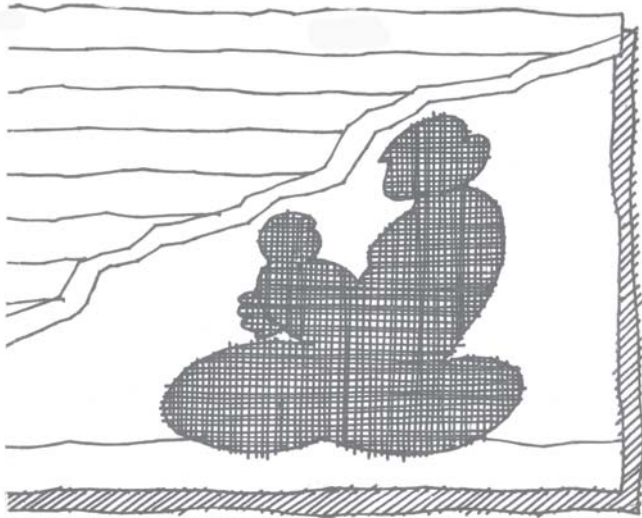


I Introduction

What do we want economics to do? I think we want economics to *demystify* economics! If the media says somebody is a great economist and, therefore, when (s)he says that 6 per cent budget deficit is very serious for the country, one must be prepared to question it. This is typical of the kind of nonsense you must have the intellectual confidence to know is nonsense without closer reasoning or evidence. A famous economist once said, economics is a very important subject not for what it teaches, but because it prevents you from being fooled by other economists. Almost every time you open the television and hear pundits talking about share prices going up, therefore “India’s economic health is much better;” or “India is having an 8 per cent growth rate” and therefore “we are in a wonderful economic situation” or “the problem of poverty is going to be solved soon with high growth” – you must know where the (usually motivated) bluff is. Share prices change every day, often drastically, but the real economy changes far more slowly and even in the opposite direction; you see too many poor people around you, extensive malnutrition, children begging, farmers committing suicide in despair; all this despite two decades of high growth. You should have some



confidence in what you see, to take into account real life experience, to think how representative is what you see, rather than what some economist, statistician or textbook says. This is the first reason why some exposure to economics is important for all of us even as the common citizen. It makes us questioning citizens who keep democracy healthy.

I try to talk to common people, and to write books which do not basically require much economics, or any economics if one trusts their commonsense. It is our duty at various levels to demystify economics. To know that a budget is really not much more than housekeeping and the real difference between a budget and housekeeping is the flexibility of the former. The government can create money by borrowing from the Reserve Bank, so-called deficit financing, or the government can also tax; a housewife or household cannot do this unless it has some overdraft facilities. This is one of the things that really distinguish the government budget and public

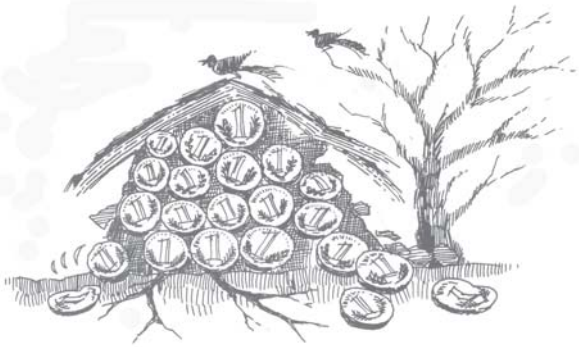
finance from housekeeping. And yet, mainstream economists nowadays have almost obliterated this distinction because they want the state to be diminished in its economic role as far as possible. So it has become conventional wisdom to say that the government must not spend too much; there is a limit. But why cannot the government spend to help its citizens and continue to service its loans by borrowing more so long as people have confidence in the government?

