

What Is Economics

1.1 Introduction

A cursory glance at your daily newspaper for an entire week might tell you about: how the Indian farmers are struggling, how the manufacturing sector is not creating enough jobs, the nature of India's economic growth, the changes made by the Reserve Bank of India (RBI) to the interest rates, the stubbornly wide socioeconomic inequalities across caste and gender, how growth in manufacturing is causing ecological damage, and/or how the Bombay Stock Exchange (BSE) reacted with cheer to a recent government notification. All these listed issues are economic in nature because they deal with employment, economic growth, interest rates and economic inequalities, and they affect the livelihood of individuals, entire communities, sectors as well as the nation. But why spend time trying to understand these economic issues? Of course, if you are enrolled for a bachelor's or master's course in economics, you are required to study them. To pose the earlier question slightly differently, what is it that motivates you to enroll for an economics course or to spend time studying them independently?

To an economist, all the above-mentioned issues will appear related. Although Indian farmers are struggling, they are unable to find jobs in the manufacturing sector because it has not been creating adequate jobs and because the farmers do not have access to the skills/education that are required in the manufacturing sector. India's economic growth is mainly driven by the growth of the services sector; here too, not many jobs are being created and nor do the Indian farmers have the requisite skills/education. The fact of unequal access to education is explained mostly by the historical inequalities arising from the ownership of land and capital. Since agricultural output is insufficient (due to which the farmers' livelihoods are adversely affected), agricultural prices rise. To tackle this price rise (or inflation), the RBI decides to increase the rate of interest to mop up excess money (more accurately, liquidity) from the economy; this is done because it believes that inflation is caused by too much money chasing too few goods. The investors of stocks listed in the BSE are happy

because this rise in interest rate is going to attract an inflow of foreign capital to India as the rate of return in India is higher than that in their own country. What are the mechanisms that cause these outcomes? What determines the levels and growth rates of these macroeconomic variables such as money, interest rates and employment? Studying macroeconomics helps you make sense of these seemingly disparate events. And it is hoped that any engaged reader of this textbook will become equipped with the necessary concepts required to make such connections and explain them.

Most of us live in societies where the governments are democratically elected, that is, directly or indirectly, by *our* votes. The efficacy of government functioning is, therefore, largely contingent on how we cast our votes. You might have noticed how political parties, coalitions and independent candidates all have some vision of how to improve the existing availability and distribution of material goods and services. Additionally, they promise us better wages, greater employment opportunities and low inflation. But how do we decide what is the 'best' based on their manifestos or vision documents? Such vision documents and plans are also released by the government; examples include the annual economic surveys and the union budgets. How do you evaluate the claims made in these public documents? The study of economics can help with making an informed judgement. Besides this reason, you might want to see to it that everyone in your community and/or country gets a good life. If this is your motivation, your natural choice of occupation might be a policy maker in the government, an independent consultant for ecological issues, a socioeconomic journalist, a teacher, a social entrepreneur or a trade union leader. Whichever occupation you aspire to be in, the knowledge of economic matters is necessary.

However, be mindful of the fact that the study of economics, especially of the current university kind, is never *sufficient* to fully understand our societies. Therefore, as students of economics, it is recommended that you read widely. Read good books of fiction that convey to you the realities about your surroundings in a manner no economics book does (or can). This book hopes to make a slight difference to that state of affairs by including excerpts from relevant fiction. Read history. Understand the operation of the political systems in your community and country. Listen to those who have experienced socio-economic hardships. Finally, remember that any economics textbook, including this one, should be seen only as a stepping stone and should be used in the good company of other kinds of texts and experiences.

WHAT IS ECONOMICS



This is the right time to read a motivating passage by John Maynard Keynes on the kind of skills an economist ought to possess.

... the master-economist must possess a rare *combination* of gifts.... He must be mathematician, historian, statesman, philosopher—in some degree. He must understand symbols and speak in words. He must contemplate the particular in terms of the general, and touch abstract and concrete in the same flight of thought. He must study the present in the light of the past for the purposes of the future. No part of man's nature or his institutions must lie entirely outside his regard. (1924, pp. 173–4)

