of hostilities in the Persian Gulf in 1990 and the consequent spiralling of oil prices, there was tremendous pressure on India's foreign exchange reserves, aggravating an already weak BoP situation. Following this, the country plunged into a deep economic crisis. The rate of inflation rose to a level much higher than what India had witnessed even six months earlier. Foreign exchange reserves declined to a level covering only three weeks of imports, about US\$ 1 billion at the end of the financial year 1990–91. To compensate for this decline, India entered into a stand-by arrangement, together with a supplementary loan with IMF. Following IMF conditionalities, various reform measures were undertaken to raise the growth rate in a sustained way.

Reforms in the domestic economy have been able to reduce excessive government control of economic decision-making. In the manufacturing sector, most of the reforms were incorporated into the industrial licensing policy of 1991, implemented subsequently through a series of government notifications. There are almost no sectors in which the entry of the private sector is restricted by discretionary central government policy. Budget pronouncements since 1991 ensured this. In the external sector, the government has continued the process of eliminating quantitative restrictions on imports and reducing import duties while floating the exchange rate (to a large extent). Import duties continued to fall from 300 per cent levels in 1991 to about 10 per cent in 2011 (on non-agricultural commodities). The further liberalization of FDI inflows, such as in pension and insurance, awaits political consensus but there are no serious business restrictions. Additionally, reforms in the capital market have lowered the borrowing cost of capital. All these steps have helped the business environment immensely and propelled growth in India's exports.

Table 6.1 Growth Rates of India's Merchandise Exports (Valued in US\$ Billion, %)

<i>Period</i>	<i>Growth Rates</i>	
	<i>Total</i>	<i>Non-Oil</i>
1970-71 to 1990-91	10.8	10.4
1991-92 to 2010-11	14.5	13.3
1993-94 to 2010-11	14.9	13.6
1970-71 to 1979-80	18.2	18.3
1980-81 to 1989-90	7.1	7.6
1990-91 to 1999-2000	9.8	10.1
2000-01 to 2009-10	20.3	18.1
1993-94 to 2001-02	8.0	7.7
2002-03 to 2008-09	24.0	21.1
2002-03 to 2010-11	20.6	18.4
2009-10	-3.6	-4.6
2010-11	37.4	35.4
2011-12 (April to November)*	33.2	NA

Source: Balance of Payment Statistics, Reserve Bank of India.

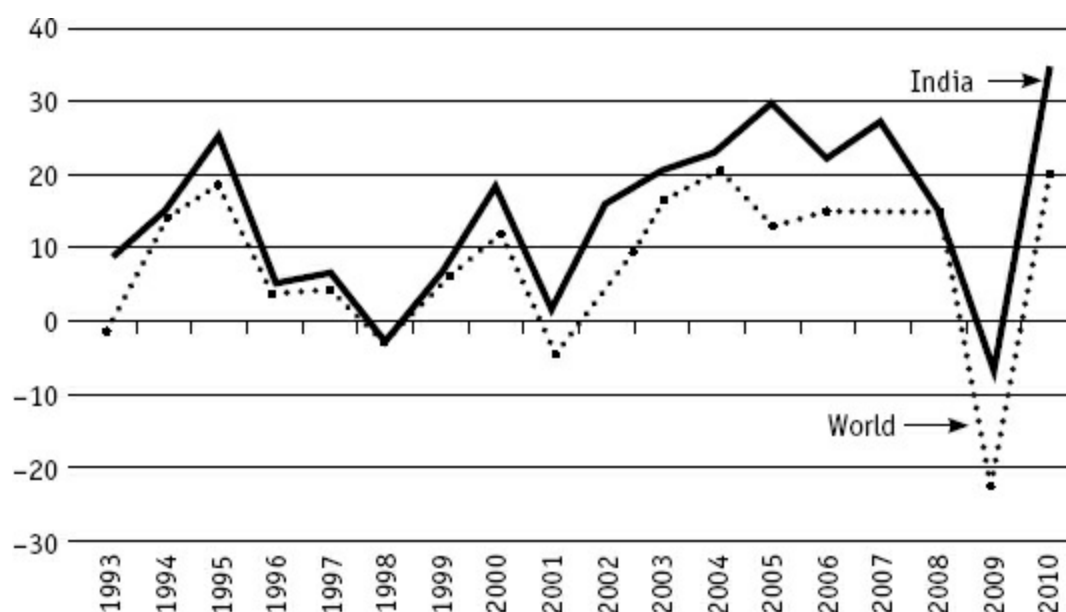
Note: *provisional estimate.

During the first decade of reforms (1991–2000), exports grew by 8 per cent per year, while during the second decade (2001–10), exports grew by 21 per cent. In general, post 1991, the growth rate of Indian exports has been higher than the world exports (see [Figure 6.1](#)). This is in contrast to the pre-1991 period when the growth of Indian exports was lower than the world average.²

FACTORS AFFECTING EXPORTS

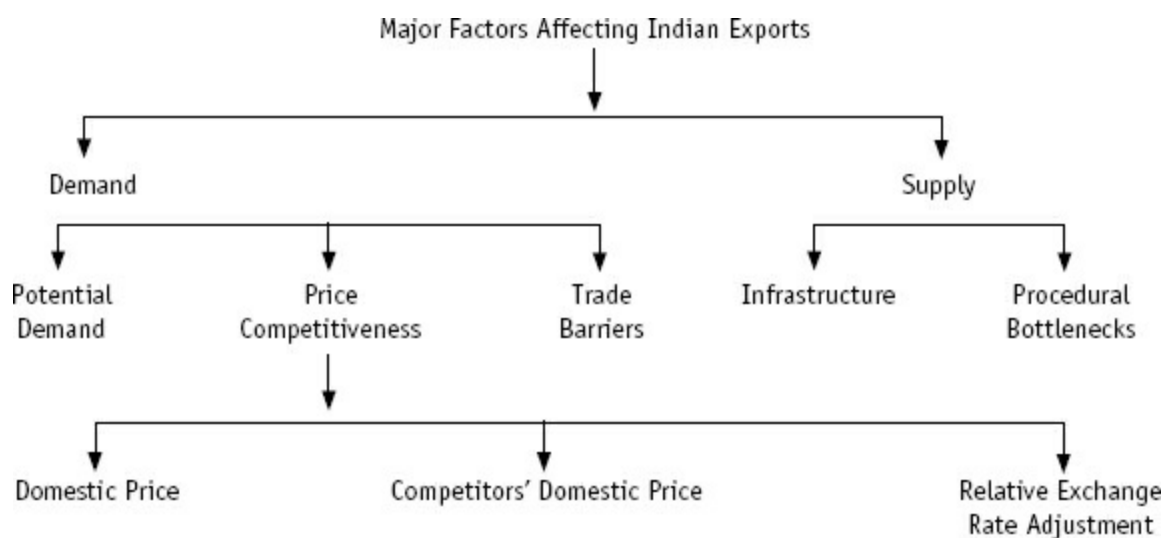
Exports are influenced by many channels, as explained in [Figure 6.2](#). These channels can be classified broadly into two groups. One channel refers to demand-side factors which can lead to a sudden turnaround in growth, while the other channel refers to supply-side factors. If supply-side factors are not favourable, this may prevent a quick revival of exports and may also act as an obstacle to maintaining high growth for a long period.

Figure 6.1 India's Exports vis-à-vis World's Exports



Source: C. Veeramani (2012), Anatomy of India's Merchandise Export Growth, 1993-94 to 2010-11, *Economic and Political Weekly*, Vol. XLVII, No. 1, pp. 94-104, January.

Figure 6.2 Factors Affecting India's Exports



1. Demand-side Factors

a) Price competitiveness

India's merchandise export profile (comprising mostly low-technology products) is quite similar to that of Southeast Asian nations. [Table 6.2](#) provides a list of the major trade items of some Asian countries. Country names in parentheses denote the leading producers, although other countries in the region also have a comparative advantage in producing these commodities.

Table 6.2 Main Tradables of India and Some of Its Competitors

Rice (Vietnam)	Electronics (Republic of Korea)	Motor vehicles (Japan)
Tourism (Thailand)	Transport equipment (Indonesia)	Iron and steel (China)
Tea (Sri Lanka)	Rubber (Malaysia)	Textiles and apparel (China)
Cotton (Bangladesh)	Air travel (Thailand)	Financial services (Hong Kong, China)
Gems and jewellery (India)	Dairy products (India)	Chemicals (India)

Source: United Nations, Industrial Commodity Statistics Yearbook 2012, Department of Economic and Social Affairs (United Nations publication).

Many of India's tradables comprise low-technology products, such as leather footwear, dairy products, iron and steel, beverages, corn and vegetables, textiles and apparel, and so forth. Because highly differentiated products are being considered that are nevertheless close substitute products, demand for these products is price-sensitive. Firms offering a lower relative price would be able to sell more than their competitors. Therefore, it makes sense to examine the importance of the price factor to compare changes in India's external competitiveness relative to those of its neighbours. To measure lower relative price, it is necessary to look at price and exchange rate data of India vis-à-vis those of its competitors. The volume of exports depends on nominal exchange rates after adjusting for the domestic level of inflation.

Real exchange rate (R) = nominal exchange rate (e) $\times$ foreign price (p^*)/domestic price (p). The nominal exchange rate is measured as domestic currencies per unit of foreign currency. Using the law of one price³: $e \times p^*/p = 1$, after slight modification yields: $de/e = dp/p - dp^*/p^*$. That is, if the inflation rate in India is higher than that of its foreign competitor by 3 per cent, the Indian rupee should depreciate by 3 per cent to ensure that its exports remain competitive.

Empirical evidences suggests that India's exports react favourably to devaluation or depreciation. Following the devaluation in 1949, there was an increase in export volume between 1950–51 and 1951–52. Similarly, export growth between 1993–94 and 1995–96 was due to the rupee devaluation in 1991. Considering the period from 1961 to 1987, the price elasticity of demand for exports was about 1.1 in the short run and 3 in the long run. The price competitiveness of India's exports is an important determinant of the volume of exports and that

rupee depreciation can have a significant positive effect on its current account balance.⁴

Table 6.3 Competitiveness of Indian Exports

<i>Inflation (WPI)</i>	<i>China</i>	<i>India</i>	<i>Indonesia</i>	<i>Malaysia</i>	<i>Pakistan</i>	<i>Thailand</i>	<i>Sri Lanka</i>
2006	3.1	4.7	13.7	6.7	8.5	7.1	11.7
2007	3.1	5.0	14.7	5.5	8.2	3.2	24.4
2008	6.9	8.6	27.0	10.1	25.4	12.5	24.9
2009	-5.4	2.3	-1.8	-7.3	7.2	-3.8	-4.2
2010	5.5	9.6	4.9	5.6	21.4	9.4	11.3
<i>Exchange Rate (Percentage of Change)^a</i>							
2006	-3.3	-1.8	-8.2	-5.4	1.8	-12.2	5.5
2007	-6.4	-10.9	4.4	-5.7	0.5	-6.4	0.9
2008	-6.8	22.9	16.3	3.0	29.2	3.5	4.0
2009	0.0	-3.7	-14.2	0.0	6.5	-4.5	1.1
2010	-2.9	-4.0	-4.4	-11.8	1.7	-9.5	-3.0
<i>External Competitiveness (Inflation – Percentage Change in Nominal Exchange Rate)^b</i>							
2006	6.4	6.5	21.9	12.1	6.7	19.3	6.2
2007	9.5	15.9	10.3	11.2	7.7	9.6	23.4
2008	13.7	-14.3	10.7	7.1	-3.8	9.0	20.9
2009	-5.4	6.0	12.3	-7.3	0.7	0.7	-5.3
2010	8.4	13.6	9.2	17.3	19.6	18.9	14.2

Source: Author's own calculations and IMF, International Financial Statistics Yearbook 2012.

^aA negative sign indicates the depreciation of the exchange rate.

^bLower values indicate a rise in competitiveness.

[Table 6.3](#) depicts India's external competitiveness. We can carry forward this exercise to understand how India's trade competitiveness will change in the future. Although external competitiveness has fallen for most other Asian countries, in case of India, this fall in external competitiveness led to a fall in exports of price-sensitive items. Items, such as foodstuffs and beverages, vegetable products, leather items, and wood and corks, etc., registered a fall in exports post 2005. It should be noted that although India's overall merchandise exports have increased, its external competitiveness has fallen relative to that of its competitors. This is true even when taking into account the fact that some competitors also lost competitiveness in recent years. This finding is in contrast to what was stated in the previous paragraph—India's exports performance improved post-1991 reforms.

The apparent contradiction may reflect a change in the composition of India's exports from price-sensitive items to less price-sensitive items. Indeed, the recent robust performance is due to the rise in exports of value items such as chemicals, mineral products (especially, mineral fuels, bituminous substances, etc.), and machinery and transport equipment (engineering goods). These items are price inelastic. It is to be noted that the share of petroleum products in India's export basket increased dramatically from around 2 per cent in 1993 to around 20 per cent in 2012. The surge in exports in case of petroleum items is because of India's potential in oil refining activities. According to the Centre for Monitoring Indian Economy's (CMIE's) Prowess database, for the fiscal year 2010–11, Reliance Industries and Essar Oil contributed to around 68 per cent and 8 per cent respectively, to the petroleum exports from India (see [Table 6.4](#)).

b) Potential demand

Apart from relative prices, the GDP of importing economies is also considered to be an important variable for estimating export demand functions. Since imports by India's major trading partners are based on derived demand (i.e., as a function of their GDP), demand for Indian exports refers to potential rather than actual demand. In [Table 6.5](#), the import growth of India's major trading partners is considered. In 2009, there had been a major fall in growth rates of imports for all the countries, but that coincided with global financial crisis. Apart from this single year, in general, import figures for these nations have shown a positive trend. Hence, the growth in India's exports can be partly explained by the growth in imports by its trading partners.

Table 6.4 Average Annual Growth Rates of Exports (1993–2010, US\$ Million)

<i>Sections</i>	<i>Descriptions</i>	<i>1993–2001</i>	<i>2002–08</i>	<i>2002–10</i>
I	Live animals and products	5.4	10.8	11.1
II	Vegetable products	5.6	16.2	13.2
III	Fats and oils	7.4	23.5	20.3
IV	Foodstuffs, beverages and tobacco	–0.2	30.7	22.4
V	Mineral products	6.1	51.5	37.1
VI	Chemical products	11.8	24.8	20.6
VII	Plastics and rubber products	6.7	21.1	15.4
VIII	Hides, skins and leather	3.4	11.0	7.1
IX	Wood and cork	–5.9	27.0	18.6
X	Paper and paper products	14.7	18.0	15.6
XI	Textile and textile products	7.2	12.9	11.0
XII	Footwear, umbrellas, etc.	3.1	18.5	14.4
XIII	Stone, glass, cement, etc.	11.3	19.1	14.5
XIV	Natural/cultured pearls, gems, etc.	8.4	14.7	17.4
XV	Base metals and products	9.2	32.2	22.5
XVI	Machinery	11.6	29.2	25.7
XVII	Transport equipment	4.1	39.8	36.4
XVIII	Instruments and apparatus	20.0	18.1	17.2
XIX	Miscellaneous manufactures	7.8	24.4	19.7
	Total	7.7	24.5	20.8

Source: Veeramani, *Anatomy of India's Merchandise Export Growth*, p. 96.

Table 6.5 Import Growth Rate of Selected Partners of India, 2005–11

<i>Year</i>	<i>China</i>	<i>France</i>	<i>Italy</i>	<i>Japan</i>	<i>UUK</i>	<i>United States</i>
2005	17.6	7.0	8.3	13.5	9.1	13.6
2006	19.9	7.5	15.0	12.3	17.1	10.7
2007	20.8	16.4	15.6	7.5	3.6	5.3
2008	18.5	13.6	9.8	22.5	1.7	7.4
2009	–11.2	–21.8	–26.1	–27.6	–23.8	–26.0
2010	38.7	8.7	17.3	25.7	16.3	22.7
2011	25.0	17.1	14.5	23.2	13.6	15.1

Source: WTO statistics database, available at: <http://stat.wto.org/Home/WSDBHome.aspx>

There has been some change in the direction of trade for India (see Tables 6.6 and 6.7). India's trade focus is gradually shifting from the developed economies towards developing ones. China and few other countries such as UAE, South Korea, Indonesia, and Malaysia are fast emerging as India's important trading partners whereas a share of India's exports to countries in Western Europe, North America, and Japan have started falling. One reason for the fast growth of India's

exports (comprising both merchandise and services items) is the remarkable growth in India's services sector. Since the early 1990s, both merchandise and services exports originating from India, have grown at a rate faster than the world export average. India's share of merchandise trade (includes trade in both merchandise and service sector) increased from 0.9 per cent in 2002 to around 1.9 per cent in 2011. Among merchandise trade, growth in service exports has been much more spectacular. Since the mid-1990s, India's share in global service exports increased from 0.53 per cent in 1992 to around 4 per cent in 2012. Within services, share of IT and ITES comprise around 40 per cent of total India's service exports.⁵ In 2012, India's share in global export of computer and information services was 18 per cent compared to its 4 per cent service exports share in world trade. In IT and ITES, more than 75 per cent goes to three different countries, namely the USA, the UK, and Canada.