The issue is not how much a government should spend but whether its spending is useful for ordinary citizens. We should resist wasteful spending like the Commonwealth Games, scams like Coal or Spectrum allocation that diminish the budget of the government to help large private business. But we have less reason to cut spending on health insurance and education for the poor citizens because if done successfully it would increase the credibility of the government and its ability to sustain higher debt. Instead the game has become one of reducing public finance to housekeeping in the name of 'fiscal discipline' which increasingly means disciplining the poor to help the rich in India. It should be our attempt as economists to discuss and debate where the government should spend and why, without starting with a predetermined idea of how much it should spend. And yet, you open the television and see learned talk about things in jargon we don't understand; most of the time what they are talking about is a smokescreen avoiding real issues. It is seldom that you hear why employment generation is so poor despite high growth, whether better results might be possible through decentralisation of employment guarantee schemes at 'gramsabha' level, why political parties drag their feet about their own fiscal discipline through an independent Central Bureau of Investigation in face of daily scams of hundreds of crores of rupees, and I could go on. So the first thing is: We need to be intellectually self-confident citizens with open minds. It is not about whether your political leaning is Left or Right, but an open

mind that has the confidence to demystify and look at economic problems for what they are in terms of experience. But experience filters in through ideology.

It is important to have an idea *where economics merges with ideology*. The purpose of all social sciences is to create self-awareness of the basis of one's ideology. You cannot have something that is completely neutral or technocratic, so you must be intellectually honest to know where and how you are introducing your ideology. And the first check on this is an understanding of numbers. I do not mean sophisticated statistics, I don't mean econometrics. Actually, most of the time Indian data is not of much use, except of course to publish and get a professorship! Like much of mathematics used in economics, it really shows your skill, rather than contribute new insights or better understanding. I want to be intellectually honest and emphasize that mathematics can be useful to put things in a much sharper way. It is not something that gives you anything new, but it can help to blow away the fogs of imprecise thinking. Mathematics does not tell you something which you could not tell in words; what it does is to say the same thing far more precisely. And precision makes it easier to pinpoint differences in assumptions and conclusions that logically follow. However, logical reasoning as opposed to rhetoric is the same for everybody. So it helps to debate about assumptions and their relevance.¹ But mathematics also teaches you in some cases how to bluff! I will come to that later.

It is through a complex interaction between experience, ideology and numbers that we have to conduct economic reasoning. That really becomes distilled commonsense. When it does not fit in with our pre-conceived commonsense (or '*knowledge by introspection*') we must ask why. That is the more complex function of training in economics. Perhaps that is also the beginning of being a real economic theorist of relevance.



II The Core of Economics

Rather than propounding general things on the methods of economics, let me illustrate by saying what I consider to be the core of economics. I have been at this game in different universities around the world in different teaching and research capacities and have become aware of how differently different places view the 'core'. I was trying to think before coming to this lecture: *What actually is the core of economics? What is it that ideally someone as an economist should know? What is that core that gives an intelligent and interested citizen the confidence to pose and raise relevant economic questions depending on the particular context?* And then we would have some criteria to judge what the basic textbooks contain.

There are about three basic areas in economics going by the conventional classification. The first area is microeconomics. The second area is macroeconomics. The third area is applications to our context, the Indian economy, using India as an illustration of our economic understanding based on available information and theory. Micro-, macro- and Indian economics with some idea of how to analyse quantitative and qualitative information constitute the conventional core of the subject, the academic discipline of economics. So let us start with this.

III Microeconomics as the Problem of Choice

If you look at microeconomics, it has two basic elements. They can be useful; they can also be misused. There are two things one should know, let's say, in high school economics or the first year of college. The first element is some idea of how choice, individual choice, is discussed in economics. All one really needs to know is something very simple, the basic idea in the theory of choice. *Choice is made not on the basis of exact knowledge but 'inexact' knowledge.*

So how do we represent this? One way of representing this is, say, 2,3,5: where 2 is different from 3 by 1 but 3 is different from 5 by 2. You know the exact magnitude of difference because they are 'cardinal numbers'. So there is a bigger difference or distance between 3 and 5 on the number scale (measure) than between 2 and 3. Now, when you not only know that something is bigger than something else but you also know how big the difference is – quantitative idea of how big the difference is – you call it *cardinal* measurement. And you might say, I prefer 5 to 3, and I also know by how much I prefer it.