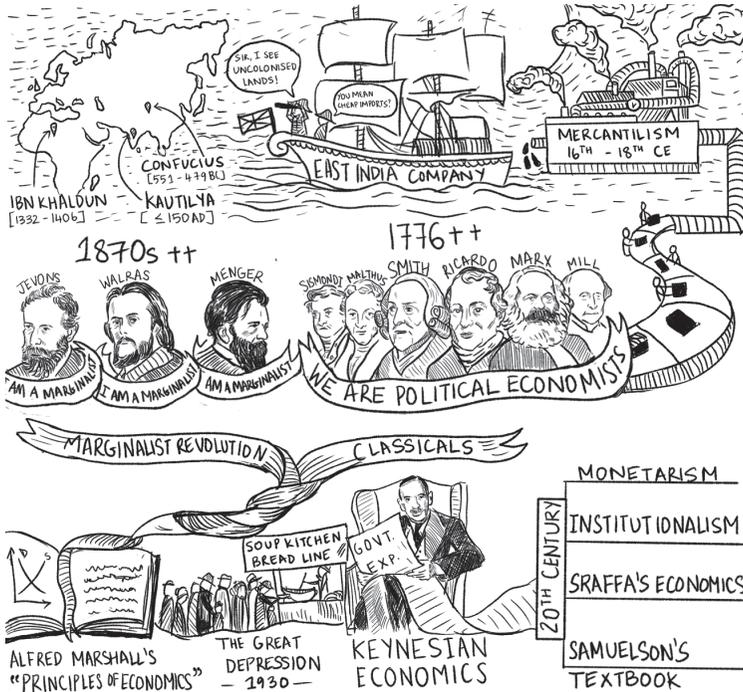
Keynes wrote the above sentences in his obituary for Alfred Marshall, his economics teacher. But, as I tell my students in class, the male pronoun ought to be changed. Closer in space and time, Jean Drèze draws our attention to what he terms 'research for action' in a 2002 article in the journal *Economic and Political Weekly*, where he stresses the "value of personal experience as a source of knowledge" (p. 819). He subsequently clarifies this approach to doing economics in his 2017 book *Sense and Solidarity: Jholarwala Economics for Everyone*, which is a collection of previously published essays.

Since we have now touched upon the various motivations to study economics, the future possibilities arising from the study of economics, and, very

importantly, the limits to the formal study of economics and how to overcome those by reading widely, the path is now clear to begin our study of economics.

1.2 A brief history of economics

Before I present the definition of economics used in this book, it is useful to provide you with a brief outline of the evolution of economic ideas. When do you think economics as a distinct subject/discipline emerged? Also, do you notice any correspondences between the emergence of capitalism as a way of organising society and the emergence of economics as a distinct subject of study? (Capitalism is a mode of economic organisation wherein the capitalists own all the means of production and the workers have nothing but their labour.)



Most historians of economic thought (that is, economists who study the history of their discipline) identify William Petty as the first ‘political economist’, as they were then called. Petty was also a surgeon and a surveyor. In 1662, he published a book titled *A Treatise of Taxes and Contributions* which puts

forward a way of accounting for aggregate output and a proposal of how much of that ought to be taxed. That is, as some of you might already be thinking, economics has a short history (a little over 350 years) vis-à-vis the natural sciences. However, is it true that no one before Petty wrote about economic issues? Of course not! Just a little before and around Petty's time, there were a group of merchant-economists, loosely called mercantilists, who wrote about money, wealth and foreign trade. Of this motley group, Thomas Mun is the most famous. They identified the stock of gold reserves in the nation, which flowed in when exports exceeded imports, as an indicator of economic health. Also, Petty and Mun are both from the European continent. Were there no economic discourses elsewhere?

Some notable non-European economic discourses are: *Muqaddimah* by Ibn Khaldun (1332–1406), a North African Arab thinker; *Arthashastra* by Kautilya written no later than 150 AD; and works by Confucius (551–479 BC) in China. However, you will not find anything resembling a theory in these works. Kautilya is not the name of a single person but perhaps a title and, therefore, some Kautilya scholars argue that it is a compilation by several individuals over time.

While many of the economic concepts (such as the division of labour) in Adam Smith's *Wealth of Nations* (1776) were already prevalent in the extant literature, Smith deserves credit for conceptualising political economy, the science of wealth, as a distinct field of inquiry (but note that Smith uses wealth interchangeably with income). Subsequent economists like David Ricardo, Thomas Tooke, Robert Malthus, J. C. L. Sismondi and J. S. Mill further developed the science of political economy. It is in Karl Marx's work that classical political economy (or classical economics, as it is also called today) receives a very mature treatment. In particular, Marx lays bare the exploitation of workers by capitalists in our epoch. Ricardo had already highlighted the conflict over income distribution between workers and capitalists when he demonstrated the inverse relationship between wages and the rate of profit (this idea will be discussed further in the chapter on inflation). The classical economists used concepts such as the social surplus, (customary) subsistence wage and social classes in their theories of value, distribution and economic growth.