Table 6.6 Direction of India's Exports to Developed Economies

Region	Countries	Shares of Total Exports (in %)			Trade Intensity		
		1993	2002	2010	1993	2002	2010
North America	Japan	8.1	3.7	2.2	1.5	0.8	0.6
		19.6	22.7	11.5	0.9	1.0	0.7
	Canada	1.1	1.4	0.5	0.3	0.4	0.2
Eastern Europe	United States	18.5	21.3	11.0	1.1	1.1	0.8
		4.6	5.6	4.0	1.8	0.9	0.5
	Belgium	3.8	3.3	2.3	1.2	1.1	1.0
Northern Europe	Russia	3.0	1.5	0.6	3.3	1.9	0.5
		7.8	6.2	4.0	0.8	0.6	0.6
	United Kingdom	6.4	4.9	3.0	1.2	0.9	0.3
Southern Europe		4.3	4.9	4.2	0.6	0.6	0.6
	Italy	2.8	2.6	1.9	0.8	0.7	0.6
	Spain	1.0	1.5	1.1	0.5	0.6	0.5
Western Europe		17.2	9.2	8.7	0.7	0.5	0.5
	France	2.3	2.1	2.3	0.4	0.4	0.6
	Germany	7.1	4.2	2.8	0.8	0.6	0.4
Oceania	Netherlands	2.4	2.0	3.1	0.7	0.6	0.9
		1.3	1.2	0.9	0.9	0.8	0.6
	Australia	1.1	1.0	0.8	1.0	0.9	0.6
Total		62.9	53.5	35.5	0.9	0.7	0.6

Source: Veeramani, *Anatomy of India's Merchandise Export Growth*, p. 100.

c) Trade barriers

There are two ways to restrict the movement of goods and services: tariff barriers and NTBs. However, NTBs have recently become more dominant than tariffs in restricting market access. Repeated rounds of multilateral trade negotiations under the WTO led to a steady fall in industrial tariffs. Due to WTO commitments, it is not easy for a country to increase tariffs without substantive negotiations with, and compensation to, affected parties, and many countries are therefore now using NTBs to protect their economy. During the pre-liberalization period (i.e., before 1991), NTBs were not important, given India's tiny share in world trade and the relatively small contribution of trade to GDP. However, since liberalization, when India became more outward-oriented, the use of NTBs gained significance. Some NTBs that are adversely affecting the country's exports are anti-dumping procedures, countervailing procedures, sanitary and phytosanitary sanctions, import licensing, rules of origin, tariff quota, and government procurement. We will discuss more about these NTBs in [Chapter 8](#). The major export items of India that face these restrictions in the USA, EU, and Japan, primarily fall under four categories. Using the two-digit Harmonized System (HS),⁶ these items are: HS Code 52 (cotton textiles; facing anti-dumping restriction); HS Code 23 (residues and waste from the food industry prepared animal fodder; facing sanitary and phytosanitary sanctions); HS Code 84 (nuclear reactors, boilers, machinery, mechanical appliances, and parts thereof; facing problems because of import licensing and government procurement); and HS Code 08 (edible fruits and nuts, peel or citrus fruit or melons; facing problems associated with rules of origin and countervailing measures).⁷

Table 6.7 Direction of India's Exports to Emerging and Less Developed Economies

Region	Countries	Shares of Total Exports (in %)			Trade Intensity		
		1993	2002	2010	1993	2002	2010
Central Asia		0.0	0.2	0.1	0.4	1.7	0.5
Eastern Asia (excluding Japan)		8.3	9.6	14.5	1.0	1.0	1.0
	China	1.3	3.1	8.1	0.4	0.8	1.0
	Hong Kong	5.8	4.8	4.4	1.8	1.4	1.2
	South Korea	1.0	1.3	1.7	0.5	0.6	0.7
South-eastern Asia		7.9	9.3	10.9	1.3	1.7	1.7
	Indonesia	1.1	1.6	2.1	1.7	3.4	2.2
	Malaysia	1.1	1.5	1.7	1.0	1.2	1.3
	Philippines	0.3	1.0	0.4	0.5	1.6	0.7
	Singapore	3.5	2.8	4.2	1.6	1.6	2.4
	Thailand	1.7	1.5	1.0	1.5	1.7	1.0
	Vietnam	0.1	0.6	1.2	1.0	2.3	1.8
Southern Asia		5.0	6.0	6.3	3.9	5.1	2.6
	Bangladesh	2.0	2.1	1.4	23.6	21.8	8.3
	Iran	0.7	1.0	1.2	2.0	4.1	3.5
	Pakistan	0.3	0.4	1.0	1.3	2.9	5.3
	Sri Lanka	1.3	1.7	1.5	14.9	26.6	21.8
Western Asia		11.0	12.8	19.9	3.1	4.4	5.0
	Israel	0.6	1.2	1.3	1.3	2.8	3.6
	Saudi Arabia	2.4	1.9	2.1	2.6	3.3	3.1
	Turkey	0.5	0.7	1.1	0.8	1.2	1.1
	UAE	5.4	6.4	12.7	9.8	10.2	14.0
Eastern Africa		1.7	1.6	2.6	4.8	7.2	8.2
Middle Africa		0.1	0.2	0.5	0.7	1.9	2.1
Northern Africa		1.0	1.3	1.8	0.9	1.5	1.5
Southern Africa		0.2	1.0	1.8	0.4	2.4	3.3
	South Africa	0.2	1.0	1.7	0.4	2.4	3.3
Western Africa		0.9	2.1	1.7	1.6	5.0	2.6
	Nigeria	0.6	1.0	0.9	2.9	5.6	3.5
South America		0.7	1.4	2.7	0.3	0.7	0.8
	Brazil	0.3	0.7	1.7	0.4	0.9	1.3
Caribbean		0.1	0.3	1.1	0.1	0.5	2.3
Central America		0.4	0.8	0.5	0.1	0.3	0.2
Total		37.1	46.5	64.5	1.4	1.7	1.8

Source: Veeramani, *Anatomy of India's Merchandise Export Growth*, p. 101.

Similarly, NTBs are affecting services exports as well. There is significant opposition from labour unions in Europe and North America towards procuring Business Process Outsourcing (BPO)-type services from India. In Europe, there are legal norms known as transfer of undertakings and protection of employees, which are designed to protect workers in outsourcing deals. There are also many other barriers, such as the burdensome visa formalities of H-1B visa quotas and different taxation standards, for people willing to provide software-related services. The H-1B is a non-immigrant visa category in the USA that allows employers in that country to seek temporary help from foreign-skilled labourers. In USA, during the time of the

.com boom, the number of H-1B visas rose from 65,000 in 1997 to 115,000 in 1999, but declined to 65,000 in 2002.⁸ In 2006, the UK and Northern Ireland introduced a medical bill that required work permits for non-EU doctors if they wanted to complete National Health Service training. For decades, graduates from overseas medical and dental schools had been coming to the UK to complete two years of training in junior National Health Service posts. Some of these posts were specifically reserved for overseas doctors. From now on, trainee doctors and dentists will not be able to get a training place work permit at a hospital without the hospital proving that it has not been able to recruit a doctor from the UK or the EU. The Government of the UK was open about this, saying, 'it is protecting posts for UK graduates as supply of doctors outstrips demand'.⁹

Hence, looking at the demand-side factors, the positive impact on exports has come mainly from reforms in the domestic economy and in the external sector. Besides reforms, other factors, such as growth in world trade since 2003 and the changes in the composition of trade towards value items have complemented growth in India's exports. NTBs, however, are harming India's exports. Officials at Ministry of Commerce, Government of India, regularly track these NTBs that affect our exports.

2. *Supply-side Factors*

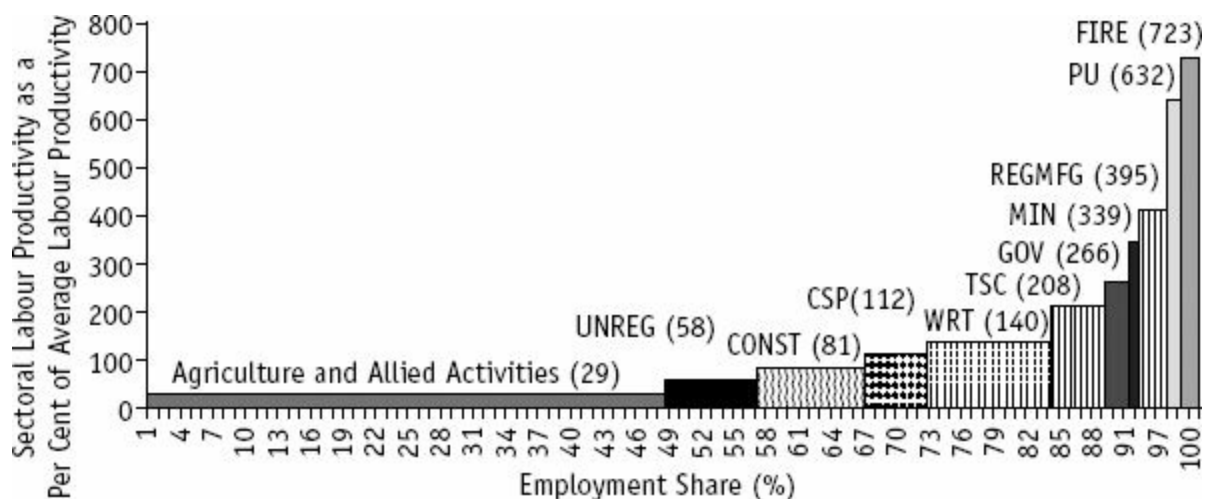
a) Factor productivity

From the supply-side perspective, growth in exports can be an outcome of improved factor productivity. A paper by Bosworth, Collins, and Virmani found that labour productivity increased since 1991.¹⁰ Output per worker grew the most during the period following reforms. What is more interesting is that the sharpest improvement in output per worker was witnessed in the services sector. Incidentally, it is the services sector that has been the star performer, outshining both manufacturing and agricultural exports. Output per worker in the services sector grew at a rate of 7 per cent from 1993 to 1999, compared with only 2.7 per cent during the previous decade. Labour productivity in the manufacturing sector was more modest, growing from 3.1 per cent during the previous decade to 4.5 per cent in the period 1993–99. The agricultural sector lagged behind, with output

per worker rising to only 2.4 per cent from 1993 to 1999, compared with 1.5 per cent during the previous decade.

It is evident from [Figure 6.3](#) that the low-productive agricultural sector is also the largest employer of labour force. In sharp contrast, the finance, insurance, and the real estate sector, which also happen to be the most productive sector, employ only a tiny portion of the workforce. The height of the rectangle indicates labour productivity in any particular sector, whereas the width of the rectangle indicates the share of employment that a particular sector employs. The poor performance of India's agricultural exports can be partly explained by low agricultural productivity. There is a need for capital investment in the agricultural sector and agricultural research. India's agricultural productivity stagnated after the Green Revolution. India has 170 million hectares under food grain cultivation, and produced 259 million metric tonnes of food grains in 2011–12. China has only 60 per cent of this arable land area. But it is able to harvest twice the quantity of food grains that India produces. Raising productivity in Indian agriculture is important not only from the perspective of inclusive growth but also to improve our export performance.

Figure 6.3 Employment Shares and Labour Productivity Differentials across Sectors, 2009–10



Source: R. Hasan, D. Mitra, and A. Sundaram (2013), What Explains the High Capital Intensity of Indian Manufacturing, *Indian Growth and Development Review*, Vol. 6, No. 2, pp. 212–41.

Notes: UNREG: Unregistered manufacturing, CONST: Construction, CSP: Community, social and personal services, WRT: Wholesale—retail trade and restaurants—hotels, TSC: Transport, storage and communications, GOV: Government services, MIN: Mining and quarrying, REGMFG: Registered manufacturing, PU: Public utilities, FIRE: Finance, insurance and real estate.

b) Procedural bottlenecks

Although reforms in India are taking place, they are far from complete. There is scope for further reforms, something we discussed in details in [Chapter 5](#). Exporters face a maze of government orders, regulations, rules, and procedures, which raise the cost of production and hence affect exports. In its Doing Business Report-2012, the World Bank places India in the 132th position out of a sample of 185 countries, which is far worse than China (91st), Sri Lanka (81st), Bangladesh (129th), or Pakistan (107th) when it comes to the convenience of doing business in India. Enforcing a contract in India takes an average of 1,420 days and involves 46 different procedures. Importing goods takes an average of 20 days and 11 documents. Tax payments have to be made on average 33 times per year and the process takes 243 hours.¹¹

c) Infrastructure

To sustain the rapid growth of exports, it is necessary to have a well-functioning infrastructure, including electric power, road and rail connectivity, telecommunications, air transport, and efficient ports. India lags behind East and Southeast Asia in these areas. In 2012–13, the World Economic Forum in its Global Competitiveness Index

Report places India in the 84th position (out of a total sample of 144 countries) when competitiveness is measured in terms of infrastructure development (World Economic Forum, 2013).¹² India, however performed relatively better in terms of overall competitiveness (59th position), which takes into account other factors, such as a country's institutions, infrastructure, macroeconomy, health, primary education, higher education and training, market efficiency, and technological readiness.

India needs to invest over US\$ 320 billion in infrastructure. This figure includes US\$ 130 billion for power, US\$ 66 billion for railways, US\$ 49 billion for national highways, US\$ 11 billion for seaports, and US\$ 9 billion for civil aviation.¹³ During the 11th Five Year Plan (2007–12), 36 per cent of the total investment in infrastructure came from the private sector. This is in contrast to China, where during the same period, 48 per cent of the investment in infrastructure came from the private sector. This is notwithstanding the fact that China's GDP is almost four times the size of India's GDP—US\$ 8.3 trillion for China and US\$ 2 trillion for India in 2012.¹⁴ However, this level of investment requires resources that are not available to the public sector and hence, there is a need for private participation. Unfortunately, private participation has fallen in recent times due to problems associated with regulatory constraints. Except for telecommunication, sectors such as power, ports, aviation, railways, and roads are witnessing slow progress in growth. Further, the nature of bottlenecks is discussed in brief for each one of these sectors.

- i. Power: The power sector is approaching a crisis. Average power supply shortages are approximately 12 per cent of the total demand power supply is irregular and variable in quality, and the power costs for the industry are considerably higher than those of most Asian developing nations. The power shortage rose from 10.5 per cent in 2005–06 to a 14 per cent peak during the first nine months of the financial year 2006–07. Electric power transmission and distribution losses (as a percentage of the total output) stood at 26 per cent in 2004.¹⁵ The irregular power supply hurts manufacturing activities, although in recent times, large manufacturing units have depended

on their captive power plants. Post 2005, power situation in major metros such as in Mumbai, Delhi, and Kolkata, in India, has improved, thanks to participation from major corporates such as Reliance, Tata, and Goenka in power transmission and distribution.

- ii. Ports: Indian ports are over-utilized. Major ports, such as Chennai, Mumbai, Tuticorin, and Visakhapatnam, have consistently handled more cargo than their capacity allows. As a result, these ports are less efficient than other Asian ports such as Singapore, Hong Kong China, and Colombo. In Singapore, for example, the average turnaround for a container ship is only six to eight hours compared with an average of 3.47 days in India.¹⁶ Cargo ships from Indian ports are therefore not cost-efficient, incurring high detention costs of approximately US\$ 15,000–20,000 per day. According to an estimate by the World Bank, container delays at Indian ports cost about US\$ 70 million per year.¹⁷ Port capacities are also not increasing. Due to capacity constraints in Indian ports, cost of undertaking any trading activities (measured in terms of freight on board, and cost, insurance and freight charges) increase. Exporters have to bear detention costs for warehouse facilities, higher insurance charges and other related costs. As a way out, investors have recently established some private ports and cargo facilities throughout the country. There has been a dramatic increase in private sector participation in building ports and port-related infrastructure at Jawaharlal Nehru Port Trust, Mumbai; Mundra (a private port in Gujarat); Pipavav (a private port in Gujarat); and Chennai.
- iii. Railways: In the railway sector, high freight-user charges to compensate or cross-subsidize low passenger traffic are a common complaint. There are also problems associated with connectivity between broad-gauge and metre-gauge railway lines. For example, there is no simple way to transfer goods from Kolkata to neighbouring Dhaka. In the border town in Bangladesh, the trains run in metre-gauge, while in India they run on broad-gauge. There is a need to bridge this connectivity. In the 2006–07 railway budget, rail-based container operations were scheduled for privatization, and it is hoped that this will benefit exporters.

- iv. Roads: India has begun strengthening its road connectivity. Although progress has been made in building four- and six-lane highways connecting four main cities (Kolkata, Chennai, Mumbai, and Delhi), very little has happened with respect to rural road networks. The major arterial routes have low capacity (just two lanes in most cases) and suffer from poor maintenance. Private participation in developing the road infrastructure is permitted with few restrictions on FDI. With the idea of providing better road infrastructure, multilateral agencies such as the World Bank and ADB have joined hands with the Indian central and state governments to fund significant road infrastructure projects. Foreign companies can also bid for these contracts
- v. Aviation: To handle the growing air traffic, there is a need to expand existing airports or, wherever possible, build new ones. The government has airport privatization on its reform agenda, and the private sector has been successfully involved in at least two major airport modernization programmes (Delhi and Mumbai airports). Construction of two additional private-sector-developed airports at Hyderabad and Bangalore has been completed.
- vi. Telecommunication: Telecommunication is a success story in India. Tele-density, which had doubled from 0.3 lines per 100 population in 1981 to 0.6 in 1991, increased about 128-fold in the ensuing 20 years to reach 76.86 lines per 100 in December 2011 (Ministry of Communications and Information Technology, Government of India, 2012). Waiting periods for telephone connections have shrunk dramatically. Telephone rates were heavily distorted in the past, with very high long-distance charges cross-subsidizing local calls and covering inefficiencies in operation. They have been rebalanced by the regulatory authority, leading to a 90 per cent reduction in long-distance charges. Interestingly, the erstwhile public sector monopoly supplier has aggressively reduced prices in a bid to retain market share. Mobile phone services have by far outnumbered landline services. As of March 2011, there were 8115.98 lakh mobile phone users in India as against 347 lakh users for landlines.¹⁸

Hence, although productivity growth has helped to increase the competitiveness of the country's exports, especially, services, a lot needs to

be done with respect to removing infrastructural and procedural bottlenecks (see [Case Study 6.1](#)). Further, we give an account of the procedures to export goods from and import goods to India.

Case Study 6.1: India's Trade Agenda

Although we always quote any country's trade figure, in reality, however, trade figures are derived from trading activities of domestic firms with the outside world. Trade is primarily a private sector activity and it makes sense to understand the problems that are hurting Indian exports. There are primarily two sets of factors that affect any firm's ability to export. These are supply-side factors such as government regulations and inability to provide necessary logistics, rather than the demand-side factors such as appreciation of Indian rupee, tariff, and NTBs. The demand-side factors are exogenous—something that the domestic government and exporting firm cannot influence. However, Indian government can work to make the supply-side factors favourable for Indian exporting firms.

In this regard there are important lessons to be learnt from China. While trade is primarily a private sector activity, much of it relies on infrastructure, which in turn, is primarily financed by the public sector. Infrastructure, both physical and institutional, facilitates trade by lowering the costs of moving goods and services (payments from traders in one country to those in another).

India spends much less on infrastructure in comparison to China. China invests around 7 per cent of its GDP on infrastructure as compared to India which has allocated just 4 per cent towards this crucial growth driver. Lower transaction costs have also given Chinese exports the competitive edge. For example, it takes around 40 days to book a container for export in India as compared to just one day in China.

It is a wonder why China's export figure of US\$ 4.16 trillion in 2013 was almost 10 times that of India. If one takes into consideration items such as iron and steel, chemicals, machines and telecommunication equipment, textiles and clothing, where China and India compete with each other in the international market, the former's share in the world market is much higher. For the above-stated categories, China commands an export share of around 6, 3, 15, 17, and 24 per cent respectively, compared to India's share of around 2, 1, 1, 4, and 3 per cent respectively. The relative success of China lies in its ability to provide a better physical infrastructure and easy availability of cheap credit.

Logistics costs in India are among the highest in the world at 13 per cent of GDP. In many instances, Indian exporters of edible items such as rice, tea, etc., find it difficult to ship their product from the nearest port of exit. For example, exporters in eastern India are forced to transport edible items by road to Kakinada—a port in Andhra Pradesh which offers mid-water loading facilities—to avoid contamination. The congested Kolkata port handles export of iron ore and other metals scraps, items which cause pollution (read dust particles) and thereby expose edible items to the risk of

contamination.

The Chinese government offers other goodies as well. On top of cheaper credit, Chinese manufacturing units also avail cheaper power, water, and land. Besides providing these indirect subsidies, the government also gave differential subsidy. For example, production of staple fibres meant for domestic consumption attracts lesser subsidy as compared to when it is used as an input for making exportables, like polyester yarn.

The special economic zones (SEZs), attracting zero tariffs were built with the idea of making China the assembly hub of the world—where inputs were imported from neighbouring Asia, assembled in China, and thereafter exported to the rest of the world. Coupled with these, a much larger scale of operation by lowering the per unit cost of production, explains China's much higher share of world exports.

Unlike China, exporters in India get little assistance from the government. The recent star performers (sunshine sectors) of Indian exports, items such as fertilizers, steel, and petrochemicals, were successful because industry leaders in India took initiative on their own. In terms of the scale of operation, these industries are comparable to their Chinese counterparts in size. These were set up a few years back taking advantage of lower cost of capital. Borrowing cost in India during the early part of this decade hovered between 7 to 8 per cent as compared to the present rate of 12 to 13 per cent. These sunshine sectors are also highly capital intensive and help in avoiding the labour crunch that sectors such as leather and garments are presently facing.

Indian policymakers have to learn their lesson from their Chinese counterpart. Otherwise, the story of lingering Indian exports will continue to hit national newspaper headlines.