However, in most cases we do not know that exactly. For example, I might prefer apples to bananas, but I would not know by how much. So this becomes what you call *ordinal* preference, i.e. you know 'only' the order as to what is greater than what. You could at times imagine them as 'fuzzy' numbers on a line without the distances being defined between two 'points' with precision. In simpler terms, from ordinal measures which order high and low as relative positions without exactitude. i.e. 'by how much' comes the beloved indifference curve of the textbooks. However, students do not need to know the tangency conditions, marginal rates of substitution and so on in detail.

That only makes things boring. But this idea that inexact knowledge can also result in a certain kind of logic of choice is useful. Because, *many real life choices are made on the basis of inexact knowledge.* Think about our daily life. An insurance company takes a 40-year-old and a 60-year-old. They will ask for a higher insurance for a 60-year-old. Why? They will say that the 60-year-old is likely to be more prone to illness and death, so we will take a higher premium. This is not exact knowledge. This is one kind of inexact knowledge: it is *probabilistic* inexact knowledge. Unlike the apple versus the banana example where the former may simply be higher on your preference order, it is a probabilistic example when actuarial arithmetic makes cardinal measures related to a large number of observations possible.

A teacher can devote time to these ideas of different types of inexact knowledge rather than spending a lot of time on how choice is made and how tangency conditions are met for maximizing ordinal utility represented by indifference curves. Once students leave school they will never need indifference curves again. All you really need is the idea of the types of inexact knowledge versus exact knowledge (similar to non-linear, which is not countable, versus linear equations, for the mathematically inclined). And that may be introduced in two ways: one is where you are making a choice of the kind as in apples and bananas or monarchy versus dictatorship, and one when it is probabilistic knowledge. In the former you have some basis only in your personal tastes; in the latter you have a basis in numerous observations (of 40- and 60-year-olds).

In the theory of the firm, rather than teaching all the doubtful propositions that nobody needs – U-shaped cost curves, equality between marginal cost and marginal revenue and so on – I think all we need to know is that when firms make a choice, they are also making the choice in a somewhat similar way. They cannot maximize profit exactly because they have to deal with different types of

information. There is exact and inexact knowledge – in computer language we may call it 'hard' and 'soft' information. Think of a firm. If you are a businessman you have some knowledge about your firm such as what would be your cost. Your internal accountant will tell you the cost of production under given conditions. This is relatively hard information. You also have some far less exact knowledge. You want to sell your product but you do not know how much you are going to be able to sell, particularly if it is a new commodity. This is soft information. The distinction between hard and soft information is relative, again pointing to the importance of making a distinction between *types (ordering)* of information involved in making individual choice.

Now, if you are a businessman, you would use the hard knowledge about cost as much as you can because it is more reliable. You would also use soft knowledge but you would try to rely less on it. In our real life, we use soft knowledge, probabilistic soft knowledge, e.g., a higher percentage of people die of rash driving in their 30s than at 80 or 70, in order to make designs for a new model of car for the relevant demographic target group of buyers of car.ⁱⁱ Marketing plans are usually made on the basis of such knowledge. However, a firm makes pricing plans mostly on the basis of cost; if its cost goes up, it will raise its price, because cost is hard information. When the petrol prices go up it will raise prices, because it is hard information for all sellers transporting goods. A businessman often has soft information about a new product, say a new model of car or whatever. So either (s)he would do more market research trying to make information about demand for the new product harder, or take uninformed risk.

For the firm, information about cost, particularly average cost, is usually more reliable (harder). So firms introduce *cost-based pricing with a mark-up on average cost*. While introducing the notion of

average cost a distinction between average full cost and average variable cost would be useful. Firms usually base price on average variable cost; here depreciation plus profit considerations enter in setting the *mark up* on average variable cost in fixing price. These are empirically established reasonably robust results for manufacturing business. In contrast, you would be hard put to find a businessman who knows what his marginal cost and revenue are.