Subsequently, in the 1870s, there was a revolution in economic thinking, pioneered by Léon Walras, William Stanley Jevons and Carl Menger, independently of each other. It was a revolution because it supplanted the

concepts and ideas proposed by the classical economists. This is referred to as the marginalist revolution owing to their use of and reliance on marginal concepts and principles such as marginal utility, marginal product, marginal cost and the marginal productivity theory of income distribution. According to the marginal productivity theory of (income) distribution, in a competitive economy (that is, there is free mobility of labour and capital across industries), workers will be paid the marginal product of labour and capitalists the marginal product of capital. The marginal product of labour denotes the addition made to the total product when one additional labourer is employed (and similarly for capital). Note that this theory implies a kind of harmonious income distribution in a capitalist society, whereas the political economy of the classical economists and Marx explicitly highlights conflict, especially between workers and capitalists.

Alfred Marshall, in his *Principles of Economics* (1890), attempts to establish a continuity between classical political economy and marginalist economics, two distinct theoretical or conceptual frameworks. First, while the starting point of marginalist economics is an individual, that of classical political economy is a class/group. Second, in classical political economy or classical economics, the real wage is determined by social and political forces, and, therefore, it is irreversible to a large extent, whereas in marginalist economics, wages are determined by the marginal product of labour and is, therefore, reversible. Recall from introductory (marginalist) microeconomics that the equilibrium wage is determined at the intersection of labour demand and supply, and shifts in these curves can push down or pull up the equilibrium wage rate. For example, classical economists would argue that the daily wage of a bus driver in Kerala is INR 1,000 as a consequence of wage bargaining and government policies. Marginalist economists would argue that the wage reflects the productivity of the bus driver and, therefore, if the productivity falls, the wage can fall to INR 800. And this reduction in wages could be considered economically *fair*. However, classical economics would point to the irreversibilities associated with consumption (particularly of the workers) and consequently deem it unjust. Third, according to classical economists, competitive economies do not possess an intrinsic/natural mechanism of ensuring that *all* workers who are willing to work at the going wage rate will find employment. In other words, there is no tendency to the full employment of labour (except in the *very* long run where the supply of labour adapts to the demand for labour, a causation opposite to that found in marginalist economics).

Marginalist economics, on the contrary, argues that a competitive economy will tend towards a state with full employment of labour.

Amidst the Great Depression of the 1930s, John Maynard Keynes published his revolutionary book *The General Theory of Employment, Interest and Money* (1936) wherein he argued that the tendency to full employment found in the then-dominant economics (Marshall and Arthur Pigou mainly) was flawed. And that the only solution for reviving the depressed level of aggregate income and employment is through an expansion in government expenditure. This was because Keynes rightly noted that private investment is volatile (as it is driven by the profit motive) and depends on 'expectations' which further depend on a large set of variables unamenable to theorising. However, government expenditure was (and is) not constrained by such expectations. The Polish economist Michał Kalecki, independent of Keynes, also made essentially the same point in his 1933 article.

In the 20th century, economics witnessed five other significant developments: (a) monetarism led by Milton Friedman which challenged Keynes's notion of the 'monetary production economy' by arguing that 'monetary' forces have no impact on 'real' variables such as aggregate real output and employment; (b) institutionalism as developed by Thorstein Veblen, John Kenneth Galbraith and Gunnar Myrdal which underscored the importance of social and institutional norms in determining economic outcomes; (c) the application of game theory, particularly to understand strategic interactions between countries, firms, groups of people and individuals; (d) Piero Sraffa's devastating critique of marginalist economics, followed by the capital theory debates of the 1960s which challenged the marginal productivity theory of distribution due to the problems associated with the conception and measurement of capital in economic theory; and (e) the textbook culture of teaching (marginalist) economics pioneered by Paul Samuelson.

I shall end this section after making one important point. Textbooks often portray economics as a *settled* science but this is far from the truth. The preceding narrative, albeit a linear one, on the history of economic thought was to communicate the fact that despite the dominance of certain ideas during certain periods of time, all the different theories and concepts still continue to be employed, in varying degrees, to make sense of our economic surroundings. A majority of the textbooks, especially the introductory microeconomics and macroeconomics variety, communicate the idea of a largely settled domain of inquiry to the students. By now, you must have gathered that there exist multiple

perspectives and schools of thought in economics. Two significant schools of thought absent in our discussion are ecological economics and feminist economics. I would like to end this section with a quote from the philosopher of science Paul Feyerabend's chapter 'Rationalism, Relativism and Scientific Method' in the 1999 book *Knowledge, Science and Relativism*.