PROCEDURES

Procedures to Export through Sea-route

Step 1

The Clearing and Forwarding Agent (henceforth, C&F Agent) makes reservation for the container with the shipping line upon receipt of the invoice and packing list from the exporter. At the same time, the shipping bill is filed with the Customs Department (either electronically or manually). The shipping bill is a declaration by an exporter on a prescribed form about precise quantity and value of goods that are being exported (entered, as outward in the shipping bill). Prepared by a qualified broker, the shipping bill is examined by the Customs authorities for its accuracy and conformity with tariffs and regulation.

Step 2

After getting approval from the Customs, the container is placed for stuffing, either at the factory premise or any Customs-bonded warehouse, known as Container Freight Station (CFS). In case the cargo is stuffed inside the factory premise, the factory must be registered with the Excise Department, Government of India. Officers from the Excise Department are present at the factory premise at the time of stuffing. Subsequently, the container is sealed by the Excise officers, and the container is moved to a CFS, where only verification of the seal by the Customs officers takes place.

Step 3

In case of a CFS stuffing, after examining the cargo the Customs officers issue a 'Let Export Order' to the C&F agent, who then makes a reservation for the container. After stuffing is completed (also applicable for stuffing at the factory premise), the container is locked with a One Time Lock (OTL) provided by the shipping line. Against this OTL, a unique lock number is provided which gets mentioned in the Bill of Lading (also referred to as B/L).¹⁹ The OTL cannot be opened. If it is tampered, it is a sign that the container was handled after the Customs inspection got over. Post this formality, the container is transported to the port.

Step 4

At Chennai, the container is required to be inside the port premise 24 hours before the vessel sails, failing which, the container is 'shut out'—meaning it has to be shipped through a different vessel, with all the existing shipping documents amended.

Step 5

The B/L is released. The B/L is released by the shipping line either as:

1. Shipped on Board—the B/L is issued only after the container is loaded into the vessel and the vessel has sailed for destination. Or,
2. Received for shipment—the B/L is issued on receipt of the cargo at the CFS of the exporting country.

Normally, the B/L consists of three original and three non-negotiable copies. If the transaction between the exporters and importers is a direct telegraphic transfer, or against the advance paid by the importers to the exporters

beforehand, the B/L can be surrendered at the country of origin. This means, the importers can release the cargo without the submission of the original B/L when the ship reaches the destination country.

Step 6

Once the cargo reaches the destination, the C&F agent from the importer's side takes the original B/L and hands it over to the importer's bank (called the issuing bank). The issuing bank then asks the exporter's bank (called the accepting bank, negotiating bank, or paying bank) to release the fund to the exporter.

Step 7

The exporter presents the B/L to his bankers who discount it and credit the exporter's account once all the norms as stated in the L/C are fulfilled. L/C is a document issued by a financial institution, or a similar party, assuring payment to a seller of goods and services.²⁰

Procedures to Export through Air-route

Step 1

The C&F agent checks for space with the airlines and prepares the airway shipping bill (equivalent to B/L).

Step 2

Once this is done, the C&F agent gets in touch with custom house agents—an authorized entity eligible to file the airway shipping bill.

Step 3

Once the air shipping bill is filed, the C&F agent communicates with an International Air Transport Association (IATA) agent and books space in the airlines.

Step 4

After the air shipping bill is issued, the Customs issues the Let Export Order.

Step 5

Stuffing is done and the airline takes delivery of the items.

Step 6

The consignment is screened and stored in the airport warehouse. In case the consignment is too big for screening, it is kept at a designated area at the airport premise for a period of 24 hours (cooling period). This is to make sure that the consignment does not contain any explosives. There are two differences as opposed to when the consignment is sent through the sea. First, air shipping bill is non-negotiable unlike the B/L which is a negotiable document (i.e., the B/L can be used for releasing money from the issuing banks). Second, once the airline takes delivery of the consignment and the consignment is stored in the airport warehouse, the cost of storage is borne by the airlines and not by the exporters. This is in contrast to the fact that the shipping line bears the storage cost once the consignments reaches the sea port premise.

Procedures to Import

Step 1

Once the consignments reach the port of destination, the C&F agent from the importer's side collect the B/L and hand it over to the importer's bank (called the issuing bank). The issuing bank then releases money to the accepting bank.

Step 2

Containers reach the Customs warehouse. The Customs officials examine the containers and issue a document known as the TR-6 challan. With this TR-6 challan, the C&F agent can go to the Customs warehouse and release the containers.

Step 3

The officials at the Customs warehouse release the containers with an excise seal stating that the duty has been paid. This document can be used to get part of the duty refunded under the Duty Entitlement Pass Book (DEPB) scheme. DEPB is an export incentive scheme, where duties paid on imported inputs are given back to the manufacturers when they export.

Step 4

Before importing plant or animal products, the importing firm has to apply for a license from the Directorate of Plant Protection, Quarantine and Storage

(in case of plant), or from the Department of Animal Husbandry Dairying and Fisheries (in case of animal), both under the Ministry of Agriculture. This license is valid for six months.

Step 5

In case the importers are importing animal or plant produce, it requires few more documentations such as the imported items are free from plant and animal contamination and are safe for human consumption. The imported items are tested for their quality and these are carried out by the central government-designated testing facilities. In South India, there are three such testing facilities located in Chennai, Mysore, and Trichy. Typically, health standards specified by the World Health Organization (WHO) are followed.

Step 6

Once the sample is tested, the report goes from the testing facility to the Customs Department through registered post. Upon receipt of the report, the Customs Department officials release the container from the warehouse.

¹ In India, data in general are based on the financial year, which starts from 1 April of every calendar year and ends on 31 March of the next calendar year.

² C. Veeramani (2007), Sources of India's Export Growth in Pre- and Post-reform Periods, *Economic and Political Weekly*, Vol. 42, No. 25, pp. 2419–27.

³ Law of one price is an economic law that states that when markets are efficient or perfect, then all identical goods will be trading at the same price. So if a bottle of Coca Cola costs \$1 in the USA, then it should cost roughly ₹54 in India. In 2012, exchange rates between Indian rupee and US dollar was roughly US\$ 1 = ₹54

⁴ For more on this literature and about India's exports performance, see N. Banik (2007), India's Exports: Is the Bull Run Over?, *Asia Pacific Trade and Investment Review*, Vol. 3, No. 2, pp. 47–66.

⁵ 'IT-enabled services' are those services that have been transformed by information and communication technology, enabling them to be digitized, codified, and fragmented, and therefore able to be undertaken at any distance from the core business and final customer. These services include those often associated with off shoring, including accounting, financial analysis, call centre services, architectural drafting, and health-record transcription, among other services activities.

⁶ HS code stands for Harmonized Commodity Description and Coding System (HS) of tariff nomenclature—a multilaterally accepted code of commodities used in classifying products mainly for the purpose of international trade. This code is developed and maintained by World Customs Organization (WCO)—an independent inter-governmental organization with 177 member countries as of February 2011.

⁷ N. Banik (2007), India's Exports: Is the Bull Run Over?, *Asia Pacific Trade and Investment Review*, Vol. 3, No. 2, pp. 47–66.

⁸ *Hindustan Times* (2006), 'Bill Gates Is for Big Raise in H-1B Visas', *Hindustan Times*, 21 March.

⁹ Casciani Dominic (2006) Overseas NHS doctors 'betrayed', BBC News, 21 April, available at: <http://news.bbc.co.uk/1/hi/health/4928954.stm>

¹⁰ B. Bosworth, S. Collins and A. Virmani (2006), *Sources of Growth in the Indian Economy*, paper presented to the India Policy Forum, New Delhi, 31 July–1 August.

¹¹ World Bank (2012), Doing Business Report, World Bank, available at: <http://www.doingbusiness.org/data/exploreeconomies/india/>

¹² http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2012-13.pdf

¹³ From a speech by the Minister for Finance of India, Mr P. Chidambaram, at the London Business School on 28 June 2007.

¹⁴ OECD Country Reports (2013), available at: http://www.oecd-ilibrary.org/economics/countrystatistical-profile-china_csp-chn-table-en (accessed on 3 April 2013).

¹⁵ Banik, *India's exports: Is the Bull Run Over?*

¹⁶ Amit Shovon Ray (2005), *Managing Port Reforms in India: Case Study of JNPT, Mumbai*, Report prepared for the World Bank, Washington DC for the World Development Report, available at: http://siteresources.worldbank.org/INTWDR2005/Resources/477407-096581040435/wdr2005_india_port_reform2.pdf

¹⁷ Ibid.

¹⁸ Annual Report 2011–12, Department of Telecommunications, Government of India, available at: <http://www.dot.gov.in/annualreport/AR%20Englsih%2011-12.pdf>

¹⁹ B/L contains information regarding: i) consignor's and consignee's name, ii) ports of departure and destination, iii) name of the shipping line, iv) dates of departure and arrival, v) itemized list of goods being transported with the number of packages and kind of packaging, vi) marks and numbers on the packages, vii) weight and volume of the cargo, and viii) freight rate. It serves as a proof of ownership (title) of the cargo, and may be issued either in a negotiable or non-negotiable form. In negotiable form, it is commonly used in letter of credit (L/C) transaction. A B/L is required in claim for compensation for any damage, delay, or loss; and for the resolution of disputes regarding the ownership of the cargo.

²⁰ A L/C guarantees payment of a specified sum in a specified currency, provided the seller meets the precisely defined conditions as mentioned in the B/L, and submits the prescribed documents within a fixed timeframe. These documents usually include a B/L or air waybill, commercial invoice, and certificate of origin.

CHAPTER 7

External Account and Exchange Rates

INDIA'S EXTERNAL SECTOR

Presenting the budget for 2013–14, Finance Minister P. Chidambaram pointed out, ‘My greater worry is the CAD. The CAD continues to be high mainly because of our excessive dependence on oil imports, the high volume of coal imports, our passion for gold, and the slowdown in exports.’¹ India needs over US\$ 75 billion to finance this CAD deficit. On a longer time horizon (i.e., for a period beyond a year), what can help to bridge CAD during any particular year is higher FDI, FII/foreign portfolio investment (FPI) and external commercial borrowing (ECB).

In order to understand why external sector is important and how it affects the economy in general, we will have to first understand external account (also known as BoP account), exchange rate, and trade cost.

In external account, we have current account and capital account. CAD is the difference between national savings and national investment of any given economy. It records short-term flows of funds into and out of a country, usually, during any given fiscal year. There are two components in the current account. The first component is the trade account that records the flow of merchandise goods into (imports) and out (exports) of a country. During a given fiscal year, if a country exports more than it imports, it has a trade surplus, otherwise a trade deficit. The second component is the services account, recording flow of service payments on account of exports and imports. A country may register a trade account deficit and yet have a current account surplus, if surplus from services account outweighs the deficit in the trade account. The current account surpluses that India registered during the early part of 2000 was because of surpluses in the services account.

Unlike the current account that records a change in national income resulting from exports and imports of goods and services during any given year, the capital account reflects net change in national ownership of assets. Since ownership or selling of assets takes time, the capital account records long-term flow of fund. The word *capital* in the capital account refers to both physical assets such as factories, and financial assets such as shares of stock. When Hyundai built an automobile manufacturing unit in the outskirt of Chennai, it was considered as FDI in India. When GOOGLE buys stock or bonds in some Indian company, it is essentially making FII/FPI in India. In addition to recording transaction in assets, capital account also includes transactions such as remittances to and from abroad and transactions on account of copyright, patent, trademark, and geographical indications. We will be deal in detail with these concepts in [Chapter 8](#).

In India, a particular FII is allowed to invest up to 10 per cent of the paid-up capital of a company, which implies that any investment above 10 per cent will be construed as FDI, though officially such definition does not exist. However, it may be noted that there is no minimum amount of capital to be brought in by the foreign direct investors to get categorized as FDI.

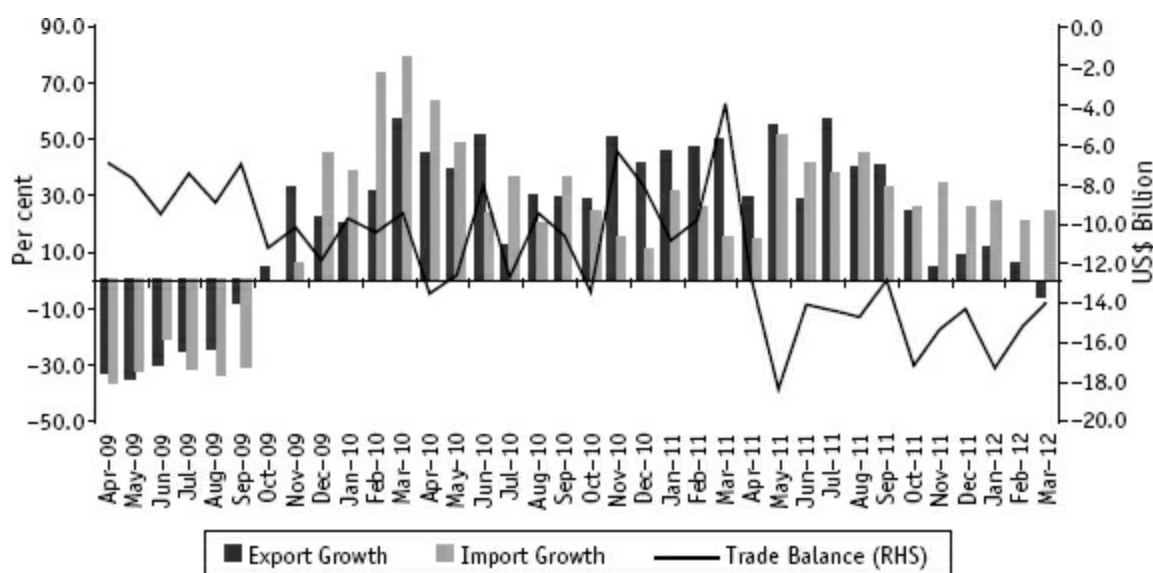
Note that a CAD also implies a surplus in the capital account. Capital account balance reflects the difference between receipt from sale of domestic assets (stocks, bonds, and lands) to foreigners less spending on buying foreign assets. A CAD or a capital account surplus happens when receipt from the sale of domestic assets exceeds the nation's expenditure on buying foreign assets. When a country runs a CAD or a capital account surplus, it is basically depleting its foreign exchange reserves. As the BoP equation comprise both current and capital accounts, the BoP for a country is always zero.

Post-April 2011, India's CAD started worsening (see [Figure 7.1](#)). During the fiscal year 2010–11, India's CAD was 2.6 per cent of GDP, in 2011–12 it was 4.2 per cent of GDP, and it further increased to around 5.2 per cent of GDP in 2012–13. This number would have been lower if we were to measure CAD in dollar terms. Between March 2011 and March 2012, Indian rupee depreciated by around 22 per cent, therefore a lower figure for CAD when measured in dollar term.

Irrespective of this measurement issue, CAD increased. CAD in the first six months of 2012–13 was US\$ 2.5 billion higher than the corresponding period of 2011–12. This increase was caused by a US\$ 1.1 billion increase in

the merchandise trade deficit and a US\$ 1.4 billion drop in the invisible (services and remittances) surplus.² The trade deficit increased. Even as imports fell to US\$ 10.4 billion, the increase in trade deficit was caused by a US\$ 11.7 billion drop in exports. Trade deficit touched US\$ 182.1 billion in the first 11 months of 2012–13. The drop in the invisible surplus was due to a small US\$ 800 million drop in net services export, while an increase in private remittances, more or less balanced out an increase in payments of interest and royalties. The main cause of CAD deterioration is a fall in merchandise exports. Interestingly, during the April–September quarter of 2012–13, merchandise exports fell more than the fall in merchandise imports—exports falling by US\$ 12 billion and imports by US\$ 9 billion. India's main import items are price and income inelastic in nature—petroleum, oil and lubricant, and precious metals such as gold and silver. In value term, for much of 2000s, petroleum, oil and lubricant accounted for around 30 per cent of India's total imports. The second most important items are gold and silver. In spite of being price inelastic, a fall in demand for these items signifies a slowdown in the domestic economy. Likewise, a fall in India's exports signifies a global economic slowdown.

Figure 7.1 Tracking India's Current Account Deficit



Source: RBI Monthly Bulletin, June 2012, Reserve Bank of India.

Controlling CAD is important for two reasons. First, it has important implications on growth as it is closely related to national investment and saving. Second, it affects exchange rates and hence export competitiveness of

a given economy.

Recall the equation that we dealt with during our discussion on the relationship between fiscal and current account.

$$I = S^{\text{Pvt}} + S^{\text{Pub}} + S^{\text{Row}}$$
$$\Rightarrow (G - T) = (S - I) + (M - X)$$

In a closed-economy framework, when savings equal investment, a rise in fiscal deficit implies a rise in CAD. Therefore, to control CAD it is essential to control fiscal deficit and/or CAD. A way to control fiscal deficit is to reduce government's expenditure or to raise tax. For example, raising diesel price (something that we are witnessing now) would increase fuel efficiency and bring down imports. Controlling CAD can be made effective either through increase in exports or by reducing imports. As we have discussed earlier, exports can be increased through increase in competitiveness and through government's support in the form of fiscal incentives such as interest sops, extension of focus market and focus product schemes, incentive for setting up special economic zones (SEZs), and through better provision of infrastructure. Focus market schemes allow exporters to get incentives in the form of cheaper export credit (equivalent to 3 per cent of freight on board value of exports) while exporting certain products (also known as focus products) to certain specified countries (focus markets). Extending the focus market and focus product schemes to units in SEZ further enhance benefits to the exporters. In 2012–13, exports were around US\$ 300 billion lower than the targeted US\$ 360 billion. Exports fell by 1.76 per cent, totalling to US\$ 300.6 billion lower than US\$ 305.9 billion recorded in 2011–12. The trade deficit for the 2012–13 fiscal year widened to US\$ 190.91 billion higher than the US\$ 183.4 billion posted in the previous year.

There is also a need to control domestic inflation. It can help to boost our export competitiveness, increase our exports, and reduce CAD. Lower inflation may also help to reduce imports of gold. Investors often resort to buying gold and silver to hedge themselves against inflation. In addition to the price factor, we can augment exports by easing out procedural bottlenecks (also known as trade cost) negatively affecting exports. Smart policy decisions such as easing supply-side bottlenecks in case of coal (thereby reducing demand for oil imports) and applying higher import duties on gold, can bring down imports and keep CAD under control.

EXCHANGE RATE

An exchange rate between two currencies is the rate at which one currency is exchanged for another. It is also regarded as the value of one country's currency in terms of another currency. For instance, on 1 March 2013, if we were to exchange US\$ 1 for Indian rupee, we would get around ₹54. This is the spot exchange rate that refers to the current exchange rate, say at time period t . We also have forward exchange rate. The forward exchange rate refers to an exchange rate that is quoted and traded today but is due for delivery and payment on a specific future date, say at time period $t+1$. The exchange rate market is an over-the-counter market. There is no single electronic market, a physical place, or an organized exchange such as a stock exchange, with a central trade clearing mechanism where traders meet and exchange currencies. The exchange rate market involves a network of inter-bank traders, consisting primarily of banks doing trade among themselves using telephones and computer terminals such as Reuters and Bloomberg.

Economists agree that 'getting the exchange rate right' is essential for economic stability and growth of any country. Currently many countries, including countries in Asia and North America, *generally* allow the market to determine the price of their exchange rates. These countries essentially have a *floating* currency where the market determines the rate. Occasionally central banks in these economies *intervene* to buy and sell their currency or other currencies to affect exchange rates. When this happens, we say that the exchange rate is a *managed* float.

Few other countries attempt to keep the exchange rate between their currency and another currency constant. For example, China kept the exchange rate constant between its currency Yuan and US dollar until 2005. Back in 1975, 87 per cent of developing countries had some type of pegged exchange rates. By 1996, this number fell below 50 per cent. The trend over the past two decades clearly indicates a shift from *fixed* exchange rates to *flexible* exchange rates albeit with a *managed* float.