This is what actually all microeconomics at one level needs to teach in the theory of choice which is supposed to be really the core of microeconomics. If you know the director of any firm, ranging from soap manufacturing to an automobile manufacturing firm, you may ask how they put a price. They look at the cost. They will say this is my unit cost, the cost of producing one bar of soap, and I put a 20 per cent margin and set the price. This is what is called cost-based pricing. What am I using here? I am using the cost which is the hard information completely, saying that I want to use this to set my price, and then the 20 per cent is soft knowledge. If with that I can sell, I will then make it 30 per cent. Tata will sell their Nano at Rs.1 lakh. If they can sell sufficient number, in two years prices may be raised. They will see how much they can sell at some tentative margin, i.e. they are probing the soft information about demand. You probe the market to discover not the 'correct' price or the optimal profit maximizing price, which you might never know, but a more 'satisfying' price (a jargon for this kind of price setting behaviour) for your profit motive. If you see that the 20 per cent is too high, you will reduce. This is actually the logic of cost-based 'satisfying' pricing behaviour. You break up your price into hard information and soft information. These are actual real life examples. (It would be an excellent idea to ask students to do projects on how true this is for the local shops.) They don't set price by demand and supply curve conditions. And market equilibrium, marginal revenue and marginal cost, all that stuff that we teach at great length, and profit maximisation

are false precision. They use mathematics not to describe the real world. Who knows what the demand curve is? What is the marginal revenue? What is the marginal revenue of an extra bar of soap? Can you tell? If a student asks: Madam, what are you teaching, can you give some examples, what will you say except for doing another diagram or a bit more of calculus?

If you look at much of what is taught as core economics at a more advanced level, where does the heavy mathematics come from? It comes from saying that you maximise: you maximise this way at a point of time, you maximise that way over a period of time, and this is the condition of maximisation at a point of time or over the time path from which you try to infer, if at all, propositions about the real world. But this is much more to prove that you are going to be a professional economist, with the required skill. This can be misleading in real life because you are assuming implicitly more hard information than is actually available. Instead of explaining the procedures of such maximization, it is more important for the student to know that information is not simply precise or imprecise, hard or soft, but it is a strategic variable. The supplier, say, of a second hand car or computer, may have more information about what (s)he is selling than the buyer (asymmetric information). But this is less important as an example than, say, information suppressed by a democratic government when it purchases defence equipment, leases out coal or iron mines etc. *Strategic information brings into open the notion of power in economics*, seldom discussed. (The right to information and some 'scams' would be good projects for students to see how information becomes a strategic variable.)

There is a second thing in microeconomics that is useful: the difference between what we call the income effect and the substitution effect. Take, for example, India's inflation today. What do you think is the effect of inflation? Why there is inflation is a different question,

but what is the effect of inflation? One way to begin to analyse it is to say that whenever the price rises, particularly of an essential commodity (let us say, food prices rise), what does it do? It does two things: it reduces your real income if it is fixed (e.g. salaries, pensions, etc.) and it obviously raises the prices of some items of food more compared to others and with limited income you try to buy the cheaper substitute. Economists think of these in a way which actually changes your basket. For example, you will buy less those vegetables whose prices have increased relatively more; at the same time, vegetables whose prices have increased less, you will substitute in their favour (*substitution effect*). There is direct substitution in favour of the cheaper items. The second effect is, your real income is less so in effect you will consume less of everything (*income effect*). This actually allows you to look at the effect of inflation on an individual buyer or consumer in a more ordered way. Those who are at the bottom, the poorest among consumers, have nothing to substitute because they are anyway consuming the cheapest variety. Hence, what do they do? As their real income goes down, they will simply cut down consumption. However, food is more essential than, say, buying a pair of shoes. This leads to what is called Engel's Law. They will buy food, because they have to buy everyday food; and they will cut down on health and they will cut down on education of their children and so on. The proportion of the budget spent on food would increase. This is a good introduction to analysing how food price rise affects different income groups, the poorest, the poor, the middle class and the rich. (Projects on budget studies in the nearby locality by proportion spent on different items by different income groups would be an excellent idea.)



Now, let me come to the other part: macroeconomics.