The questions "What shall we do? How shall we proceed? What rules shall we adopt? What standards are there to guide us?" however, are answered by saying: "You are grown up now, children, and so you have to find your own way." (p. 211)

While mainstream textbooks adopt the dominant (marginalist) economics framework to understand economic issues, this textbook follows a different path and highlights the pluralistic nature of economics through the presentation of contending economic theories. It is hoped that such an approach, to paraphrase Feyerabend, will help you better in your journey of learning.

1.3 Our definition of economics

As some of you might already know from the economics you learnt in school/college, there exist several definitions of economics. In any case, if you reflect on the discussion in the preceding section about the different perspectives in economics, the (co)existence of competing definitions might become apparent. And if it does not, it will, after you complete reading this section and then read Section 1.2 again.

Recall that Section 1.1 had outlined the different ambitions, aims and persuasions for studying economics. This section will make clear to you that it is the aim, in a way, that determines the definition. It is because of this reason that we discussed 'why economics' before 'what is economics'.

Adam Smith was particularly interested in finding out the "nature and causes of the wealth of nations". In textbooks, this is often referred to as the 'wealth definition'. Let us now read Smith's definition of economics, or political economy, as it was then called; this is found in the introduction to Book IV of *The Wealth of Nations*.

Political economy, considered as a branch of the science of a statesman or legislator, proposes two distinct objects: first, to provide a plentiful revenue or subsistence for the people, or more properly to enable them to provide such

a revenue or subsistence for themselves; and secondly, to supply the state or commonwealth with a revenue sufficient for the public services. It proposes to enrich both the people and the sovereign. (p. 428)

Alongside acknowledging Smith's contributions, Ricardo states in the preface to his *Principles of Political Economy and Taxation* (1817) that "the principal problem [remaining] in Political Economy" is to "determine the laws which regulate" the distribution of the aggregate output between rents, profits and wages (p. 5). Broadly, the classical economists were interested in explaining how economies grow and how the surplus, that is, the aggregate output net of replacement requirements, is distributed between landowners, capitalists and workers. In other words, economics was defined and understood as a science of wealth/income by the classical economists.

With the advent of the marginal revolution in the 1870s, the emphasis shifted from viewing the fundamental unit of analysis as a 'class' to an 'individual'. This represents a shift in the method of doing economics—from methodological holism to methodological individualism. Those readers of this book who have some prior economics knowledge (from school or the first semester of your undergraduate degree in economics) will find the marginalist economist Jevons's definition similar to what you have already studied. For Jevons, "Pleasure and pain are undoubtedly the ultimate objects of the Calculus of Economics" (p. 37), as he writes in his 1871 book *The Theory of Political Economy*. In other words, economics is about maximisation of pleasure and minimisation of pain. Marginal revolution also marks the extensive use of the mathematical branch of calculus in economics, owing to the theoretical needs of maximising utility and profit functions of the individual consumer and the firm, respectively.

Alfred Marshall, in his attempt to see marginalist economics as a continuation of classical economics, defines economics as "a study of mankind in the ordinary business of life; it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of wellbeing" (p. 1) in chapter 1 of his highly influential book *Principles of Economics*, first published in 1890. And finally in his 1932 book *An Essay on the Nature and Significance of Economic Science*, Lionel Robbins provides the definition of economics which I think is closest to most people's understanding of economics: "Economics is a science which studies human behavior as a relationship between ends and scarce means which have alternative uses" (p. 16). Today, the dominant understanding of economics

is that it is a science of choice. The science of choice was taken to its peak, or literally maximised, in the way that marginalist principles were employed by Gary Becker in his 1976 book *The Economic Approach to Human Behavior*.

In this book, we adopt the ‘science of wealth’ definition of economics because of its emphasis on production, as opposed to allocation, which is central to the ‘science of choice’ definition. The rationale behind this choice will become clearer as you advance through the book and a compact statement can be found in Section 6.3. To use Keynes’s phrase, our theoretical object of study is the ‘monetary production economy’ and the knowledge arising therein is applied to the monetary production economy of India. (Keynes [1933, p. 408] uses this phrase in a *Festschrift* for Arthur Spiethoff, an important figure within the German Historical School.) That is, in this book, we will study how the levels of aggregate output, money and employment are determined in a competitive economy. To put it differently, we will study the pure theory of aggregate levels and growth of macroeconomic variables. When this conceptual framework is applied to the Indian economy, it will be done in conjunction with the relevant contextual characteristics. Hence, for instance, we will learn about the financial architecture in India, including the informal moneylenders (Section 3.2), and the significance of agriculture in the Indian economy (Section 6.4).

