

Thinking Like an Economist: A Developing Country Perspective

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Abstract

This essay examines how economists are trained to look at economic issues differently than others. By using examples, it discusses the distinctive perspectives that can be gained from such economic concepts as *counterfactuals*, *sunk cost* or *comparative vis-à-vis absolute* advantage; it also illustrates how using the logic derived from abstract economic models can help avoid arguments at cross-purposes in public discourses. The essay argues that, in spite of the attempts at grand narratives through universally applicable theoretical constructs, useful economics is necessarily eclectic, so that the students of economics in developing countries have much to gain by trying to relate textbook theories to their own socio-cultural settings. In doing so, they have the advantage of observing the actual functioning of markets in a whole range of institutional settings, from rural *hats* and *bazars* to modern shopping malls. Moreover, some of the recent theoretical advances in economics, such as in the field of incomplete markets and markets with information asymmetry, endogenous growth, game-theoretic models of trust and cooperation, behavioural economics, and the experimental approach to impact evaluation (randomised control trials) are often more readily applicable in the context of less developed countries. There may be unexplored ingredients in these new ideas in explaining why markets function better in some environments than others and why some countries succeed in achieving economic development while others fail.

Introduction

Maynard Keynes once said that economics is a difficult subject, but nobody will believe it; it seems an easy subject compared to the high branches of philosophy or pure science, yet very few excels in it. In his view, “the paradox finds its explanation, perhaps, in that the master economist must possess a rare combination of gifts.... He must be a 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. He must study the present in the light of the past for the purposes of the future. He must be purposeful and disinterested in a simultaneous mood; as aloof and incorruptible as an artist, and yet as near the earth as a politician.”¹ That is a

¹ Quoted in Mankiw, W. G. 2004. *Principles of Economics*, 3rd ed. Ohio: Sout Western Mason, p. 32

tall order of things; and if it is true, it may be worth pondering how economists view things and approach a problem differently than others.

The above quote from Keynes suggests that useful economics is necessarily eclectic. In spite of elegant theoretical constructs, such as the neo-classical general equilibrium theory, economists have increasingly come to realise that there are no grand narratives or universal theories of such generality as the laws of science. Yet, economic models as tools of analyses can be very useful in explaining and understanding the economic life around us. Though highly abstract and not a true account of the real world, economic models can help us in starting to approach an economic problem coherently and with logic, as the examples in this essay will illustrate. Economic theories are thus best understood by trying to apply these to real life situations. Students of economics in developing countries are at the same time both advantaged and disadvantaged in this respect. The economics textbooks, mostly originating from the industrialised countries, commonly use examples from the economic life and problems in those countries, which are less familiar to them. On the other hand, they have the opportunity of applying textbook theories to the actual functioning of markets in a whole range of institutional settings, from rural *hats* and *bazars* to modern shopping malls. In the countless ways that they encounter economic dealings in their surroundings, there are always new insights to be gained from such dealings, if only they could take a fresh angle on the familiar.

The application of textbook economic models to the real life situations has become more rewarding with the recent onslaught of new ideas into mainstream orthodox neoclassical economics, such as regarding incomplete markets or markets with information asymmetry between buyers and sellers, environmental externalities, game-theoretic models of trust and cooperation leading to reinforcing of social norms, theories of individual behaviour derived from experimental psychology, and the experimental approach to impact evaluation (randomised control trials). Many of these new ideas are appealing to the inquisitive mind and are also more relevant in the context of less developed countries. Most of the modern theories of agrarian economics have also been developed from the perspectives of present-day less developed countries. The theoretical applications of some of these ideas can be found in the textbooks used in the courses on economic development at the graduate or advanced undergraduate courses,² but it should be possible to introduce these ideas in a more accessible way both in introductory economics courses and in public discourses on economic issues.

Even if economic issues may be deceptively complex, economists owe it the society to try to bridge the gap between the expert and the lay opinion on such issues. It is often frustrating for otherwise knowledgeable people to find debates on economic policies too technical and inaccessible, although the lives of everyone are affected by these policies. Yet, a minimum level of economic literacy among educated people is both possible and highly desirable. It is true that economists differ in their opinion on most economic issues (which is the subject of many popular jokes) and there are rarely ready-made unequivocal answers to questions commonly asked on

² See, for example, Bardhan, P. and Udry, C. 1999. *Development Microeconomics*. Oxford: Oxford University Press; Ray, Debraj. 1998. New Jersey, USA: *Princeton University Press*.

such issues.³ However, knowledgeable people need to know the basis of the different viewpoints without falling into the traps of economic fallacies, then make their own value judgments to reach their own conclusions.

Unfortunately, popularising serious policy debates on economic issues is not easy. As the Nobel laureate economist Paul Krugman once lamented: Where is the economics equivalent of the late Carl Sagan who could make the technicalities of astrophysics accessible and exciting to a wide television audience? Later on, Krugman proved himself wrong; in 2000, he began a twice weekly op-ed column for the *New York Times*, and using this platform became America's most widely read commentator on political economy. And, instead of being boring and dry, discussions on economic issues may be interesting and engaging as well. As the novelist Mario Vargas Llosa remarked: "Economists occasionally tell better stories than novelists".⁴ What she probably meant is that there is certainly rich raw material in economic happenings to make engaging literary narratives; the stories of markets and businesses are full of human ingenuity and creativity, as well as disappointment and failure.