Before the *managed* float system, countries around the world followed *gold standard system* and *Bretton Woods System* which were essentially a fixed exchange rate system. Under the *gold standard system* (continued from the 19th century until the 1930s), the exchange rate was determined by the relative amounts of gold in each country's currency, and the size of a country's money supply was determined by the amount of gold available.

Under the *Bretton Woods System* (the name originating from a conference held in Bretton Woods, New Hampshire, USA, in 1944) the central banks of all other member countries in the Bretton Woods System pledged to peg their exchange rates against the US dollar. The USA in turn pledged to buy or sell gold at a fixed price of US\$ 35 per ounce. With the demise of the *Bretton Woods System* during the early 1970s, most of the countries began to shift from single currency pegs to basket pegs, such as to the IMF's special drawing right (SDR). Presently, there are only 58 countries that are following the fixed exchange rate system, with the exchange rates pegged mostly with US dollar and Euro.

However, there are a few exceptions. A prime example is the *Colonies française d'Afrique* ([CFA], French colonies of Africa). It is a franc zone in the sub-Saharan Africa where some 14 countries pegged their rate to the French franc since 1948—with one substantial devaluation in 1994. In addition, some countries reverted against the trend from flexible to fixed rate regimes. These include Argentina, which adopted a type of currency-board arrangement in 1991, and Hong Kong Special Administrative Region (SAR), which had similar arrangements since 1983.

There is another related concept which is that of *crawling peg*. During the 1980s, there was a rapid acceleration in inflation in many developing countries. Countries with inflation rates higher than their main trading partners often devalued their currencies to prevent a severe loss in export competitiveness. This led many countries in the Western Hemisphere, in particular, to adopt *crawling pegs*, whereby exchange rates could be adjusted according to such pre-set criteria as relative changes in the rate of inflation. Later, some countries that suffered very high rates of inflation shifted back to a pegged exchange rate system.

The trend towards greater exchange rate flexibility has been associated with more open, outward looking policies on trade and investment generally and increased emphasis on market-determined exchange rates and interest rates. Here, it is important to distinguish between devaluation and depreciation.

Devaluation happens when a country makes a conscious decision to lower the value of its exchange rate in a fixed exchange rate regime. Devaluation means that more local currency is needed to purchase imports, and exporters get more local currency when they convert the export proceeds (the foreign exchange that they get for their exports). In other words, imports become

more expensive and exporters earn more money. A devaluation is supposed to improve the competitiveness of exporters in the foreign markets. In professional jargon, we say that devaluation ‘improves the terms of trade’.

On the other hand, depreciation happens when there is a fall in the value of currency in a floating exchange rate system. This is not due to any government's decision to lower the value of its currency but due to supply- and demand-side factors. Although, if the government sells a lot of its own currency in the foreign exchange market, it can help in depreciation. Like devaluation and depreciation, when the value of any currency increases under the fixed exchange rate system, it is *revaluation*, and when under a flexible exchange rate system, it is *appreciation*.

India began its reform of the external sector in July 1991 by devaluing its currency by almost 19 per cent. This was followed by an explicit dual exchange rate regime in March 1992, with exporters receiving the free market rate. Finally the exchange rate was unified in March 1993 with the public announcement that the exchange rate is left to be determined by the market forces. The most complicated policy issue confronted by the RBI in 1993–94 was the conduct of exchange rate policy in the face of large capital inflow. The two extreme options available were i) to allow the nominal exchange rate to float freely, and ii) to fix the nominal exchange rate regular interventions (sterilized or unsterilized) in the foreign exchange market. The authorities decided to follow option ii) in view of the highly volatile nature of the capital inflow. As a result, the behaviour of the exchange rate regime (although flexible) displayed the characteristics of a fixed exchange rate. However, there is an important trade-off in this arrangement. In this process, the real exchange rate got appreciated. This was reflected in fall in exports from 20.7 per cent in 1995–96 to 5.3 per cent in 1996–97.

DETERMINING THE VALUE OF EXCHANGE RATES

How does one determine the value of exchange rates? In the [last section](#) we saw that under the floating exchange rate, it is the market that determines the value of the exchange rate. But how does one say whether the exchange rate is trading at the correct price in the market. In economics, there are two ways to determine the *correct* value of the exchange rate. First is the *goods* market approach where an attempt to find the *correct* value of exchange rate is based on the assumption of law of one price (LOOP), using the concept of PPP.

Second is the *capital* or *asset* market approach, where the value of the exchange rate is conditional upon the inflow and outflow of capital into and from the domestic economy.

Goods Market Approach

LOOP states that in the absence of transport and other costs such as tariffs, identical (similar) goods sell for the same price. When market is efficient, arbitrage makes sure this happens. Arbitrage is a type of investment transaction that seeks profit when identical goods are priced differently. Buying an item at one price and immediately selling it at a higher price is a type of arbitrage. Because of the combined activities of arbitrageurs, identical goods, primarily financial assets, cannot sell for different prices for long. This is LOOP. Arbitrage helps make our markets efficient by assuring that prices are in line with what they are supposed to be. LOOP is an integral part of the PPP theory. Under PPP, once the aggregate price level (CPI or WPI type measures) is converted to a common currency, it should be the same across countries. Instead of looking at the aggregate price level, the LOOP states that taken on an individual level, the prices of homogenous goods once converted to common currency should be the same in spatially separated markets. For instance, if a bottle of Pepsi costs ₹50 in India and US\$ 1 in the USA, for the PPP to hold true, the exchange rate between India and the USA should be US\$ 1 = ₹50. If the prevailing market exchange rate is ₹55 = US\$ 1, we say on PPP ground, that the Indian rupee is *undervalued* against the US dollar. During most part of early-2000, there were complaints that China had deliberately undervalued its currency to get an edge over its competitors in the foreign market.

In fact the magazine, *The Economist*, publishes the Big Mac Index, which serves as an informal way of measuring PPP between two currencies. The index takes its name from Big Mac—a hamburger sold at McDonald's restaurant in various countries. The logic behind LOOP is simple, that is, if it does not hold, there would exist an opportunity of a riskless profit through arbitrage. In other words, the goods could be shipped from locations where the price is low to locations where the price is high. However, in practice, it is often observed that prices of similar goods fail to be the same across countries. This contradicts the idea of arbitrage that drives the LOOP and is a signal of incomplete market integration. One reason why the prices of

homogenous goods fail to equalize across different countries is the presence of significant transaction costs and barriers to trade such as tariffs or quotas. When cross-listed equity stocks are considered though, most, if not all of these costs may disappear, creating a convenient environment for testing the LOOP.

LOOP has two versions, absolute PPP and relative PPP. The absolute version examines the aggregate price levels, whereas the relative version examines the *changes* in aggregate price levels over time. In its original form, the absolute PPP can be expressed as follows:

$$\text{Real exchange rate } (R) = \text{nominal exchange rate } (e) \times \text{foreign price } (p^*) / \text{domestic price } (p). \text{ That is, } R = e \times p^* / p.$$

From the above relation, we can derive PPP in relative form. PPP in relative form is important as it helps us to understand why higher inflation leads to depreciation of exchange rate. Under LOOP, homogenous goods should sell at the same price. That is, if LOOP holds true, then $R = 1$. Using this information, we can write the above relation as:

$$1 = e \times p^* / p; \text{ Or } p = e \times p^*; \text{ Or } \text{Log } p = \text{Log } e + \text{Log } p^*; \text{ Or } d\text{Log } p = d\text{Log } e + d\text{Log } p^*$$

Here, d is the difference operator (in the context of difference equation) or $de/e = dp/p - dp^*/p^*$ (since, $d\text{Log } x/dx = 1/x$. That is, $d\text{Log } x = dx/x$).

It is evident from the above that if domestic inflation (dp/p) is higher than foreign inflation (dp^*/p^*), then $de/e > 0$. As we measure the exchange rate as domestic currencies per unit of the foreign currency, $de/e > 0$ implies that for the domestic economy, exchange rate is depreciating.

There is another related concept which is the effective exchange rate (EER). EER is an index that describes the relative strength of a currency relative to a basket of other currencies. The basket is trade-weighted. For instance, if India trades 40 per cent with US, 30 per cent with Euro region, and 20 per cent with China, then EER for India would be $0.40 \times 54 + 0.30 \times 71 + 0.20 \times 9 = 44.7$

Here, we assume US\$ 1 = ₹54, 1 Euro = ₹71, and 1 Yuan = ₹9.

It is a general practice to consider only the top 10 trading partners while calculating the EER. Like the above, we now have *real* EER (REER) and *nominal* EER (NEER). That is, $\text{REER} = \text{NEER} \times p^* / p$.

Capital Market Approach

Under capital market approach, exchange rate is viewed as another asset class. Under this view, exchange rates are asset prices that adjust to equilibrate international trade in financial assets (bonds, stocks, etc.). This is in contrast to the traditional view where exchange rates adjust to equilibrate international trade in goods. Exchange rates are relative prices between two currencies and these relative prices are determined by the desire of residents to hold domestic and foreign financial assets. Because goods' prices adjust slowly relative to financial asset prices and financial assets are traded continuously each business day, the shift in emphasis from goods markets to asset markets has important implication in explaining the volatility of an exchange rate. Exchange rates will change every day or even every minute as supplies of and demands for financial assets of different nations change. However, willingness to invest, and hence the value of the exchange rate is conditional upon returns from investing in domestic and foreign financial assets.

For example, suppose you have the option of investing ₹1 in India, or dollar equivalent of one Indian rupee in the US market. This investment option is for a year. Assume that the *nominal* rates of interest for a year in the US and Indian markets are i_{usa} and i_{india} , respectively. Further, assume that S_t and F_t are the spot and future exchange rates for India. The spot price is the current market price for the exchange rate. On 7 March 2013, Indian rupee was trading at ₹54.83 against US\$1. So on 7 March 2013, the spot exchange rate for India was ₹54.83 to a US dollar. On the other hand, the future exchange rate is the price that the market expects the spot price to be sometime in the future.

If you are investing ₹1 in India, at the year-end, you will get $(1 + i_{india})$. To invest dollar equivalent of ₹1 in the US market, first we need to convert ₹1 into US dollar by dividing it by S_t . This amount when invested in the US market for a year yields $(1 + i_{usa})/S_t$. This return is in US dollar. To do a meaningful comparison, we have to convert this return into Indian rupee by using the forward exchange rate. The return from investing in the US market in rupee term will be $F_t/S_t (1 + i_{usa})$. Under condition of perfect capital mobility where capital flows freely across nations and there are no transaction costs or capital control, the returns from investing in both the

places will be the same:
That is,

$$(1 + i_{\text{india}}) = F_t/S_t (1 + i_{\text{usa}})$$
$$i_{\text{india}} - i_{\text{usa}} = (F_t - S_t)/S_t$$

The above equation is the *covered interest parity* (CIP) condition, where the exchange rates adjust to equalize interest rates differential between two countries. The difference between F_t and S_t is *forward premium* if $F_t - S_t < 0$ and *forward discount* if $F_t - S_t > 0$. The forward premium (discount) is measured in percentage, and it indicates changes in the value of the domestic exchange rate in the future.

If the Indian nominal interest rate is 9 per cent and the US interest rate is 2 per cent, CIP implies that the forward discount should be 7 per cent. We measure the exchange rate as domestic currencies per unit of the foreign currency. At time t , if the nominal interest rate in India is higher than in the USA by 7 per cent, then going by CIP, the Indian exchange rate depreciates by 7 per cent a year from now. The reason why the nominal interest rate is higher in India is because of higher inflation in India in comparison to the USA.

Although these two theoretical approaches help us to understand how the value of exchange rates should be determined, in reality however, the daily fluctuation in exchange rates can be explained by other factors as well. Further, we briefly talk about them.

Market Sentiments

During turbulent markets, investors usually prefer to park their money in safe havens such as US treasuries, Swiss franc, gold, and so on to avoid losses to their portfolios. This flight to safety would lead to foreign investors redeeming their investments from India. This could increase the demand for foreign currencies vis-à-vis Indian rupees.

Speculation

There are derivative instruments and over-the-counter currency instruments through which one can speculate/hedge the underlying currency rates. When

speculators sense improvements/deterioration of the sentiments of the markets, they too want to benefit from such rising/falling dollar. They then start buying/selling dollar which would further change the demand/supply of the dollar vis-à-vis Indian rupees.

RBI Intervention

When there is too much volatility in the rupee–dollar rates, the RBI prevents the rates from going out of control to protect the domestic economy. The RBI does this by buying dollars when rupee appreciates too much and by selling dollars when the rupee depreciates significantly.

Exports and Imports

There are a lot of schemes and incentives for exporters while importers are burdened with many conditions and taxes. This policy level intervention is to protect our economy from high rupee depreciation. Importing foreign goods requires us to make payment in dollars, thus strengthening the dollar's demand. Exports of Indian goods and services do the exact reverse.

Public Debt/Fiscal Policy

Whenever our government fails to match expenses with equivalent revenue, there is a shortage of funds. To finance this, the government at times opts to borrow money from institutions such as the World Bank and the IMF. This debt, accrued interests, and the payments made also lead to currency fluctuations. [Case study 7.1](#) helps to understand the factors that led to the depreciation of Indian rupee.

Case Study 7.1: The Story of the Falling Rupee: Why Is the Rupee So Weak? And What Can Be Done to Pull It Up?*

The question on everyone's mind is why this sudden fall in the value of the rupee and is there any end to this? In order to explain this story, we have to connect a few dots—exchange rate, inflation rate, fiscal deficit, CAD, exports, imports, and the US economy.

Under a floating exchange rate regime, the market determines the value of the exchange rate. In economics, there are two ways to determine the correct exchange rate. First, is the goods market approach where an attempt to find the correct value of

the exchange rate is based on the assumption of 'LOOP', using the concept of PPP. LOOP states that in the absence of transport and other costs such as tariffs, identical (similar) goods sell for the same price. Because of the combined activities of arbitrageurs, identical goods, primarily financial assets, cannot sell at different prices for long.

The prices of homogenous goods, once converted to common currency, should be the same in spatially separated markets. In fact, the magazine, *The Economist*, publishes the Big Mac Index which serves as an informal way of measuring PPP between two currencies. The index takes its name from the Big Mac—a hamburger sold at McDonald's restaurant in various countries.

If LOOP or the Big Mac principle holds true, then the real exchange rate is 1. Therefore, if domestic inflation is higher than the US inflation, the rupee is expected to depreciate against the US dollar (\$).

Second is the asset market approach, where the value of exchange rate is conditional upon the inflow and outflow of capital into and from the domestic economy. What determines these inflows and outflows? In foreign exchange markets, expectations play a crucial role. High fiscal deficits and higher inflationary expectations make domestic assets (government bonds) less attractive.

Currency depreciates (following asset market approach), as foreigners pull out money from the domestic capital market. Stock market tanking every other day is an indication of this trend. And, countries with higher CAD lose investors. Therefore, whichever way we approach the issue, understanding the drivers of inflation is crucial to understanding exchange rate movements.

INFLATION DRIVERS

How does one explain inflation in India? One school of thought holds the view that inflation in India is because of factors such as increased transfers through MGNREGA, higher MSP for farmers, and now the government committing to spend around ₹1.3 lakh crore per annum on account of the Food Security Bill. Money spent without increase in storage capacity in the case of Food Security Bill or without infrastructure projects being completed in the case of MGNREGA, is bound to cause inflation.

Questions were raised about the effective usage of government's money on health and education. Taking the case of Sarva Shiksha Yojana, there has been a rise in literacy and gross enrolment ratios (at the primary level) which has been attributed to the programme. But these achievements do not tell us whether the quality of education improved.

Critics argue that although development indicators have improved, money is not being spent well as the quality of services has not improved. Add to this corruption, and one finds a perfect recipe for inflation.

Fiscal deficit and with it inflation is likely to increase further with the formation of new states such as Telangana, with more resources being used to spend to set up adequate administrative infrastructures (secretariat, police, revenue department, etc.).

Adding to these domestic factors is the US economy showing signs of revival.

There are indications of quantitative tightening where the Federal Reserve is likely to reduce government's bond purchase by US\$ 10 billion per month (from US\$ 85 billion to US\$ 75 billion).

This has further strengthened the US dollar against most Asian currencies. The likely attack by USA on Syria has already pushed up the crude price to US\$ 113 per barrel. In fact, gold in international markets is now trading at US\$ 1,400 per ounce (around 28.3 gram). In India, gold is trading at ₹34,000 per 10 gram, whereas it should have traded at ₹24,000, with ₹50 to US\$ 1 as the exchange rate.

CAD MOVERS

Optimists say that this depreciation of the rupee is good for our exports. Here also, data suggest otherwise. A look at our major export items suggests that there is a change in the composition of India's exports from price-sensitive items such as leather footwear, dairy products, beverages, textiles and apparel, to less price-sensitive items such as refined petroleum product, chemicals, mineral products, and machinery and transport equipment. It is to be noted that the share of petroleum products in India's export basket increased dramatically from around 2 per cent in 1993 to around 20 per cent in 2012. The surge in exports in the case of petroleum items is because of India's potential in oil-refining activities.

On contrary, India's CAD is likely to increase further as oil and precious metals still contribute to the bulk of our imports. Controlling CAD is an important factor from the perspective of sovereign rating—countries with higher fiscal deficits and CAD generally lose out in terms of investor attractiveness. For the last fiscal year, India's fiscal deficit (centre–states combined) was around 9 per cent, the highest when compared with other BRIC economies—China's 1 per cent, Brazil's 2.8 per cent, and Russia's negative 1 per cent (or surplus). A lower sovereign rating is likely to reduce foreign capital inflow depreciating the rupee even further.

What are the ways to arrest this fall? First, create an environment for long-term capital investment. Capital surplus countries such as Japan are keen on investing in our infrastructure. The value addition of a dollar invested in India's infrastructure is higher than many places in Asia, including China. This is however conditional that we create necessary environment for investment. Second, improve trade relations with Iran. This will allow India to import oil in rupee, not spending from its dollar reserves. Third, implement government-funded programmes better. Reform push such as DCT is a welcome move and is expected to plug leakages in the system. Another way to increase effectiveness is to make the programmes more flexible. In the case of MGNREGA, unskilled labourers were used to build rural infrastructure. Instead, MGNREGA labourers should also be allowed to take up alternate activities such as working in agricultural farms, or in small- and medium-scale industries, depending on requirements. Likewise, the money sanctioned under any particular scheme, say under the SSA to build schools should be allowed to be used for the next best alternatives,

say building hospitals, if the village already has a school. This will ease inflation and may arrest the fall of rupee.

– Previously published by the author in *The Financial Express* (31 August 2013).

CURRENCY CRISES AND ITS POSSIBLE EXPLANATIONS

A currency crisis, which is also called a BoP crisis, is a sudden devaluation of a currency which often ends in a speculative attack in the foreign exchange market. A currency crisis may result from chronic BoP deficits or from market speculation about the ability of a government to back its currency. A currency crisis emerges when a national government is forced to abandon a fixed exchange rate regime (in the case of Thailand in 1997) or an exchange rate band (in the case of Mexico in 1994 and Czech Republic in 1997) owing to speculative attacks on its currency in the foreign exchange market.