For Smith and other classical economists, the questions of what determines the production, distribution and disposal of the surplus were central. The ‘science of wealth’ definition incorporates discussions around the disposal or utilisation of the surplus based on the wishes of the populace. This openness to politics and policies found in classical economics provides another reason for adopting the ‘science of wealth’ definition of economics because, whether in India or elsewhere, we wish to live in an ecologically clean and socially equal economy with full employment of labour, low inflation, decent wages and good working conditions. This warrants an important role for the government at all levels—centre, state and local. Therefore, this book discusses the effects of the utilisation of the surplus by the government (commonly known as public expenditure) in connection with employment and inflation via the creation of physical and social infrastructure such as roads, lakes, trains, houses, schools, hospitals and toilets. In our study of economics—the science of wealth—we also need to enquire as to how the existing distribution of wealth has come about. For instance, how did we end up in a situation where 1 per cent of the population owns 80 per cent of the land? Was it through the arbitrary use of power (and privilege) or through some kind of ‘merit’ (whatever that means)?

On the question of land ownership, Hansda Sowvendra Shekhar writes the following in his 2015 short story ‘The Adivasi Will Not Dance’:

Which great nation displaces thousands of its people from their homes and livelihoods to produce electricity for cities and factories? And jobs? What jobs? An Adivasi farmer’s job is to farm. Which other job should he be made to do? Become a servant in some billionaire’s factory built on land that used to belong to that very Adivasi just a week earlier? (p. 185)

It is because of similar concerns that many of you might have decided to learn economics. This book is a modest attempt to help you articulate such concerns and find solutions to them. Of course, the translation of economic theory into action warrants good politics (and ethics) too. To sum up the preceding discussion, much like Adam Smith and other classical economists and Keynes, this book also views economics as a policy science. Viewing economics as a subject that is intended to aid policymaking is well aligned with the aim of ensuring a good life for all (Section 1.1). Consequently, as noted already, a brief understanding of Indian socio-economic institutions becomes necessary.

Finally, I must alert the readers that despite the name change from ‘political economy’ to ‘economics’ (with an intent to appear scientific like ‘physics’), the knowledge of politics and history is indispensable to the study of economics. After all, the decisions to distribute wealth have been political, and the distribution of material resources is always and everywhere an expression of politics, that is, of power, ethics and our collective aspirations for the future. The evolution of the distribution/ownership of land is clearly political. The average hourly minimum wage (adjusted for exchange rate differences) in India is less than USD 1 and that in the United States (US) is more than USD 7 because of the historical differences in our respective approaches to politics and policy. The point I wish to make is this: any economics that claims to be ahistorical and apolitical needs to be treated with extreme caution. Our definition of economics as a science of wealth explicitly acknowledges the role of history and politics in making sense of economic phenomena.

1.4 A note on our approach

Now that you have an understanding of the brief history of economics—the different schools of thought with contending perspectives—and of the

definition of economics adopted in this book, it is the right time to provide you with a glimpse into the nature of economic theorising (see Chapter 6, which undertakes a detailed discussion of economic theorising). By definition, theorising implies the careful selection of *relevant* aspects of economic processes and the (temporary) jettisoning of the rest. Let me use an analogy to scrutinise the ‘relevant’ aspects. When we go with an ailment to the doctor, we are very often asked to get a blood test done. The test conveys to the doctor whether the relevant components of the blood fall in the ‘normal’ range or outside it. How is this normal determined? Does the normal not vary according to the body constitution? Does the normal not vary according to the place where you live (and the associated environment)?

Similarly, will the Kochi (a cosmopolitan city in Kerala) economy be the same as the Madenapalle (an agricultural town in Andhra Pradesh) one? Or will the nature of Uttarkashi (a town in hilly Uttarakhand) and Gokarna (a coastal town in Karnataka) economies be the same? In this section, we shall discuss the method of theorising that will allow us to talk of the ‘normal’ in the context of a macroeconomy. Another way to think of the ‘normal’ is to pose the following question: what is the standard of reference when we discuss the macroeconomy? While some of you might find the foregoing analogy to medicine slightly fanciful, it is not quite. The founders of political economy, William Petty and François Quesnay, were medical doctors. In fact, present-day commonplace terms in economics such as ‘circulation’ and ‘inflation’ are imports from the medical lexicon.