Economists are not, however, the favourites in any popularity contest, particularly since they have to carefully avoid playing to the gallery. To the passionate partisan and ideologically inclined readers, the commentaries by an economist may seem too ambivalent and non-committal for their taste. The refuting of popular economic fallacies is unlikely to go down well with those who would rather cling to their long-held beliefs. Economists may also be called upon to provide policy advice on unpalatable choices which other professions would rather avoid, like how to allocate resources in the government's health budget between the provision of primary health care for all and spending on costly intensive care in hospitals for the few who need such care. The Nobel laureate economist Jean Tirole explains another reason why the public perception about profession of economists is far less favourable than that of medicine (known as the "the caring profession"). In medicine, the benefit of treatment goes directly to the patients, even when the patients are treated for the secondary effects of a disease or when an infectious disease spreads in the community. An economist's considered advice may involve conflicting interests of different groups of people; he is obliged to think about the indirect victims as well, so that he may be accused of being indifferent to the sufferings of the direct victims.⁵

On a lighter note, does thinking like an economist tell anything about the economists' profession? After all, in their academic work, they deal mainly with the self-regarding behaviour of people that could lead them to view the world through a distorted lens. Some studies in experimental psychology carried on university students do suggest that students who opt for economics tend to be less generous compared to students of other social science disciplines; but

³ One such popular joke is about a US President saying: I have ten economic advisors with ten different opinions; I know one of them is correct, but don't know which one.

⁴ Foreword by Vargas Llosa, in de Soto. 1989. *The Other Path*, p. xi. He made this comment in relation to the story of how Peru's poor make a living through black markets in Lima.

⁵ Tirole, J. 2007. *Economics for the Common Good*, pp. 23 – 4. Princeton, New Jersey: Princeton University Press.

this may be more because of self-selection (students are more likely to major in economics or business if they are more selfish) than because of indoctrination (students become selfish because of studying economics).⁶ In any case, beyond any short-term effect of studying economics, there is no study to show if economists in their later personal and professional life act less ethically than other people. Given thus that there is no evidence of at least any long-term damage to ethical values from thinking like an economist, the non-economist readers of this essay may feel reassured on this count to proceed further!

Economic models and the counterfactual

Economic analyses primarily seek to find causal relationships between various economic variables, such as the impact on market price of a change in the supply of a commodity, or the impact of a policy in achieving its intended goals. Economics contrasts with other social sciences in trying to establish such relationships in as much a precise or ‘scientific’ way as possible. However, economic predictions have to be made in a world where everything depends on everything else, or at least a number of other things. By contrast, physicists can study a falling body in complete isolation from almost everything except gravity. A simplistic comparison of the situation prevailing *before* and *after* the implementation of an economic policy can be a misleading way of assessing the impact of that policy. The outcome of a policy reform can be ideally assessed only by looking at the *counterfactual*, that is, a *with-and-without* comparison by separating the effects of all other extraneous factors working simultaneously. This is by no means an easy task although economists have devised various statistical and methodological tools to do that with varying success. The logic of the counterfactual is not, however, always commonly understood, so that it is often difficult to perceive that certain outcomes may have happened *in spite of* and not *because of* a policy.

Economic models

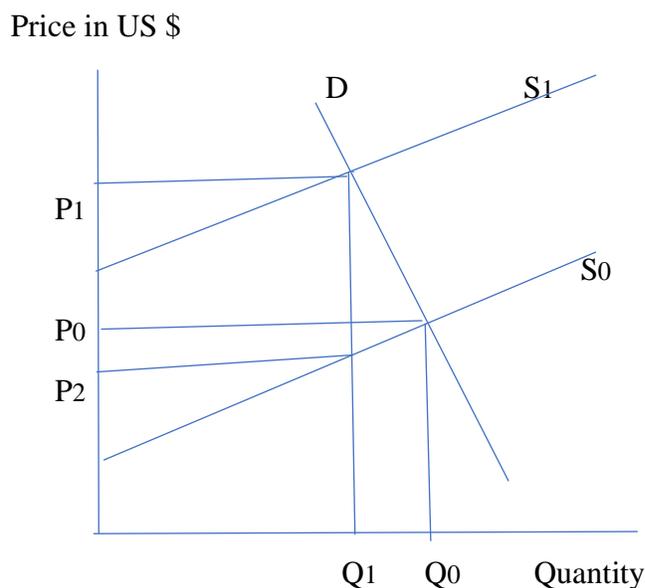
In understanding economic problems, starting with highly abstract simplified version of the real-life situations – the so-called economic models – can often be much more helpful than gathering incoherent ideas from a vast amount of general reading. Even the elementary model of market equilibrium, represented by the familiar diagram of criss-crossing demand and supply curves, can go a long way in helping to avoid confusions about how certain policies may affect the working of markets. I often used to tease my first-year undergraduate students in the Introduction to Economics course with the following problem: the “law of demand” says that the demand for apple will increase if the price falls; but everybody will also agree that if the demand for apple increases, its price will increase. While both the statements sound very sensible, how is it that they also appear to be contradictory regarding the relative movements of price and demand? The answer to this puzzle, of course, lies in the hidden assumptions behind the two statements. The