A broader definition of crisis might also include two other varieties: i) the managed float regime (in the case of Korea in 1997) where official reserves turn out to be inadequate to prevent sharp corrections in the exchange rate, and not defaulting on its debt service obligations. However, unlike a fixed rate regime, the government cannot give up its present regime as a policy tool to overcome the crisis; and ii) an unsuccessful speculative attack which is averted without any devaluation but at the cost of a higher interest rate and loss of international reserves.³

In the first-generation crisis model, a government with money-financed budget deficit is assumed to use a limited stock of reserves to defend the exchange rate.⁴ The inevitable collapse of this regime would generate a speculative attack on the currency when the reserves fall to some critical level. However, these models treat government behaviour exogenously. In other words, it does not specify why government should defend or abandon the peg. The second-generation models of Obstfeld address these issues.⁵ Government chooses whether to defend a pegged exchange rate by making a trade-off between short-term macroeconomic flexibility and longer term credibility. Since private expectations about the regime change affect macroeconomic flexibility by affecting nominal variables, therefore a crisis may emerge due to changes in private expectations about the future correction in the national currency. Because a change in private expectation raises the cost of defending, therefore the moment it crosses the critical level,

government abandons the peg. A change in peoples' expectations could be triggered by anything like a foreign interest rate shock or a high level of unemployment, etc. It is possible to combine various elements of the 'Second Generation' crises models and construct a story that sounds like the 'First Generation' crises model. A third interpretation of attacks on national currencies is that they reflect contagion, the triggering of sequential crises across neighbouring countries. There is empirical evidence to show that exchange rate crises in different countries are closely clustered in time. For example, a Korean devaluation might reduce Indian exports, and therefore, it could lead to a crisis in India. Countries in a region are perceived as a group. Once foreign investors see that one country is facing crisis, they reduce the flow of investment in other countries in the same group. Krugman, while explaining reasoning for the 1997-Asian economic crisis, emphasized on moral hazard problems and associated financial crises.⁶ The moral hazard problem led to excessive investment in real estate business in Thailand. Similarly, lending by the banking sector led to the emergence of speculative bubble. The reason behind sudden rush in short-term foreign capital during early 1990s had to do with the higher rate of return the region was offering. Low American interest rates in the 1990s encouraged investors, looking for higher returns and buoyed dreams of new paradigms, to pour money into emerging markets of Southeast Asia. The life of speculative bubbles is always short-lived as there is no support from the *real* sector. However, it may be noted that *contagion* and *self-fulfilling* elements are also important in explaining some features of the recent Asian currency crises.⁷

INTERNATIONAL COORDINATION TO MITIGATE CRISIS: A NOTE ON G-20

G-20 was formed during the aftermath of Asian financial crisis. Soon after the crisis, an urgent need was felt to restore the world economic order and to sustain growth. World leaders realized the importance for following a coordinated demand management policy, both fiscal and monetary. This coordinated effort was necessary to meet the objectives of creating more jobs and growth, and at the same time making these economies resilient to macroeconomic shocks. However, to make this coordinated effort an effective one, there was a need for forming a forum comprising of both

developed and emerging economies. Thus G-20 was formed as an association of industrialized and developing economies. The importance of the G-20 group can be gauged from the fact that it accounts for 85 per cent of global GDP, over 75 per cent of global trade, and touching life of around two-thirds of the world's population. Today, G-20 as a forum has become more effective, as world leaders are openly able to discuss and prioritize issues that affect lives of majority of world's population.

During the aftermath of US financial crisis, there was an increase in unemployment across Europe and in the USA. Elsewhere, in Asia such as in China and India, there was inflation. Output fluctuation is responsible for two necessary evils, namely inflation and unemployment. How feasible is it to minimize fluctuation in national output (gross domestic product) in the short run and to sustain economic growth in the long run?

Just to put things in perspective, the US economy is at the nascent stage of recovery and the Euro zone is yet to come out of crisis. GDP for the USA expanded at an annualized rate of 2.5 per cent in the first quarter of 2013, compared to 0.4 per cent in the fourth quarter of last year, and 2.2 per cent for the whole of 2012. Growth in the second half of 2013 was forecast at 0.5 per cent compared to the same period of 2012 in the EU. On an annual basis, GDP was expected to remain unchanged in the EU and to contract by 0.4 per cent in the Euro zone in 2013.⁸

But there is much more to this story than what these macro data suggest. Growth has not been uniform in the Euro zone and elsewhere in Asia. Germany stands out in comparison to rest of Europe, whereas in Asia, the second fastest growing economy—India—has slowed down. The problem with not having uniform growth across regions implies inability to formulate a common macroeconomic policy. For instance, if Germany is expanding whereas Greece is contracting, then the European Central Bank cannot formulate a common demand management policy for the EU—Germany would require a contractionary and Greece an expansionary demand management policy. Asymmetric economic activity implies that long-run movements in real output are not synchronized. It also implies that there is contradiction in terms of formulating internal and external macroeconomic policies. To bring uniformity, there is a need for undertaking structural reforms, something which is so very relevant for modern day Europe. G-20 forum needs to persuade European leaders to undertake, if not hasten, structural reform programmes.

World leaders recognize this. At the Toronto Summit (June 2010), the focus was on the need for fiscal consolidation with agreement that advanced G-20 deficit economies would at least halve their fiscal deficits by 2013 and stabilize or reduce their sovereign debt ratios by 2016. These commitments are to be complemented by ongoing structural reforms across all G-20 members to rebalance and strengthen global growth. Leaders also agreed to conclude work of the Basel Committee on banking supervision. They extended their pledge to refrain from imposing new protectionist barriers until the end of 2013 and reiterated support for a successful end to the WTO Doha Round.

MULTILATERAL AID AND VOTING POWER

G-20 leaders also recognized the need to act on their commitment to infuse US\$ 350 billion worth of capital to multilateral organizations. This funding is necessary for institutional reforms in developing countries, especially building capabilities in the areas of trade facilitation and tax collection. Presently, developed countries, including the USA and European countries, have more voting power in institutions such as the IMF and the World Bank. Voting power is derived from each country's contribution to these institutions, which again is conditional upon how *rich* their economy is. A quota is assigned equivalent to the country's subscription to the fund, and this determines its voting power.⁹ For instance, in 2014, there are 188 member countries in the World Bank. However, the EU has one-third of the voting power, whereas G-8 member countries have half the voting power. Voting power determines how much multilateral funds will flow into which region or regional allies.

Developing nations, including India and China, want to reform this voting power so that larger amount of multilateral aid can flow in accordance to the need, independent of the voting power. India also considers the reform of the international financial institutions as a key part of its agenda for the G-20. The 14th Quota Review of the IMF (December 2010) resulted in an agreement that would improve the voting share of the developing countries and get a better representation on the IMF board. India is keen on the earliest possible completion of this ratification process. Australia will have to maintain a fine balance between emerging and industrialized world when it comes to reforming voting power at the IMF and the World Bank.

India also believes that on the issue of development, there is a need to undertake investments in infrastructures such as building roads, ports, and utilities (electricity, banks, etc.). Investments in infrastructure in emerging markets will augment potential of these countries to grow more rapidly in the medium term, besides contributing to resurrect the much-needed global demand. Just as the industrialized countries demonstrated that unconventional monetary policy could be used, India also supported the view that there is a need to bring the same innovativeness in devising ‘unconventional development financing’ for building physical and social infrastructure. At the St Petersburg G-20 Summit (September 2013), India proposed that the World Bank and regional development banks such as the ADB could create a special window for ensuring fund in support of infrastructure finance, including provision of finance for ongoing projects which confront a sudden paucity of funds owing to volatile capital flows. Access to this window should be beyond the normal country limit, which otherwise injects inflexibility.

SUSTAINING GROWTH

In fact, much before the World Economic Forum meet at Davos (January 2014), world leaders were keen about formulating strategies which would create more jobs and sustain growth. The Seoul G-20 Summit (November 2010) came out with the Seoul Action Plan under which member nations committed to implement macroeconomic policies to ensure ongoing recovery for sustainable growth and to enhance stability for the financial markets. In particular, G-20 leaders agreed to develop guidelines for addressing large current account imbalances under the framework for strong, sustainable, and balanced growth and to make significant headway on financial sector reform through agreement on the Basel-III package. Basel-III is supposed to strengthen bank capital requirements by increasing liquidity and decreasing leverage. All these steps are important for averting another global financial crisis and curbing shadow banking activities. Shadow banking activities encompass credit intermediation outside the regular banking system. Setting up commercial banks requires many clearances, especially from the central bank, and these banks usually operate under various norms such as the Basel-III. On the contrary, setting up of any shadow banking activity such as setting up hedge funds requires much lesser clearances.

SHADOW BANKING AND FINANCIAL CRISIS

The financial crisis in USA is a classic tale of financial and real sector de-linkages. It can be traced to the continuous over production of houses and how the financial engineers manipulated the housing/real estate market through shadow banking activities. A housing boom marked by continuously rising real estate and housing prices, accelerated at the turn of century and peaked out in 2006. In the USA, money was cheap, interest rates were low, and the general perception was that real estate and housing prices will continue to rise even if there is a temporary slack. In fact, since the end of World War II, real estate prices had been rising for six decades in the USA. Based on this assumption, even the usual preconditions for a house loan, such as the ability to repay or prior credit records were overlooked before extending mortgages. Loans worth million dollars were extended to persons without job and living on social securities, also termed as NINJA loans, with NINJA being the full-out of people with no income, no job, and no asset. The banks and other financial institutions believed that even if the borrower could not meet the mortgage payments, the continued future appreciation in the price of real estate/houses would take care of any potential default. The US Federal government-sponsored housing mortgage refinance companies, namely Fannie Mae and Freddie Mae, sold these mortgage-based securities to investment bankers such as Lehman Brothers. Riding on this presumption of rising the property price, the financial market (financial engineers) came out with collateralized debt obligations (CDOs). These CDOs were complicated securities based on pools of other mortgages of varying maturities and risk ratings. CDOs became a major source of refinancing mortgages. The refinance of such pooled securities itself was done with highly leveraged debt. For example, Lehman Brothers who was one of the leaders in the CDO market was leveraged 30:1. On average, CDOs generating US\$50 billion every quarter in 2005, rose to a quarterly level of US\$175 billion by last quarter in 2006 and during the first half of 2007. Foreign investors, primarily from Asia, went for investing in these CDOs as these were given AAA rating by rating agencies. American International Group got in with credit default swaps, derivatives providing protection from default of these CDOs.

However, there was a black swan. In 2006, as per Standard & Poor's Case-Shiller Index, housing prices fell by an average of 15 per cent in 20 of the major housing markets in the USA. The decline continued reaching 29 per

cent in 2009. Once the owners of the real estate property realized that property prices are not going to increase any further, those who were holding mortgages well beyond their ability to repay were happy to default—walk away from the mortgage obligation and offer the homes for repossession. The market already had an abundant over-supply of houses. There were no takers of repossessed houses. When it became obvious that housing values were falling, the delinquencies grew rapidly. At the same time, banks and other financing institutions tried to get rid of the sub-prime (worthless) securities from their portfolios. The unbridled optimism that ruled the market turned into panic, and the rest is history.

With the aim of curbing shadow banking activities, the G-20 leaders realized the need for a stricter financial regulation. At the time of financial crisis in the USA, the size of the shadow banking market was more than twice the size of the traditional banking market. It is essential to regulate shadow banking activities by making them adhere to Basel-III norms, controlling the leverage ratio (for instance, Lehman Brothers was highly leveraged), regulating the margin requirement, and maintaining adequate capital to the liquidity ratio.

THE UNINVITED

Capital Flight

A poorly integrated *monetary* with *real* sector may have other fall outs—capital flight, competitive devaluation, and deficit financing. The problem of capital flight may arise when countries within any given region (Asia, Europe, and elsewhere) are not growing uniformly. With tapering in the USA, it is likely that the countries that are not performing well on the economic front and yet have opened up their capital account will be the first ones to witness the outflow of capital, making them vulnerable. It will be useful to recall that the quantitative easing (QE) in the USA prompted a massive influx of funds (short-term hot money) into emerging economies' market leading to the appreciation of various asset classes including properties, stocks, and bonds. Brazil, China, and Indonesia have been criticizing the Federal Reserve for creating asset bubbles in emerging economies, making them vulnerable to foreign capital flow.

QE in the USA and Europe had not only exported inflation to the

developing/emerging economies, but to some extent was also responsible for devaluing their currencies. How? Initially with QE in the USA, investors started investing in both real and nominal assets in fast-growing emerging economies, most of which had relatively little private and public debt by the standards of the high-income countries. As real and financial sector are poorly integrated, additional flow of fund into the emerging economies did not increase their productivity. Instead, it appreciated the value of their currencies in the short run. With time, this appreciating value of currencies started to hurt export performance of emerging economies like China. In addition, flow of dollars into the domestic Chinese economy also created inflation, further reducing its export competitiveness. This is particularly true, as China's exports, like any other emerging economies' exports, are price elastic. All these led the Chinese central bank to devalue its currency.

Currency Devaluation

Currency devaluation is linked to a country's exports performance. The J-curve effect of currency devaluation has been well-documented.¹⁰ Immediately following currency devaluation, the volume of imports and exports may remain largely unchanged due in part to pre-existing trade contracts that have to be honoured. Moreover, in the short run, demand for more expensive imports such as oil and gold (and demand for exports, which are cheaper to foreign buyers using foreign currencies) remains price inelastic. This is due to time lags in the consumer's search for acceptable, cheaper alternatives, which may not exist. Over the longer term, a devalued exchange rate can have the desired effect of improving the current account balance. Domestic consumers might switch their expenditure to domestic products and away from expensive imported goods and services, assuming that equivalent domestic alternatives exist. Equally, many foreign consumers may switch to purchasing the products being exported into their country, which are now cheaper in the foreign currency, instead of their own domestically produced goods and services.

This provides motivation for devaluation. In response to a fall in Chinese exports by 18.1 per cent in February 2014 compared to a year earlier, China's central bank, the People's Bank of China (PBOC), intervened to drive down the value of the Chinese yuan against the US dollar. Renminbi depreciated by 2.8 per cent (until March 2014), almost erasing all of its gains last year and

ending the period of steady gain over the past decade.¹¹

What is true for China is true for other economies as well. In fact, the main concern these days is about how to prevent currency wars among nations. China has an excuse. Chinese policymakers feel that inflation created through QE has been responsible for loss in their export competitiveness, and at the same time making their imports costly. In February 2014, China's imports raised by 10.1 per cent, making China sitting with a trade deficit of US\$ 23 billion—its biggest trade deficit in two years.¹² It will be hard to convince the PBOC not to go for further devaluation unless there is a promise from other G-20 member countries.

Why blame only China alone? Japan's economic recovery in 2013 was as a result of monetary easing and a dramatic fall in the yen's value. In an interview with the Wall Street Journal on the sidelines of the World Economic Forum meeting in Davos (May 2013), South Korea's central bank governor said that any further depreciation of the Japanese yen would cause widespread pain to South Korean exporters.¹³ The economic argument against competitive devaluation is that it is a strategy to export unemployment to trading partners, by showering them with cheap goods and destroying domestic production and jobs. At a time, when world economic order is yet to come out of contraction, such a tactic of competitive devaluation is not desirable.

This currency devaluation blame game is not only restricted to countries in Asia. Countries like Brazil complained that the USA and other industrialized countries were waging a 'currency war' against them by artificially driving down the value of dollars, euros, and yen. Now, officials in some nations such as Argentina and Turkey, blame foreign 'vultures' and 'the interest rate lobby' for the sharp depreciation of their currencies.¹⁴ Among other agendas, one of the important agendas for Australia is how to stop this currency war game. It has to convince two of its biggest trading allies—China and the USA. The recent sharp decline in the Chinese currency is threatening to exacerbate China's trade tensions with the USA and raising concerns over a potential currency war in Asia.

India also suffered. The then Prime Minister of India, Dr Manmohan Singh at the St Petersburg G-20 Summit (September 2013) voiced his concern as to how sudden increase in cross-border capital flow affects the exchange rate, credit volumes, and asset prices. Such flows led to excess leverage in the industrial countries before the global financial crisis, which in turn lead to

stock market and exchange rate volatility in the emerging markets. Volatility in capital market may harm the growth potential of emerging economies notwithstanding their adherence to the flexible exchange rate regime.

Deficit Financing

There is another side of the story. Quantitative tapering in the USA may prompt emerging economies to raise their domestic interest rates in a bid to entice more capital flow from the developed economies. Countries may also start giving tax concession and unnecessary subsidies. Both are inimical to growth. Rise in the interest rate may hurt future growth potential. Tax concession and unwarranted subsidies may worsen the current account balance. Emerging countries can never sustain growth through deficit financing, something which may be true for the USA.

Since US dollar is an international currency, it is easier for the USA to sell its debt, which may not be true for emerging economies. Emerging economies such as China want an alternate to the US dollar. China pitched for a limited expansion of the IMF's current system of SDRs through new issues and by increasing their use in IMF mega-lending programmes. A former member of the Monetary Policy Committee working at PBOC, Mr Yu Yonging said that doing so would build on the earlier proposal made at the G-20 London Summit in April 2009, to issue SDRs equivalent to US\$ 250 billion, which was then quickly implemented. In fact, China was in favour of issuing SDR 150–250 billion annually (roughly US\$ 240–390 billion at extant exchange rates).¹⁵

¹ <http://indiatoday.intoday.in/story/union-budget-2013-14-full-text-of-chidambaram-budgetspeech/1/252048.html>

² RBI Monthly Bulletin (various issues), Reserve Bank of India, publishing data on both merchandise goods and services trade. Also see, Ministry of Commerce, Government of India, publishing data only on India's merchandise trade. Available at: <http://commerce.nic.in/tradestats/indiatrader.asp>

³ Graciela Kaminsky, Saul Lizondo and Carmen M. Reinhart (1998), Leading Indicators of Currency Crisis, *IMF Staff Papers*, Vol. 45, No. 1, March.

⁴ Paul Krugman (1979), A Model of Balance of Balance of Payments Crisis, *Journal of Money Credit and Banking*, Vol. 11, No. 3 (August), pp. 311–25.

⁵ Maurice Obstfeld (1986), Rational and Self-fulfilling Balance-of-payments Crises,

American Economic Review, Vol. 76, No. 1, pp. 72–81.

⁶ Paul Krugman (1998), *What Happened to Asia*, Mimeo.

⁷ Ibid.

⁸ European Commission (2013), EU Economic Forecast: Gradual Recovery, External Risks—5 November 2013, available at: http://ec.europa.eu/news/economy/131105_en.htm (accessed on 31 March 2014).

⁹ More information about voting power is available at: <http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/ORGANIZATION/BOI>

¹⁰ For instance, refer to, M. Bahmani-Oskooee (1985), Devaluation and the J-Curve: Some Evidence from LDCs, *The Review of Economics and Statistics*, Vol. 67, No. 3 (August), pp. 500–4. Also see, S. Hacker (2003), Is the J-Curve Effect Observable for Small Northern European Countries? *Open Economies Review*, Vol. 14, No. 2, pp. 119–34.