Object of analysis

While the object of analysis for some of you might be the ‘Indian’ economy, some of you might want to understand how the Nagaland or Telangana economy functions. Some of you may also wish to know how the Kalaburgi (a town in Karnataka) or Rourkela (a city in Odisha) economy works. The chief purpose of this book is to provide you with an apparatus, a framework, to help you make sense of any economy. And as pointed out in the previous section, a proper understanding of any economy requires you to possess a reasonably good knowledge of that economy’s history, culture and politics. In other words, shallow and shabby applications of economic theories on actual economies cannot, and should not, be done.

Our object of analysis, at the first level, is an economy with free mobility of labour and capital. Many a time, students lose interest at this very point because the economies we have seen and grown up in are not ones where labour and capital are freely mobile. To move your business (which comprises capital equipment and workers) from Tamil Nadu to Telangana, you need to incur additional costs (not just money but also time and, therefore, the business income foregone ought to be included). Labour is even more immobile. Owing to the Indian caste system, those from the marginalised castes and those outside the caste system are not free to do any work they wish to. Hence, B. R. Ambedkar (who made important contributions to monetary economics and centre–state financial relations) points out in his book *Annihilation of Caste* (1936) that the caste system is not just a division of labour but a division of labourers (p. 47). As a matter of fact, the caste system dictates that you should milk cows because you are born into a caste which is supposed to do that. Forget actual mobility, you cannot even *dream* about it. Iyamam, a Tamil school teacher and author, poignantly describes this in the introduction to his 2015 book *Pethavan (The Begetter)*, a novella about the story of a father who is being forced by the community to kill his own daughter because she dared to dream of marrying a Dalit man:

My characters are not great thinkers or rebels. They belong to the land. They are labourers. There is a constant struggle with land and nature.... My characters do not even dream. Even if they dream, it is about eating well. (pp. xv–xvi)

Additionally, in India, it is not easy for women to dream of mobility either, owing to the patriarchal expectations and norms. In the 2012 novel *The Taming of Women*, P. Sivakami captures evocatively the social constraints faced by Anandhayi, a Dalit labourer who harvests coriander: “Anandhayi could not help feeling bitter. She was fed up with this life. She was reduced to being just a mother to her children” (p. 80). Thus, the extent of labour immobility varies depending on the specificities of their caste, gender, community and region. At the initial level of theorising, we do not accommodate these realities. This is done by keeping in mind that when we apply (pure) theory to understand any economy, we ought to engage with its socio-cultural specificities. To put it differently, a good economic understanding warrants the coming together of both concept and context (for a concluding statement, see Section 9.2).

Another reason for viewing a competitive economy as the standard of reference or the normal is that it enables us to say something definitive or precise (of course, given the assumptions) about the economic phenomena under study. The assumption of free mobility of labour and capital implies that the rates of return across sectors will tend to be uniform. Since each sector has its own specific technological requirements and skills, the rate of profit across sectors is necessarily different. That is, if we keep aside sector-wise differences in skills and risks, the rate of profit across sectors will be uniform; you can visualise this profit as a 'pure' rate of return. The following passage in Ricardo's *Principles of Political Economy* provides a nice description of the free mobility of capital.

Whilst every man is free to employ his capital where he pleases, he will naturally seek for it that employment which is most advantageous; he will naturally be dissatisfied with a profit of 10 per cent, if by removing his capital he can obtain a profit of 15 per cent. This restless desire on the part of all the employers of stock, to quit a less profitable for a more advantageous business, has a strong tendency to equalize the rate of profits of all.... (p. 88)

Once we study the properties and tendencies of a competitive economy, we are better equipped to study non-competitive economies, a central feature of the actual world (I prefer using 'actual' to 'real' as the theoretical world is also real). Since this book is pitched at an introductory level, there will be no substantial theoretical discussions on non-competitive economic arrangements such as monopoly or oligopoly. However, we will engage with these features when applying the analytical framework of the competitive economy to understand the Indian macroeconomy.

After noting two further reasons for choosing the competitive economy as our object of analysis, we move on to discuss the *level* of analysis adopted in most parts of this book. First, irrespective of the school of thought, almost all economists up until the 1930s 'imperfect competition revolution'—pioneered by Joan Robinson and Edward Chamberlin in their books *The Economics of Imperfect Competition* and *The Theory of Monopolistic Competition*, respectively—conducted their investigations within the framework of a competitive economy. However, there is still merit to treating the competitive economy as the object of analysis because it helps us see clearly the interdependencies and sometimes lays bare the consequences of an economic action. Second, since the emergence of capitalism as a way to organise societies, much has been written about its merits and demerits. A key merit is the belief that competitive economies (more

specifically, competitive markets for commodities and labour) bring about the full employment of labour. Moreover, most economic 'reforms' seem to be undertaken with an implicit belief that a competitive economy is better for *all*. Since such an implicit belief exists and will continue to exist, it is important for all of us to thoroughly understand how a competitive economy operates in theory, the economist's laboratory, as it were. Thus, an understanding of a competitive economy is a prerequisite for understanding the past, present and future of India's economic vision.