¹¹ Source: <http://online.wsj.com/news/articles/SB10001424052702303949704579456583465285674>

¹² Source: <http://www.dailyfinance.com/2014/03/15/will-china-devalue-its-currency/>

¹³ Source: <http://online.wsj.com/news/articles/SB10001424052702303448204579338800064220782>

¹⁴ Source: http://www.nytimes.com/2014/02/08/opinion/currency-wars-revisited.html?_r=0

¹⁵ Source: <http://www.project-syndicate.org/commentary/a-modest-proposal-for-the-g-20>

CHAPTER 8

India and the WTO

GATT AND WTO

The General Agreement on Tariffs and Trade (GATT) was set up in 1947 and sought to liberalize world trade negotiation through a series of multilateral trade negotiation (MTN) rounds. The second last round of negotiations was the Uruguay Round (1986–94) and this agreement came into effect from 1 January 1995. This is also when GATT was replaced by the WTO. Unlike the earlier GATT, which was a set of rules, WTO is a proper organization like the World Bank or IMF monitoring world trade in goods and services. WTO is a forum for the governments to negotiate trade agreements. It is a place for them to settle trade disputes. It operates a system of trade rules via the single undertaking clause, that is, any country party to an agreement under WTO is automatically party to any other agreement even if it is not a signatory to that specific agreement. The last round of WTO negotiation was the Doha Development Round or Doha Development Agenda. It commenced in November 2001 with the objective of lowering trade barriers around the world. As of March 2013, the Doha Development Round was yet to be concluded. Negotiations were stalled because of disagreement over a number of major issues such as agriculture, industrial tariffs, NTBs, services, and trade remedies. The most significant differences were between developed nations led by the EU, the USA, and Japan and the major developing countries led and represented mainly by Brazil, China, India, South Korea, and South Africa. There is also considerable contention against and between the EU and the USA over their maintenance of agricultural subsidies—seen to operate effectively as trade barriers. We will discuss more about these negotiations and India's stance at WTO later. But

first, let us discuss how WTO works.

The formation of WTO on 1 January 1995 goes back to 1948 when GATT was set up. Soon after World War II, an urgent need was felt to refurbish the world trade order. With this objective in mind, UN called for a conference to be held in Bretton Woods in the USA. At the end of the conference in August 1944, it was decided to form three new international institutions. These institutions were meant to facilitate the revival of the then fragile world trade order—the International Bank for Reconstruction and Development (now better known as the World Bank), IMF, and the International Trade Organization (ITO). While the first two bodies were established on 27 December 1945, the ITO was not established due to resistance from the US Senate. In its place, however a protocol was signed among 27 countries, calling the first round of negotiations under the GATT. GATT, unlike the stillborn ITO that was conceived as a full-fledged organization, was a set of rules formed by worldwide consensus. It is to be noted that India is one of the founder members of GATT 1948.

From 1948 till the end of 1994, GATT was a set of rules facilitating international trade. The system was developed through a series of trade negotiations or rounds. The initial rounds dealt mainly with tariff reductions but later negotiations included other non-tariff measures like anti-dumping measures, countervailing measures, sanitary and phytosanitary sanctions, etc. The second last round of negotiations held during the Uruguay Round (1986–94) ultimately led to the creation of the WTO.

The negotiation process that started with the formation of GATT on 1 January 1948 gathered momentum with each round of negotiation. Till the Kennedy Round of 1966, developing countries did not have to reciprocate to the tariff reduction made by the developed countries. The objective of the main player in the system—the USA—was to break the system of preferential tariffs available to the UK while trading with its former colonies. The USA was also keen about bridging trading relations with Japan, and GATT worked exceedingly well between 1950 and 1970. During this period, world trade expanded at around 8 per cent in real terms. However, this bonhomie ended during the Tokyo Round of GATT negotiations during the 1970s, when developed countries wanted to end this practice of one-sided reciprocity. They also wanted to introduce services, in addition to trade, under the realm of GATT. Much of the unfinished agendas that were conceived during the Tokyo Round were carried forward to the Uruguay

Round (1986–94).

In fact, between 1948 and 1994, eight rounds of negotiations were conducted. Many new agreements were concluded at the end of the Uruguay Round. The Uruguay Round agreements can be thematically divided into three different groups—market access (tariffs, NTBs, textiles and garments, agricultural, tropical products, natural-resource-based products), rules (subsidies and countervailing measures, safeguards, anti-dumping, dispute resolution, GATT articles, MTN agreements and arrangements), and the new areas (trade-related intellectual property rights [TRIPS], trade-related investment measures, services). To make these agreements compulsory, a new multilateral body, the WTO, was conceived.

In February 1997, an agreement was reached on telecommunication services, with 69 governments agreeing to wide-ranging liberalization measures that went beyond those agreed in the Uruguay Round. In the same year, 40 governments successfully concluded negotiations for tariff-free trade in information technology products, and 70 members concluded a financial services deal covering more than 95 per cent of the trade in banking, insurance, securities, and financial information. In the May 1998 ministerial meeting in Geneva, WTO members agreed to study trade issues arising from global electronic commerce. In the ministerial meet in Seattle, 2000 negotiations happened with respect to agriculture and services. After the Seattle Round, six more ministerial meetings took place—Doha (2001), Cancun (2003), Hong Kong (2005), Geneva (2009), Geneva (2011), and Bali (2013). All these ministerial meets—year of occurrence in the parenthesis—were part of the Doha Development Round. In the Doha Development Round, emphasis was laid so that the negotiating countries gave commitment to open up agricultural and manufacturing markets as well as General Agreement on Trade in Services (GATS) negotiations and expanded intellectual property regulation (TRIPS).

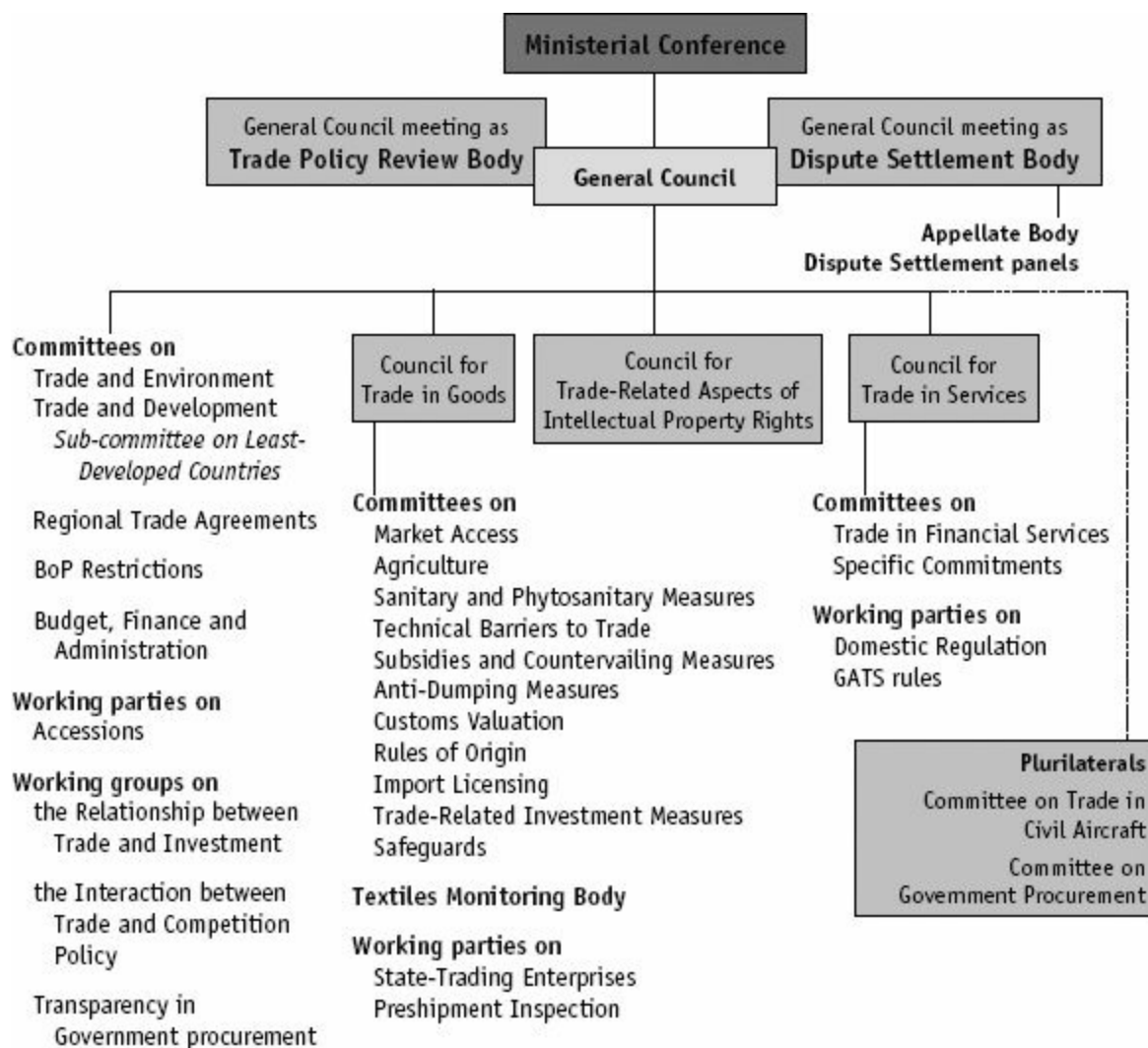
WTO STRUCTURE

As on June 2014, the WTO had 160 members, accounting for over 97 per cent of the world trade. In the decision-making process, any 25 of the 159 member countries are involved in the final stages of negotiation. This part of the final negotiation is also called ‘green room’ negotiation. However, of these 25 countries, 18 are from the developed world while the remaining

seven slots go to more prominent developing economies such as India, Brazil, and Argentina. Hence, it is no surprise why WTO decisions are often tilted in favour of developed nations.

Most decisions in WTO are taken at the Ministerial Conference which generally meets once every two years (see [Figure 8.1](#)). Below this is the General Council (normally ambassadors and heads of delegations in Geneva, but sometimes officials sent from members' capitals), which meets several times a year in Geneva. The General Council also meets during trade policy review and dispute settlement between member countries.

Figure 8.1 The WTO Structure



Source: WTO.

Below the General Council are three councils, namely the Goods Council,

Services Council and the Trade-Related Intellectual Property Rights (TRIPS) Council. They report to the General Council. In addendum, there are numerous other specialized committees, working groups, and working parties dealing with the individual agreements and other areas such as the environment, development, membership applications, and regional trade agreements.

During the first Ministerial Conference in Singapore in 1996, three new working groups were added to this structure. The idea was to chalk out a relationship between trade and investment, and trade and competition policy, besides introducing more transparency in the government procurement process. At the second Ministerial Conference in Geneva in 1998, it was decided that the WTO would also study the area of electronic commerce. The negotiations were intended to start at the Ministerial Conference in Seattle, USA, better known as the Millennium Round. However, the Millennium Round in 1999 failed and it was decided that negotiations would not start again until the next Ministerial Conference in 2001 in Doha, Qatar. This also led to the inception of the Doha Development Round.

WTO RULES

The WTO rules and the agreements are the result of negotiations between members. The current set-up in the WTO is the outcome of the 1986–94 Uruguay Round negotiations which entailed a major revision of the original GATT. The Uruguay Round also created new rules for dealing with trade in services, relevant aspects of intellectual property, dispute settlement, and trade policy reviews. The complete set runs to some 30,000 pages consisting of about 60 agreements and separate commitments (called schedules) made by individual members in specific areas such as lower customs duty rates and opening of the services market.

Through these agreements, WTO wants to operate as a non-discriminatory trading system that spells out the rights of members and their obligations. Each country receives a guarantee that its exports will be treated fairly and consistently in the markets of other countries. That is, each partner enjoys a most favoured nation (MFN) status in trading with others. The only exception is Article XXIV, which allows member countries to form regional trading blocks and deviate from the MFN status. There are four different forms of regional trading agreements (RTAs), namely free trade areas (FTAs), custom

unions (CUs), common markets (CMs), and economic unions. In forming an FTA, members remove trade barriers among themselves but keep their separate national barriers against trade with outside nations. In a CU, members not only remove trade barriers among themselves but also adopt a common set of external barriers. In a CM, members allow full freedom of factor flows (migration of labour and capital) among themselves in addition to having a CU. In an EU, members unify all their economic policies, including monetary, fiscal, and welfare policies, while retaining the features of a CM.

WTO foresees that any trade block formation has more of a trade creation effect than trade diversion, hence this exception. Trade creation happens when a more efficient producer of one country displaces the less efficient producers of other member countries within the FTA. On the other hand, trade diversion results in displacement of more efficient producers outside the FTA—losing market share to less efficient producers within the FTA. For example, both Bangladesh and India are part of the South Asian FTA (SAFTA), which means duty-free trade between these two nations. When Bangladesh allows Indian cement to be imported duty-free and leads to the more efficient Indian cement industry outcompeting the less efficient Bangladeshi cement industry, it results in trade creation. On the other hand, duty-free access to Indian television manufacturers to Bangladesh resulting in the displacement of more efficient Japanese television manufacturers who remain subject to duty, results in trade diversion.

NEGOTIATIONS AT GATT/WTO

Goods

The initial negotiations began with trade in goods. From 1947 to 1994, GATT was the forum for negotiating lower customs duty rates and other trade barriers; the text of General Agreement spelt out important rules, particularly pertaining to non-discrimination. Since 1995, the updated GATT has become the umbrella agreement of the WTO for trade in goods. It has annexes dealing with specific sectors such as agriculture and textiles, and with specific issues such as state trading, product standards, subsidies, and actions taken against dumping.

Services

Banks, insurance firms, telecommunications companies, tour operators, hotel chains, and transport companies looking to do business abroad can now enjoy the same principles of free and fair trade that originally only applied to trade in goods. These principles appear in the new GATS. WTO members have also made individual commitments under GATS stating which of their services sectors they are willing to open to foreign competition, and how open those markets are.

Intellectual Property Rights (IPRs)

Intellectual property rights (IPRs) are rights given to creators to prevent others from using their inventions, designs, or other creations. There are three types of IPRs—copyrights, trademarks, and geographical indications. The rights of authors of literary and artistic works (such as books and other writings, musical compositions, paintings, sculpture, computer programmes, and films) are protected by copyright for a minimum period of 50 years after the death of the author. Trademarks are recognizable signs, designs, or expressions which identify products or services of a particular source from those of others. Examples are Coca Cola, Amul, etc. Geographical indications are place names (in some countries also words associated with a place) used to identify the origin and quality, reputation or other characteristics of products (e.g., ‘Champagne’, ‘Tequila’ or ‘Roquefort’). IPRs state how copyrights, trademarks, geographical names used to identify products, industrial designs, integrated circuit layout-designs, and undisclosed information such as trade secrets should be protected when trade is involved.

Trade-Related Investment Measures (TRIMs)

The agreement on Trade-Related Investment Measures (TRIMs) are rules that apply to the domestic regulations a country applies to foreign investors, often as part of an industrial policy. TRIMs negotiation during the Uruguay Round applies only to measures that affect trade in goods. Recognizing that certain investment measures can have trade-restrictive and distorting effects, it states that no member shall apply a measure that is prohibited by the provisions of GATT Article III (national treatment) or Article XI (quantitative restrictions).

Dispute Settlement

The WTO procedure for resolving trade quarrels under the dispute settlement mechanism is vital for enforcing its rules and therefore ensuring that trade flows are smooth. Countries bring disputes to the WTO if they believe their rights, spelt out under the multilateral agreements, are being violated. Judgements by specially appointed independent experts are based on interpretations of the agreements and commitments of individual countries.

The system encourages countries to settle their differences through a process of consultation. Failing that, they can follow a carefully mapped out, stage-by-stage procedure that includes the possibility of a ruling by a panel of experts and the chance to appeal the ruling on legal grounds. Confidence in the system is borne out by the number of cases brought to the WTO—457 cases by March 2013 compared to some 300 disputes dealt with during the entire life of GATT (1947–94).

Trade Policy Review

The purpose of the trade policy review mechanism is to improve transparency, create a greater understanding of the policies adopted by various countries and assess their impact. Many members also see the reviews as constructive feedback on their policies. All WTO members must undergo periodic scrutiny. Each review contains reports by the country concerned, and the WTO Secretariat.

Although institutions like the WTO attempt to guarantee free and fair trade, in reality, trade is suffering because of NTBs and trade costs. We deal with these two important issues in the following section.

NTBs

NTBs are an important factor for which a country's export potential can remain underutilized. There are many types of NTBs that can hinder exports. Major types of NTBs are given in [Table 8.1](#). NTBs mostly come under the *Rules* part of GATT. As we will see later, each one of these NTBs were codified as agreements during various rounds of GATT negotiation for a purpose. We refer to these agreements as NTBs if they are used for restricting market access and not for the purpose with which they were codified. As tariff increase is not permissible, many countries impose NTBs (permissible

under the WTO framework) to protect their domestic economy.

Quantitative Restriction (Quota)

Think of a nagging exporter complaining about his/her inability to sell products not because they are less competitive (price or otherwise), but because the foreign government does not allow him/her to sell products beyond a certain limit. It would be wrong, saying that the foreign government does not allow the exporter to sell more than what he wants but actually restricts quantum of imports by issuing licenses to its importers. Hence, demand function of the foreign importer is binding not because of any endogenous factors like management decision or a weaker perceived demand, but purely because of an exogenous factor like their government's decision of restricting quantum of imports. As a result of quota restriction, the exporting firms more often land up exporting products less than their potential, and same is for the importing firms, failing to import less than their perceived demand. Such form of restriction in economic parlance is known as quantitative restrictions or quotas.

Table 8.1 Major Types of NTBs

Barriers	Major Instruments
Non-Tariff	Quantitative Restrictions
	Anti-dumping Procedures
	Countervailing Procedures
	Sanitary and Phytosanitary Sanctions
	Import Licensing
	IPRs
	Safeguards
	Rules of Origin
	TRIMs
	Technical Barriers to Trade

Different Forms of Quota

There are four types of quota. First is *tariff quota*. It combines characteristics of both tariff and quota. Under a tariff quota, imports of a commodity up to a specified volume are allowed duty-free or at a special low rate, but any imports above this call for a much higher level of duties that in many cases are prohibitive in nature, that is, sufficient to restrict imports. Second is *unilateral quota* or more general form of quota, where a country unilaterally

fixes ceiling on quantum of total imports. Third is *bilateral quota* resulting from negotiation between the importing and exporting country. Here the quantum of export is a function of political factor determined by the bilateral tie-up. And fourth is *mixing quota* where the producers are obliged to utilize domestic raw materials up to a certain proportion of finished product.

Quota regulations are generally administered by means of import licensing. Under this system, prospective importers have to obtain import licenses before he starts importing. Thus, quantum of imports that one can realize depends upon what his license permits. Likewise, in the exporting country (facing quota restrictions), it is the government or any other parastatal organization that determines the number of licenses to be given to any prospective exporter. For example, until 2005, Indian garment manufacturers faced quota restrictions in Western European and US markets. The exporters in India had to obtain quotas from Apparel Export Promotion Council, while for yarn and fabric they had to obtain licenses from the Cotton Textiles Export Promotion Council.

An important rationale for imposing quota is to reduce a country's dependence on imports, so to improve its BOP position. Quota restriction becomes an NTB when countries use them not to improve their weak BOP position but to restrict market access. Restricting market access has some negative effects. First is the *price effect*. As quotas limit the total supply of goods, it results in price rise. Second is the *consumption effect*. Higher price in the presence of quota means lower consumption, assuming imports are price elastic. Third is the *protective effect* which is to shield domestic industries from foreign competition. This rationale is driven by infant industry argument, where fledgling domestic industries need protection. Fourth is the *redistributive effect*, where transfer of resource takes place from the consumers to domestic producers. With the imposition of quota, the consumers end up paying a higher price and domestic producers gain. Last is the *revenue effect*. As quotas are administered by means of license, government obtains revenue by imposing license fees.

Quota vis-à-vis Tariffs

The main difference between quota and tariff is that the latter is *commodity-based* and *non-discriminatory* in application. In the case of tariff, a country cannot discriminate against its supplier but it can do so in the case of quota. Quota also has a better protective capability. When imports demand is price

inelastic, no matter how high the tariff is, the country will import. The case in point is gold and oil imports. In such cases, quota provides a better measure for restricting imports. However, quotas are not favoured because they result in deadweight loss. Quota restrictions encourage shift in production from more efficient foreign producers to less efficient domestic producers, resulting in deadweight loss.

During pre-reform time, that is, before 1991, India's imports (and exports) belonged to four categories, namely OGL, prohibited or banned, restricted, and canalized. The post-reform period added a fifth category, namely special import license (SIL)—a subset of the restricted lists. Reform witnessed more and more items brought under the OGL list from the restricted ones. OGL contains lists of items outside the purview of quota. Contrary to what the phrase seems to suggest, no licensing is needed for OGL items although relevant import duties have to be paid. The negative list of imports consists of three main categories. The first is a prohibitive type, disallowing imports of commodities the government thinks may go against national interest. Examples include tallow, fat, ore, wild animal, defence, and ivory. The second is of restrictive nature, allowing the import of products by issuing SIL to special category of exporters. Few consumer durables such as luxury cars fall under the restricted list, and hence to be imported acquiring SIL. The third category refers to canalization, where import can materialize only through canalized agencies. For example, to import gold in bulk, it has to be done through specified banks like State Bank of India and some foreign banks or designated agencies.

Anti-dumping

Anti-dumping duties are product-specific or source-specific, imposed on dumped import causing harm to domestic industries. The idea behind introducing anti-dumping agreement during the Tokyo Round of GATT negotiation was to stop predatory pricing. Predatory pricing refers to the practice of selling a product far below its cost of production with the intention of driving the domestic competitors out of the market. However, once the low prices charged by the incumbents serve as an entry barrier, in the long run foreign producers raise the prices to make up some of their early losses. Article VI stated, 'the contracting parties recognize that dumping, by which products of one country are introduced into the commerce of another country at less than the normal value of the products, is to be condemned if it

causes or threatens material injury to an established industry in the territory of a contracting party.’ Normal value is the price at which goods get sold in the domestic market of the exporting country. For action to be taken against dumping, one has to, in addition, establish injury to domestic industry. A causal link between the act of dumping and the act of injury must also be established and if this link is established, anti-dumping duties can be imposed. It is quite easy to establish this link, and any government can use anti-dumping measures against any foreign firm. Anti-dumping measures become an NTB, when it is used for restricting market access and not to stop predatory pricing. Anti-dumping measures become NTB when used for restricting market access and not for stopping predatory pricing (see [Case Study 8.1](#)).

Case Study 8.1: Are Anti-dumping Measures Justified*

Anti-dumping duties are ‘product-specific’ or ‘source-specific’ duties, imposed on dumped imports causing harm to the domestic industry. The problem is not with the imposition of anti-dumping duties, but the rationale behind their imposition. In many instances, these are imposed with the sole objective of safeguarding the interests of the domestic industry, without taking into account the occurrence of dumping. Trade theorists have argued the need to reduce trade barriers to increase economic welfare. With the WTO upholding the need for free trade, the use of anti-dumping measures with the sole intention of safeguarding domestic interests may undermine WTO's efforts.

The economists’ popular definition of dumping refers to the act of selling a product at a price that is less than the marginal cost of production. Under the condition of dumping, the firm, to sustain itself, has to cross subsidize, that is, charge a higher price in another market to make up its losses in its dumping market. However, this is not a plausible option given that most markets are now open and not geographically isolated.

There is always a competitive pressure from other international firms to capture any particular market. Because of WTO, not many countries are now protected in terms of high tariff barriers or quota restrictions. Hence, the basic conditions under which anti-dumping duties would have thrived most, that is, in the closed economy context, presently do not exist. Hence, dumping cannot be sustained in the long run. Accordingly now, in many instances, anti-dumping measures are used as an NTB.

Who are the sufferers? The efficient producers. The five most affected sectors in terms of imposition of anti-dumping duties include basic metals, chemicals, machinery and electrical equipment, and plastics and textiles.

The leading producers of these items for the year 1998–99 (this is, the latest available data) were China, Taiwan, and Korea. Incidentally, these are also the countries against whose exports maximum numbers of anti-dumping investigations

were initiated during 1998.

Given their export share in world trade, one can argue that the aforesaid countries are efficient producers of these items. It would be irrational on their part to dump products. There is little reason for them to sell at a price lower than their domestic market price, which, in any case, is low because of efficient production.

There are other negative implications. Under competitive conditions, foreign export subsidies or dumping means an aggregate real income gain to the importing country because of improved terms of trade. Consumers of the importing country also benefit. Though import-competing industries in the domestic country get hurt, they can compensate through internal redistributive measures like provision of subsidy.

* Previously published by the author in *The Hindu Business Line* (21 May 2002).

Countervailing Procedures

The rationale behind using countervailing duties is to discount any effect of subsidies given on exports. Often it becomes possible to sell products at a lower price if governments subsidize the production process. Most of the agricultural produce in Western Europe, USA, and Japan are highly subsidized. As a result, farmers in these regions can outsmart their counterparts from developing and less developed countries, selling products at a cheaper price in the world market. To mitigate the effect of such subsidies, a country under the WTO framework can impose countervailing duties to counteract the effect of such foreign subsidies. Unfortunately, like anti-dumping duties, this is now used more as a protectionist measures rather than counteracting the impact of foreign subsidies.

Sanitary and Phytosanitary Measures

It is an agreement on how governments can apply food safety and animal and plant health measures (sanitary and phytosanitary measures) to safeguard health of its consumers. Many Indian exportables are now facing blockade arising from these health or environment-related sanctions. Interestingly, many countries are setting their health standards at a level higher than the internationally prescribed one. For example, in the case of tobacco exports, the internationally permissible level of dichlorodiphenyltrichloroethane (DDT) residue is 4 parts per million (ppm), while Japan and USA had set their permissible level at less than 1ppm—the idea is again to block tobacco exports originating from countries like India.¹ In similar vein, in 2009, India

banned imports of a number of live animal products, including processed meat, eggs, pigs, etc., from the rest of the world on the pretext of avian influenza (swine flu) virus.² India's actions should not be looked at in isolation. Reports are prepared and posted on government actions all over the world. In Asia, China banned imports of Irish pork, Belgian chocolate, Italian brandy, British sauces, Dutch eggs, and Spanish dairy products. It should be noted that much of this discrimination against foreign commercial interests does not break any WTO rules. Countries use NTBs on the pretext of safeguarding the health of their consumers, perfectly permissible under WTO rules.

Import Licensing

This is an administrative procedure requiring the submission of an application to the relevant administrative body as a prior condition for importing any commodity. Its uses are now less than in the past. Complex procedures of import licensing, however, do affect Indian exports. For example, the construction sector in Japan requires extensive licensing requirement. Similarly, Chinese licensing requirements encompass a large proportion (almost 50 per cent) of their total imports by value. Indonesia has restricted imports by allowing entry points only through five designated ports and airports. Japan and South Korea have restricted foreigners from bidding for any government projects worth less than US\$ 22 million dollars.³

Rules of Origin

This criterion is used to identify the origin of the product. Countries, because of some trade agreements with others, may give each other greater market access. This happens when countries are part of any regional trade agreements or when some developed countries import products from less developed countries. The special treatment in terms of tariffs and quota concession is conditional upon the source of imports. However, there is wide variation in the practice of governments with regard to the rules of origin. While the requirement of substantial transformation is universally recognized, some governments apply the criterion of change of tariff classification, others the ad valorem percentage criterion and yet others the criterion of manufacturing or processing operation. In a globalizing world, it has become even more important that a degree of harmonization is achieved

in these practices of members in implementing such a requirement. Rules of origin become an NTB when countries tweak the rules and use them in their favour to restrict market access. Consider this: India and Sri Lanka have a free trade agreement. Under the existing rule, if a product is manufactured, or even more than 35 per cent of the value addition in production is done in Sri Lanka, then ideally, there should be no import duty when this product is imported to India. In reality, however, Department of Commerce, Government of Sri Lanka, issues the rules of origin certificate only after the shipment leaves Sri Lanka. As shipments from Sri Lanka arrive within a period of 24 hours, the goods arrive prior to the document. This causes a delay as the goods cannot be cleared from the customs. Importers have to pay a hefty demurrage fees. Many times Indian customs even demand for detailed cost sheets, reflecting value addition in excess of 35 per cent in Sri Lanka.⁴ Exporters from Sri Lanka usually do not want to share any cost-related information, in the fear that this may fall in the hands of their competitors, and refuse to trade.

Safeguards

Safeguard measures are defined as *emergency* actions with respect to increased imports of particular products, where such imports have caused or threaten to cause serious injury to the importing member's domestic industry. Such measures, which in broad terms take the form of suspension of concessions or obligations, can consist of quantitative import restrictions or of duty increases to higher than bound rates.⁵ Major guiding principles of the agreement with respect to safeguard measures are that such measures must be temporary; that they may be imposed only when imports are found to cause or threaten serious injury to a competing domestic industry; that they be applied on a non-selective (i.e., MFN) basis; that they be progressively liberalized while in effect; and that the member imposing them must pay compensation to the members whose trade is affected. However, often countries use safeguard measures coming under the pressure of the domestic lobbying firms. For instance, in the USA, domestic steel industry has been quite successful in making the Congress implement safeguard measures against more competitive steel producers from China, EU, and Japan. Steel industry around Philadelphia also happens to be the largest donor in the US Presidential election, and hence a bigger lobbying power.

IPR

Many countries lack strict IPR regulations. A weak IPR regime abroad by failing to provide protection against piracy can affect our exports. For example, Indian software exports to Southeast Asia are not taking off because of rampant prevalence of illegal copying. In another instance, an American firm in Texas started selling rice under brand name Texmati, with similar aroma and texture as that of Indian Basmati. This is violation of geographical indication clause under IPR. Here, Indian exports got affected because people started buying Texmati, thinking it to be Indian Basmati.

Service Barriers

Service barriers are hurting movement of Indian software professionals. There are two kinds of software services, namely the on-site services and offshore services. The problem arises in the case of the former, when professionals have to move out and provide services in places of their clients, typically in the USA. Indian software professionals face entry barriers when they go to the USA, especially with higher H-1B visa fees, and a cap on the numbers of workers (off-site workers) any company such as Infosys, TCS, etc., can send to work in the USA.

Local Content Requirement

Local content requirement requires that the investors purchase a certain amount of local materials for incorporation in the investor's product. These undertakings pertained to the purchase of certain products from domestic sources (local content requirements) and to the export of a certain amount or percentage of output (export performance requirements). Local content requirement acts as an NTB for foreign investors and in principle it goes against TRIMs.

Technical Barriers to Trade

Technical barriers to trade such as relating to product labelling and standards can also affect trade. International trade law regulates labelling requirements so as to make consumers aware about the products. However, in the context of product labelling and standard requirement, traders are harassed. Importers have to make sure that the product label contains information regarding the

date of manufacture, date of import, expiry date, lists of ingredient (especially, possible allergens and additives), net weight, name and address of the manufacturer, the importer, the helpline number, nutrition information, and the maximum retail price. Furnishing all these information at the same time may not be possible. For instance, for nutrition alone, the manufacturers must mention nutritional detail per 100 gram of product. Manufacturers must also specify about the amount of saturated, monosaturated, polyunsaturated, and trans-fatty acids in grams, as well as the cholesterol content in milligrams. The importers can be caught on the ground of missing information on any of these different heads. The rules regarding product labelling also change quite often. Consider this: In 2008–09, the importers could import products if the product label contained the expiry date, but in 2009–10 the custom notification required ‘best before’ to be written instead of expiry date. Again in 2008–09, custom regulation did not require information about Class II preservatives being used for manufacturing. However, starting 2009–10, this was required.⁶

TRADE COSTS

In addition to NTBs, exports can get affected because of trade costs. Trade costs account for all other additional costs incurred in moving a good to the final consumer other than the marginal cost of producing that good. All types of cost such as freight and time costs, information costs, contract enforcement costs, use of different currencies, language barriers, and lack of trade facilitation measures such as inadequate logistics of moving goods through ports, inefficient handling of custom documentation, lack of harmonization of regulation standards, etc., are counted as part of trade costs. For example, of the US\$ 2 export value for the Barbie dolls, when they leave Hong Kong for the USA, about 35 cents covers Chinese labour, 65 cents covers the cost of materials, and the remainder covers transportation and overhead including profits earned in Hong Kong. The dolls sell for about US\$ 10 in the USA, of which Mattel (the retailer of Barbie dolls in the USA) earns at least US\$ 1, and the rest covers transportation, marketing, wholesaling, and retailing in the USA.⁷ In fact, these other factors can be more important than price factors, such as tariffs and exchange rates, in affecting trade flows. Direct policy instruments such as tariffs and quotas are less important in affecting trade in

comparison to trade costs. Trade costs for industrialized countries work out to be 170 per cent. This number breaks down as follows—21 per cent transportation costs, 44 per cent border-related trade barriers, and 55 per cent retail and wholesale distribution costs ($2.7 = 1.21 \times 1.44 \times 1.55$).⁸ Out of 44 per cent border-related trade barriers—8 per cent is because of policy barriers, 7 per cent because of language barrier, 14 per cent because of currency barrier (from the use of different currencies), 6 per cent because of information barrier, and 3 per cent because of security barriers.

Much of the sources of trade costs result from the lack of trade facilitation and lack of availability of physical infrastructure in South Asia. For instance, in 2008, logistics costs in India were among the highest in the world (at 13 per cent of GDP), and inadequate infrastructure is responsible for holding back GDP growth by roughly 2 per cent, or an annual hit of approximately US\$ 20 billion to economic progress. Other elements of trade costs are abound. At the India–Bangladesh border, a consignment needs at least 22 documentations, more than 55 signatures, and a minimum 116 copies for the final approval. Paying bribes is a common phenomenon. Across South Asia, the size of bribe was reported to be between 2.2 per cent and 2.5 per cent of firm sales. In the context of South Asia, the size of bribe payments is relatively less in India, Sri Lanka, and Bhutan in comparison to Bangladesh, Pakistan, and Nepal. If countries in South Asia raise capacity building in trade facilitation halfway to that of East Asia's capacity, average trade is estimated to increase by US\$ 2.6 billion. This is approximately 60 per cent of the regional trade in South Asia. The areas that provide the greatest gains are the service sector infrastructure and efficiency in airtime and maritime ports.⁹

Trade costs and NTBs are important factors that can hold up any country's exports. An alternative is to work into deeper economic cooperation, such as becoming part of the RTA. One such RTA is SAFTA. SAFTA is one of the many RTAs that have been formed over the last two decades. SAFTA, consisting of eight countries namely Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka, came into force with effect from 1 July 2006 after prolonged deliberations. Repeated failures of multilateral negotiations, especially at various ministerial meets of WTO, lead to an increase in the number of RTAs.¹⁰ Also, increased internationalization of markets (i.e., globalization) and the fear of losing out to other inefficient producers put pressure on individual countries to become part of any RTA. The answer to a successful RTA therefore lies in controlling the factors that

act against RTA and in nurturing the factors which help in forming and sustaining an RTA. Some of the factors that affect the formation of an RTA are considered below.

Extent of Trade. If the country is more likely to trade with other member countries in the RTA, then it makes sense to join that RTA. The likelihood that industry associations will demand protection is less when two-way intra-industry trade occurs. In this case, jobs lost due to customers shifting to more efficient foreign suppliers may to a large extent be offset by the job enhancing expansion in foreign demand for similar, differentiated goods produced domestically.

Country Characteristics. A country is likely to gain more if its economic characteristics are somewhat similar to other member countries in the RTA. Similarities are measured in terms of economic development and geographical proximity. The more similar the economies (in terms of per capita gross domestic product), the more is the likelihood of intra-industry trade. This is because geographically near economies with similar level of economic development have access to similar kind of technology. Consequently, they tend to produce more or less similar items and tend to trade in similar commodities (closely differentiated products as in the monopolistic competition type market structure). Trade increases with economic size and proximity of the trading partners.

Symmetric Economic Activities. Symmetric economic activities among member nations help forge deeper forms of economic integration, such as customs and economic unions. Symmetric economic activity implies that long-run movements in real output are synchronized. Symmetry in economic activity implies that there is a smaller tension in terms of formulating internal and external macroeconomic policies—a factor thought necessary for policy cooperation.

Given the discussion about the aforementioned criteria necessary to form an FTA in general, it is of interest to examine how well SAFTA matches these criteria.

Economic Characteristics. When comparing in terms of the economic structure, namely savings as a percentage of GDP, demographic profile, and labour mobility, SAFTA member countries have many similarities (see [Table](#)

8.2). The industrial sector constitutes roughly a fourth of GDP in all countries, while the share of agriculture varies from 12.1 per cent in Sri Lanka to 31.8 per cent in Nepal. Services sector, often low-skilled services such as nursing, road-side restaurants, etc., contribute a major portion of value addition in national income. Although a majority of the population still lives in rural areas, all of these countries are becoming increasingly urbanized. In general, Maldives seems to be most developed, and Afghanistan, the least. These countries also share a similar demographic profile. The more similar are the economies, the more similar is their export profile. Greater economic cooperation among SAFTA members holds important implications in the form of larger market and economies of scale in production. These factors might act as further incentives for the smooth functioning of SAFTA.

Trade. Trade in the SAFTA region is currently low. There are reasons for lower intra-SAFTA trade. Most of the SAFTA member countries have a lower trade–GDP ratio and have initiated external sector liberalization (i.e., bringing down tariff barriers), starting only in the 1990s. A large number of NTBs currently exist in the region. These NTBs include anti-dumping measures, procedural requirements, sanitary and phytosanitary standards, and certification and technical standards.¹¹ The encouraging point is that most of these economies have started to open up and have also registered healthy GDP growth. During the period 2007–08, all SAFTA countries, except Nepal, witnessed strong economic growth in the range of 5–9 per cent as well as 4–5 per cent per capita GDP growth. Robust economic growth encourages a more liberalized trade regime. With a similar export profile, trading partners are better off with less restriction. Because countries in the SAFTA region share a similar export profile, they also face the same types of NTBs; hence, they share a similar negotiating stance for removing these barriers. Recent trade data suggest that intra-SAFTA trade is on the rise.¹² Most of the governments in SAFTA are undertaking considerable external sector liberalization. Therefore, there are indications that the currently low level of intra-SAFTA trade is likely to flourish in the future.

Table 8.2 Economic Characteristics of SAFTA Members

Characteristics	Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka
Agricultural, Value Addition (% of GDP)	20.8	18.3	15.9	17.5	5.5	31.8	21.6	12.1
Industry, Value Addition (% of GDP)	22.5	28.2	43.9	26.7	15.3	15.3	24.9	29.9
Services, Value Addition (% of GDP)	56.6	53.5	40.2	55.7	81.8	52.9	53.4	58
Infant Mortality Rate (per 1,000 Live Birth)	373.6	156.6	156.6	164.4	57	155	156	77
Rural Population (% of the Total Population)	76.5	71.6	64.4	68.7	58.9	83	63.8	84.9
Inflation	12.9	7.5	5.7	8.3	4.9	10.4	18.3	12.9

Source: World Bank, Development Indicators (2013), available at: <http://data.worldbank.org/indicator> (accessed 17/04/2013).

Symmetry in Economic Activity. South Asian countries exhibit symmetric economic activity.¹³ Symmetric economic activity implies that long-run movements in real output are synchronized. Such co-movements of outputs may be due to the dependence of common factors such as geographical proximity and similar industrial profile. When countries share a similar industrial profile and are located closely, the demand shocks in one country may affect other countries in the region. This could also arise if these economies all share a common trade linkage with major import markets. For example, if all of these countries engage in trade with the EU, then changes in the EU's economic performance would have a similar effect on all the countries concerned and cause them to behave synchronously. In this case, economic trends would become more similar because all the sectors and, therefore, all the countries would be affected in a similar way. Another reason for the presence of common economic trends and hence co-movements of output could be explained through intra-industry trade. As far as the trade structure is representative of the output structure, the cycles should become more synchronized because they would be affected by common shocks. When countries trade in similar commodities, the synchronicity of their output is increased. Countries in South Asia in general have a similar export profile. Symmetry in economic activity also implies that there is a lesser contradiction in terms of formulating internal and external macroeconomic policies. In fact, this aforementioned economic characteristic of South Asian countries enables them to go beyond the FTA framework and work for deeper economic integration, such as forming a CM and economic union.