In India, we have wage labour, alongside caste labour, and private property. Think of why about 1 per cent of Indians own the majority of the 3,287,263 square kilometres of Indian land.

Level of analysis

Now that we have identified our object of analysis, let us move on to discuss the various possible levels of analysis before we state the level adopted in this book. Extending our earlier examples, we could look at the Indian economy, Manipur economy, Kerala economy, Gujarat economy, Palanpur economy, Dharwad economy or Vidarbha economy. While the Indian economy is constituted by Manipur, Kerala, Gujarat, Palanpur, Dharwad and Vidarbha economies, it is not a simple aggregation of all of them. In any case, how does it make sense to aggregate the Kerala and Gujarat economies? What kinds of economic information can you meaningfully aggregate? That is, we could study the national, state, region or local economy. We could also study the formal and informal economies or the rural and urban economies. The level of analysis depends on the issue or topic we are interested in.

Besides these 'macro' ways of organising and studying an economy, we could adopt a 'micro' approach and examine how an individual makes economic decisions or how a firm decides how much to produce and what technology to adopt. In between the macro and micro approaches to studying an economy, there exists what I call the 'meso' approach. This approach examines different sectors in the economy. Questions relating to the economic health of agricultural, manufacturing and service sectors fall within this approach. Hence, if you are interested in knowing how the agricultural sector is faring vis-à-vis the manufacturing sector, you would adopt the meso approach. To put it differently, if you study the terms of trade between agriculture and manufacturing, it would come under the meso approach.

Much of the analysis in this book is macro in approach, although this is occasionally complemented by meso and micro approaches. And, of course, it is not as if the macro, meso and micro economies exist per se in the actual world. Just as the ‘economy’ is an abstraction, so are the ‘macro’, ‘meso’ and ‘micro’ economies. And it is important to remember that most of us are studying economics not only to understand our economic surroundings but also to better them *for all*. Amidst all the abstraction, equations, graphs and numbers, we must not forget what it is that we are studying—the economic condition of each and every person in the Indian macroeconomy. This powerful poem by Abhay Xaxa (2011), a former national convener of the National Campaign on Adivasi Rights, is a constant reminder of the aim of our study. It also teaches us to remain humble about our approaches to understand the world.

I am not your data, nor am I your vote bank,
 I am not your project, or any exotic museum object,
 ...
 Nor am I the lab where your theories are tested,
 ...
 I am not your field, your crowd, your history,
 ...
 I refuse, reject, resist your labels,
 ...
 Because they deny me my existence, my vision, my space,
 ...
 So I draw my own picture, and invent my own grammar,
 ...
 For me, my people, my world, my Adivasi self!

Precision in analysis

The previous discussions have clarified the object and level of analysis undertaken in this book. It is now time to talk a little bit about the nature of precision in economics and the need for it. As noted earlier, we wish to make some definitive and precise statements about economic phenomena. Let us suppose that you want to understand the main determinants of employment. There are several options—you could examine wages and employment, aggregate output and employment, inflation and employment, government expenditure and employment, or private investment and employment. And

when you, say, examine aggregate output and employment, you keep all the other variables constant. This is done in order to understand how two economic variables are related and, more importantly, to understand what causes what. In economic theorising, we use the Latin phrase *ceteris paribus*, which means 'everything else remaining the same'. You can think of the *ceteris paribus* assumption as a girdle on a horse or a scaffold on our thoughts, a way to theoretically discipline or control the concurrently occurring multitudinous economic activities. The use of the *ceteris paribus* assumption is most ably described by Marshall in his *Principles of Economics*.

The element of time is a chief cause of those difficulties in economic investigations which make it necessary for man with his limited powers to go step by step; breaking up a complex question, studying one bit at a time, and at last combining his partial solutions into a more or less complete solution of the whole riddle. In breaking it up, he segregates those disturbing causes, whose wanderings happen to be inconvenient, for the time in a pound called *Caeteris Paribus*. The study of some group of tendencies is isolated by the assumption other things being equal: the existence of other tendencies is not denied, but their disturbing effect is neglected for a time. The more the issue is thus narrowed, the more exactly can it be handled: but also the less closely does it correspond to real life. Each exact and firm handling of a narrow issue, however, helps towards treating broader issues, in which that narrow issue is contained, more exactly than would otherwise have been possible. With each step more things can be let out of the pound; exact discussions can be made less abstract, realistic discussions can be made less inexact than was possible at an earlier stage. (p. 304)

The *ceteris paribus* assumption is not sufficient to make definitive statements. Remember that our object of analysis is a competitive economy that exhibits a tendency to a uniformity of rates of return across sectors. Furthermore, if an external event raises the rate of return/profit in one sector, there will be an inflow of labour and capital in that sector until the rates become uniform, as the excerpt from Ricardo showed. This tendency, in an economy, underpins our notion of equilibrium because any change in the economic system eventually leads to a state with a uniform rate of return across sectors. Equilibrium in economics, as in physics, is a state of rest. But suppose you do not assume *ceteris paribus*; in this case, do you think you can identify an equilibrium tendency?

Economists make assumptions such as *ceteris paribus* so as to say something precise or definitive about the phenomenon we are studying. There is another area wherein precision is fundamental—the definitions of concepts in theory. For instance, how do you define the rate of profit? Or how do you define capital? Or technology?

In statistical analysis, due to the unavailability of relevant data, approximate measures can be used. However, in theory, imprecision is unacceptable. For example, is capital defined as a heterogeneous bundle of commodities or as a value magnitude in economic theory? To use an example, is capital a collection of seeds, ploughs and tractors or a sum of money? While we are discussing the importance of precision in economics, it is apt to quote Sraffa, the Italo-Cambridge economist who made significant and revolutionary contributions to economic theory. Sraffa made this observation at a 1958 conference, the proceedings of which were published in 1963 as *The Theory of Capital: Proceedings of a Conference Held by the International Economic Association*.

The theoretical measures required absolute precision. Any imperfections in these theoretical measures were not merely upsetting, but knocked down the whole theoretical basis. (p. 305)

In sum, we need to be very precise in our definitions of variables in theory. You can find more on measurement issues in Sections 7.2 and 8.2, which deal with the nature of employment and inflation in India, respectively. Let me end this section with a question: can you come up with multiple (theoretical) definitions of capital?

1.5 Conclusion

This chapter began with several motivations for taking up the study of economic phenomena. Subsequently, we took a brief tour of the evolution of economic thought, which included works such as the *Arthashastra*. Then we laid down the possible ways of studying economics, and we stated that this book adopts the *science of wealth* definition. The final substantive section of this chapter provided you a peek into the approach to theory in *Macroeconomics: An Introduction*. In particular, we discussed the object and level of analysis adopted in this book—a macro approach to study the economic properties of a competitive system—and the need for precision in theory.

Suggestions for further reading

For obtaining a good overview of the history of economic thought, consult Heinz Kurz's 2016 book *Economic Thought: A Brief History* (New York: Columbia University Press). While Kurz's book will be of interest to a general reader as well, for a keen economics student, I recommend Alessandro Roncaglia's 2017 book *A Brief History of Economic Thought* (Cambridge: Cambridge University Press). If the discussion on theoretical measurements in this chapter intrigued you, you can follow up by reading pp. 168–70 of Kurz (2016) or pp. 237–9 of Roncaglia (2017). However, if you do not have access to either of these books, you can read my review of Kurz (2016) in *Economic and Political Weekly* (2016, vol. 54, no. 33, pp. 47–8) and of Roncaglia (2017) in *Artha Vijnana* (2019, vol. 61, no. 4, pp. 364–72). A more advanced treatment of the evolution of economics from classical to marginalist economics that offers the readers with several critical pointers is Krishna Bharadwaj's 1986 revised edition of her 1978 classic *Classical Political Economy and the Rise to Dominance of Supply and Demand Theories* (Hyderabad: Universities Press). If you wish to be introduced to the economy and economics found in *Arthashastra*, a good accessible starting point is Thomas R. Trautmann's *Arthashastra: The Science of Wealth* (New Delhi: Penguin Books) published in 2012. And if you are interested to learn more about the relationship between medicine and economics, look at Peter Groenewegen's collection of essays published as *Physicians and Political Economy: Six Studies of the Work of Doctor Economists* in 2001 (London: Routledge). An advanced discussion on the rationale behind studying a competitive economy with uniform rates of profit can be found in John Eatwell's entry on 'imperfectionism' in *The New Palgrave: A Dictionary of Economics*, a four-volume set, published in 1987 (London: Macmillan). However, given the state of our libraries, for an Indian student, it might be easier to access a restatement of it in chapter 8 of John Eatwell and Murray Milgate's 2011 book *The Fall and Rise of Keynesian Economics* (Oxford: Oxford University Press).