Challenges

Unfortunately, in spite of having economic potential, SAFTA is yet to emerge as a successful RTA. The challenges are too many, and SAFTA in its

present form is more of a 'framework agreement' than a full-blown FTA. The challenges in the way of deeper economic integration in South Asia arise from the fact that currently there exists a lack of complementarities in tradable items produced in this region. Despite reforms in the external sector, trade among South Asian countries is still restrictive, especially considering the sectors where opportunities for trade exist. The comparative advantage of these countries lies in the low technology-intensive items such as agricultural products, leather footwear, textile, and clothing. As the level of economic development in some regions, such as Nepal (per capita income US\$ 742 in 2012) and Bangladesh (per capita income US\$ 848 in 2012), is still low, the proportion of income spent on differentiated products is less and intra-industry trade has yet to pick up. Besides, India shares a porous border with Bangladesh and Pakistan, giving rise to a considerable amount of cross-border smuggling. In addition, further inroads towards smoother functioning of SAFTA are not being made, as the current framework does not cover trade in services. Unfortunately, no Comprehensive Economic Cooperation Agreement (CECA) exists between India and any of its South Asian neighbours that would allow trade in services to pick up in this area. Coming up with a CECA is necessary in view of the fact that about 50 per cent of the value added to South Asian GDP originates from the services sector. Another important factor that needs to be addressed is about solving political animosity between India and Pakistan. Pakistan, the second largest in South Asia, has only recently given India MFN treatment, although it is yet to be fully operational. It was only in 2011, reciprocating to India's granting MFN status to Pakistan in 1996, did the latter decide that it was ready to grant India the MFN status. Following a series of high-level meetings between the two countries, the Pakistan Cabinet announced in February 2012 that MFN status with India would become operational in 2013. It is to be noted that before granting MFN status, Pakistan's trade with India was not free and was based on the 'positive list' of 1078 items. In fact, soon after the formation of SAFTA, the then Pakistan prime minister said, 'Unless and until there is visible progress on political issues between the two countries including the Kashmir issue, Pakistan cannot initiate open trade with India'.¹⁴ For its own part, India has unilaterally withdrawn tariff concessions given to Pakistan. Despite the brazenness of these moves, neither country dragged the other to the Dispute Settlement Body of the WTO for violating one of the most established rules of the multilateral trading system. Political stability is a pre-

requisite for instituting and locking-in economic liberalization measures in trade accords, an environment that South Asia has not been able to develop. Trade is far from free in South Asia. Unfortunately, in spite of having economic potential, SAFTA is yet to emerge as a successful RTA (see [Case Study 8.2](#)).

Case Study 8.2: SAARC Trade Is Caught in a Rut*

At a time when India's trade figures were not looking too good (exports growing the slowest in two years and the trade deficit at a four-year high), the SAARC summit in Maldives was being seen by many as a harbinger of renewed trading activities.

Given that intra-SAARC trade (comprising Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka), as a percentage of total trade of SAARC members with rest of the world is only around 5 per cent, there was every opportunity to increase this number. This was all the more so, when Pakistan was talking about granting India MFN status.

Intra-SAARC trade as a percentage of SAARC members' trade with the rest of the world is really small when seen against trade among members of the ASEAN (24 per cent of their trade with the rest of the world) and the Asia Pacific Economic Cooperation (APEC) (70 per cent).

The low level of intra-South Asian trade has got to do with lack of trade facilitation measures and non-availability of physical infrastructure, hampering connectivity among trading partners. Policymakers have, therefore, been right in choosing connectivity as the theme for the South Asian Association for Regional Cooperation (SAARC) summit.

However, the success of such talks would depend on the will to address bottlenecks on the ground.

NUMEROUS BOTTLENECKS

The South Asian region badly needs to build upon three areas of trade facilitation: port efficiency, customs environment, and service sector infrastructures (like electronic documentation). For instance, the road leading to the port of Chennai is highly congested. With one gate of entry to the port, containers have to line up often up to a length of 8 km before making an entry to the port.

At the port, the containers again have to wait for at least two more days before the ship starts to sail. Port congestion because of inefficient handling of goods affects the turnaround time of vessels. It is to be noted that Chennai is chosen as a preferred manufacturing destination by some international brands such as Hyundai, Nokia, Lotte because of lower input costs and less labour-related problems.

However, lack of urban planning (such as having a port within the city limit) and proper infrastructure facilities is affecting the cost of doing business, and hence of

doing trade.

There is also a need to look at the 'soft' side of infrastructure. For instance, Indian customs authorities have upgraded their software so that documents relating to exports and imports can be accessed anywhere in India. This is a welcome move. However, because of shortage of hardware (memory) space, the computers often hang. Delay in issuance of shipping bill and B/L—documents required for exports and imports—indirectly raises trade costs. The agony of traders does not stop here. The documentation process required for trading is still quite protracted in South Asia. The World Bank's *Ease of Doing Business Report* (2011) says that it takes 16 days, 25 days, 21 days, and 21 days to comply with all procedures required to export goods necessary to comply with all procedures required to import from India, Bangladesh, Pakistan, and Sri Lanka, respectively. This is much higher than the average figure of seven days for most Southeast Asian nations.

POLITICAL ISSUES

There are problems associated with connectivity. Although South Asia inherited an integrated transport infrastructure from the British, this infrastructure was fractured by the partition of India. South Asian countries have seldom given land transit facilities. Pakistan has denied transit facilities to India for sending their goods to Afghanistan.

Everyone expected Bangladesh to grant transit facilities to India for movement of its goods to and from the Northeast. That, too, did not happen, thanks to the recent fiasco over sharing of Teesta waters between India and Bangladesh. Connectivity between India and Sri Lanka is not efficient either.

The much-hyped Sethu Samundram project has been hit by higher drilling cost, and the idea to bring down ship travel time by linking the Palk Bay and the Gulf of Mannar remains a distant dream. Only Nepal and Bhutan get transit facilities through India while trading with Bangladesh. However, their contribution to the total SAARC trade is minimal.

The only ray of hope is the recent development about Pakistan's willingness to grant MFN status to India. Pakistan's trade with India is not free and is based on the 'positive list' of 1946 items.

MFN status, in addition to these items on the positive list, implies (mostly comprising base metals, chemicals, and electronics items) that trade will now be extended to other items as well.

There is, however, a glitch. Pakistan's leading newspaper *Dawn* claims that there is still confusion over Pakistan granting MFN status to India. The press note issued by the Commerce Ministry in Pakistan 'did not mention that Pakistan had granted MFN status to India'.

Just choosing themes without actually checking ground realities might not be helpful. The theme for the last SAARC meeting in Bhutan was environment. We all know how much of a cleaner environment we have achieved.

Similarly, talking about connectivity without looking at the political feasibility of

achieving the same seems pointless.

– Previously published by the author in *The Hindu Business Line* (10 November 2011).

AN ALTERNATIVE: NORTH-SOUTH NEGOTIATION, AND INDIA'S STANCE AT WTO

An RTA becomes successful when like-minded countries with similar economic interests and characteristics are able to address issues, such as harmonization of custom procedures and removals of NTBs, within a smaller period of time. However, as we observed in the [last section](#), SAFTA is still not mature to reap benefits in terms of trade creation. Under present circumstances, an attempt by India to forge into economic cooperation with other countries and regional grouping like ASEAN, is nothing but a reflection of ‘spaghetti bowl’ effect. Bhagwati et al. introduced the concept of ‘spaghetti bowl’ phenomenon to explain the harmful effect caused by multiple and complicated rules of origin in RTAs, particularly from overlapping RTAs among members of different RTAs.¹⁵ Hence from the perspective of economies in South Asia, at least in the short to medium run, successful completion of the Doha Development Round seems to be more beneficial.

As discussed earlier, the WTO was born on 1 January 1995, after the completion of the Uruguay Round of GATT negotiations (1986–94). After the formation of WTO, three new working groups were added to the existing WTO structure, comprising of council for trade in goods, services, and TRIPS, during the first Ministerial Conference in Singapore in 1996. The idea was to chalk out a relationship between trade and investment, and trade and competition policy, besides introducing more transparency in the government procurement process. The negotiations were intended to start at the Ministerial Conference in Seattle, USA, better known as the Millennium Round. However, Millennium Round in 1999 failed and it was decided that negotiations would not start until the next Ministerial Conference in 2001 in Doha, Qatar. This also led to the inception of the Doha Development Round in November 2001, which is yet to be concluded because of lack of consensus.

During the ministerial meet at Geneva (December 2011), negotiations failed mainly because of arguments centring about agriculture and

safeguards. During the ministerial meet at Bali (December 2013), the main issue was how to undertake measures to reduce domestic subsidies given to agriculture by 20 per cent from the aggregate monetary levels prevailing in 1986–88. For countries like India, whose levels of subsidies were lower than 10 per cent of the value of production (both on a product-specific and non-product-specific basis), the obligation was that the aggregate monetary levels of support would not exceed 10 per cent limit in the future. For members with programmes of market price support, the subsidy in a particular year is to be calculated on the basis of difference between the fixed external reference price (ERP) based on the years 1986–88 and the applied administrative price in that year.¹⁶

In addition, there was lack of consensus between developed and the developing economies on issues relating to Non-agricultural Market Access (NAMA), TRIPS, TRIMs, and GATS. Let us look at these issues.

Agriculture. Broadly, the association of developing nations—the G20 and G33 group of countries¹⁷—wants subsidies given by the developed countries to their farmers and processed food manufacturers (items such as beef, poultry, etc.) to be reduced. As has been mentioned earlier, subsidy in a particular year is estimated on the basis of the difference between the administered price (MSP) and the fixed price ERP (1986–88) notified by a member at the outset. The USA and the EU want big developing economies, such as China and India, to open up their markets in industrial goods as well as farm products in return for reducing subsidies on agriculture items. They are also not in favour of India and other developing countries procuring farm output from farmers through MSP. In contrast, G33 argued for the inclusion of two sets of amendments in the Agreement on Agriculture (AOA), which in their view, were necessary for addressing food security concerns in their countries. The first of these amendments was aimed at allowing developing countries to make payments on specific activities to promote rural development and poverty alleviation without being subjected to any disciplines introduced by the AOA. A second set of amendments was proposed by the G33 group to modify the existing provisions relating to public stockholding for food security purposes. The first of these said that developing countries should be allowed to acquire food stocks for supporting low-income producers and the cost of doing so will not be accounted for in their total subsidies bill.

Second, when developing countries acquire food products from resource poor producers to fight rural poverty and for providing food to urban and rural poor at subsidized prices, the difference between MSP and the ERP has to be excluded from aggregate measure of support. This will allow developing countries to support the livelihood of poor farmer and at the same time address their food security concern.¹⁸

Although the USA was willing to reduce their firm subsidies from the present US\$ 15 billion level to US\$ 14.5 billion, they had problem with a key demand of India, which is holding out for a lower threshold level of imports than the proposed 40 per cent ('Farm tariffs sink world trade talks', *The Washington Times*, 30 July 2008).¹⁹ India is arguing for safeguard measures to apply when imports exceed 20 per cent of the average of previous three years' imports. Therefore, without a further reduction in subsidies, negotiations are stalled.

NAMA. In case of items such as manufacturing products, fuels and mining products, fish and fish products, and forestry products, that is, items not covered by AOA but are classified under NAMA, developing countries submitted a number of proposals to modify the Swiss formula. According to this formula, the tariffs should be reduced on a pro-rata basis—higher tariffs subject to a greater cut as compared to lower tariffs. Since bound tariff levels for most developing countries are higher compared to high income countries, the former group of countries including Argentina, India, and Brazil are opposing the Swiss formula.

TRIPS. Developing countries have problem with the inclusion of TRIPS on the ground that it seems to be discriminatory and welfare reducing. About discrimination, TRIPS agreement provides higher degree of protection for wines and spirit, with lesser degree of protection for other exports such as Basmati rice, Tequila, Szatmar plums, etc. India wanted extension of 'geographical indication' to go beyond wine and spirits to other products. Additionally, developing countries also demanded patent provisions on traditional knowledge. About welfare aspect, royalty payments accruing to firms because of patent protection seldom lead to innovation and cost reduction. Examining 177 patent policy changes across 60 countries over a period of 150 years, Lerner (2001) found that patent protection does not necessarily lead to innovation and cost reduction.

TRIMs. Developing countries have for long opposed the inclusion of TRIMs on the ground that the provisions laid under TRIMs impede the process of industrialization and BoP stability. Moreover, there is a belief that the firms with considerable lobbying power are using this agreement for their own benefit, and hence the need for having an effective competition policy.

Services. Typically, developing countries have advantages in Mode 1 (like outsourcing of office works), and Mode 4 (like movement of natural persons) type services. Developed countries have advantages in Mode 3 type services, such as financial and professional services. In Mode 4, developing countries want issuing short-term visas at very short notice, exemption from social security contributions, de-linking movement of natural persons from the requirement to set up an office or firm in a foreign country, removal of quantitative restrictions on issuance of visa, and removing economic needs tests (ENTs). In Mode 1, the demands are for the removal of any form of government ban on outsourcing, removal of federal and state-level protectionist legislation, and caller identification requirements.

So is it worth fighting over these issues. Here are some suggestions as to how this impasse can be broken:

On Agriculture, while protecting interest of the marginal farmers is justified, developing countries should also make conscious effort to remove domestic distortion. For the marginal farmers in India, much of the producer surplus is lost because of market imperfection where the middlemen between the farmer and retailer of farm products gets to keep most part of the agricultural income. Likewise, as subsidy generates large economic inefficiencies and distorts the world market price for agricultural produce, policymakers in the developed countries should make an attempt to reduce subsidy. It is known that redistributive policy in terms of subsidy provisions always yield results less favourable than those when pursuing allocative policies of diverting fund for public agricultural research investment. The latter can be an important source of productivity growth. Public investment on the corn hybrid seed technology in the USA is a classic example. Despite the overwhelming evidence of high social rates of return to public agricultural research investments, significant under-investment persists in both developing countries and industrial countries.²⁰ So from the perspective of normative economics, countries should work towards removing domestic distortion.

About NAMA, there is a need of trying to understand whether the reasons for restricting market access are genuine. For instance, in the era of globalization, predatory pricing policy is very difficult to practice. So using anti-dumping measures on the presumption for stopping predatory pricing strategy would be meaningless.

About TRIPS, there is a need to harmonize IPR protection across countries. Many developing countries have appropriate laws on books, but lack the implementation of these laws. Although there are lack of evidences about patent protection and innovation, there are evidences about a stricter IPR regime leading to more FDI.²¹

Negotiating countries might want to take a sector-specific approach while dealing with issues related to TRIPS.

On TRIMs, the system requires an *effective* competition policy. There is a need to address private sector induced distortion before market access is granted to firms from richer nations. From the macro level perspective, it is essential to have property rights. Lack of property rights and an effective competition policy in many less developed nations have direct implication on the distribution of resources. For instance, although endowed with abundant natural resources, Sierra Leone was ranked as the poorest country in the world by 1998. While Revolutionary United Front in Sierra Leone controlled the diamond trade and openly indulged in arms and drugs trafficking, the people remained among the poorest on Earth.

In services, there will be lot of resistance if basic services, such as provision of health, education, water, and sanitation, are privatized especially in the context of less developed economies. Citizens from less developed nations are averse towards paying price for these basic services—something they consider as part of their democratic right. Hence, developed countries asking for market access in these sectors will not be meaningful, and also not desirable from the welfare perspective. Instead, they can argue for market access in services such as finance, telecommunication, etc., in exchange of removing restriction on Mode 1 and Mode 4 type services.

¹ For more on this and other NTBs, see N. Banik (2001), An Analysis of Indian Exports during the Nineties, *Economic and Political Weekly*, Vol. 36, No. 44, pp. 4222–30.

² Notification number S.O. 2208 (E) dated 28th August 2009, and issued by Department of Animal Husbandry, Dairying and Fisheries, Government of India.

³ N. Banik (2009), ‘Does the Crisis Alter Indian Trade Priorities’, in S. Evenett (eds.),

The Unrelenting Pressure of Protectionism: The 3rd GTA Report, London: Center for Economic Policy Research.

⁴ The FTA requires for manufactured product the value addition should be more than 35 per cent. What it means is that the raw material can be procured from countries outside Sri Lanka, and assembled in Sri Lanka and then exported to India. In this case, the extent of value addition should be more than 35 per cent level at an HS code of four digits level.

⁵ Bound tariff rate is the MFN tariff rate. However, a country generally keeps its applied tariff rates lower than the bound tariff rate.

⁶ Rule 32 c (i) of PFA Rules, 1955. Also see, Economic Times (2009), 'Nutrition Information on Food Labels', *Economic Times*, 14 April.

⁷ J.E. Anderson and E. van Wincoop (2004), Trade Costs, *Journal of Economic Literature*, Vol. XLII, No. 3, pp. 691–751.

⁸ Ibid.

⁹ For more about trade cost is South Asia, see N. Banik and J. Gilbert (2010), Trade Cost and Regional Integration in South Asia, in D. Brooks (ed.), *Trade Facilitation and Regional Cooperation in Asia*, Northampton: Edward Elgar.

¹⁰ As of January 2013, 546 RTAs are notified and 354 RTAs are in force under WTO. See, http://www.wto.org/english/tratop_e/region_e/region_e.htm (accessed on 23 April 2013).

¹¹ Banik, 'Does the Crisis Alter Indian Trade Priorities'.

¹² Ibid.

¹³ Ibid.

¹⁴ Quote taken from United News of India (UNI), available at: http://www.bilaterals.org/article.php3?id_article=3908 (accessed on 21 August 2009).

¹⁵ J. Bhagwati, D. Greenaway, and A. Panagariya (1998), Trading Preferentially: Theory and Policy, *The Economic Journal*, Vol. 108, No. 449, pp. 1128–48.

¹⁶ The thinking at that time was that in view of the high levels of support in the major industrialized countries, normal rates of inflation should be allowed to erode the aggregate monetary levels of support, so as to obtain an effective reduction higher than the committed level of 20 per cent.

¹⁷ The group known by G20—comprising of 20 developing countries from Africa, Asia and Latin America, and European Union—was formed during the Cancun ministerial meet on September, 2003. G33 is also a grouping of developing countries that in 2013 had 46 members including China, India, and Indonesia.

¹⁸ It is to be noted that the subsidies in the form of cheaper fertilizers, bank loans, etc., that government provides to its farmers in India, and subsidies on each individual crop which are less than 10 per cent of its value of production are allowed under AOA.

¹⁹ <http://www.washingtontimes.com/news/2008/jul/30/farm-tariffs-sink-world-trade-talks/> (accessed on 19 August 2009).

²⁰ W.E. Huffman and R.E. Evenson (1992), Contributions of Public and Private Science and Technology to U.S. Agricultural Productivity, *American Journal of Agricultural Economics*, Vol. 74, No. 3, pp. 751–56.

²¹ P. Nunnenkamp and J. Spatz (2004), Intellectual Property Rights and Foreign Direct Investment: A Disaggregated Analysis, *Review of World Economics*, Vol. 140, No. 3, pp. 525–33.

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