⁶ See, for example, Frey Bruno and Meier, Stephen. 2005. “Selfish and indoctrinated economists?”, *European Journal of Law and Economics*, vol. 19, pp. 165 -171.

law of demand regarding the inverse relation between price and demand is derived from the deductive logic that we get decreasing extra satisfaction from an extra apple, and will therefore demand more apple only if the price falls; it is a hypothetical relationship based on the assumption that other things except price, such as income and taste, remain the same. In the second statement, which is about the determination of price through the interaction of market supply and demand, it is precisely because of a change in one or more of those other things that the demand increases, thus pushing the market price upward. In terms of the textbook demand-supply model of market equilibrium, the two statements can easily be seen to relate, respectively, to *movement along the demand curve* vis-à-vis an upward *shift* of the demand curve.

Thinking in terms of an economic model makes it possible to make precise statement without creating confusion; otherwise, unnecessary controversies may be created with people talking at cross-purposes. An example is provided by a rhetorical public debate back in 2014 between the Commerce Minister of Bangladesh, Mr. Tofail Ahmed, and the then US ambassador to Bangladesh, Mr. Dan Mozena about who pays the burden of 15 percent import tariff levied by the US on Bangladesh's apparel export. Ambassador Mozena's contention was that the burden of this tariff was borne by the US consumers who buy the imported apparel, while Mr. Ahmed claimed that it was the Bangladeshi garment producers who had to pay the entire bill. In fact, both were right to an extent, but they were talking from different premises. Ambassador Mozena was referring to the textbook case of the effect of high import tariffs, the burden of which is borne in part by the US consumers (but also in part by the exporting countries generally in terms of a lower price and a lower trade volume), with Bangladesh not particularly discriminated against. The distribution of the burden will depend on the relative price response of foreign exporters' supply vis-a-vis that of US consumers (see Box 1.1)

Box 1.1 The impact of US import tariffs on readymade garments from Bangladesh



In the above, D is the domestic demand curve of imported garments in the US domestic market; S0 is the worldwide supply from exporters without any import duty and S1 is the supply curve with the existing duty. The supply curve shifts upward exactly by the amount of the duty, implying that the same quantity will be supplied at the original price plus the duty (the duty is assumed for simplicity to be at a fixed rate per unit of quantity, and not per unit value, that is, *ad valorem*). The US domestic price is P0 without tax and P1 with tax, while Q1 and Q0 are quantity imported with and without duty, respectively.

Ambassador Mozena's argument: Because of the duty, the increase in the price paid by the US domestic consumers is $(P1 - P0)$, which is a large part of the unit duty rate of $(P1 - P2)$, represented by the extent of the upward shift of the supply curve. It can be shown that this part of the duty borne by the US consumers depends on the relative slopes of the supply and the demand curve. Minister Tofail Ahmed's argument: If Bangladeshi exports were exclusively given duty-free facility, these exports would get the price P2, instead of the price P1, the difference being exactly equal to the duty rate.

Source: The diagrammatic illustration is by courtesy of T. N. Srinivasan of Yale University; private communications.

Mr. Ahmed, on the other hand, was comparing the existing situation with a hypothetical one in which the US would have offered exclusive tax-free facility to Bangladeshi apparel exports, which he thought was deserved by Bangladesh because of its status of a Least Developed Country. The impact of allowing such a tax concession on the US domestic apparel price would be marginal, if at all, because exports from Bangladesh constitute only a fraction of the US domestic apparel market. Thus, compared to allowing such a tariff concession, the impact of the existing US import tariff can be said to fall largely, if not entirely, on the Bangladeshi exporters. When I wrote an op-ed explaining the cause of this controversy, T. N. Srinivasan, the late Yale University economist and an authority on the theory of international trade, sent me a diagrammatic exposition of my explanation – an example of how economists are rarely satisfied with an argument until it can be laid out in terms of a clearly defined model.⁷

The counterfactual vis-à-vis the actual

Coming back to the logic of the *counterfactual*, conceptualising it can be of varying complexities, depending on the ways in which the counterfactual is expected to be different from the actual. Consider, for example, the impact on the consumption and saving pattern of a household, an earning member of which temporarily migrates overseas to earn a better income and send remittances back to the family left behind. Several things will happen: first, there will be a change in the family income to the extent that the monthly or yearly remittance sent by the migrant worker exceeds the income he could have earned without migrating. Second, with the additional income, the remittance-receiving household is likely to spend their income differently compared to other households with similar income because there is one person less in the household to meet living expenses, but, more importantly, because the remittances are different from other regular household incomes because of their temporary and windfall nature.

One empirical method of estimating this impact of overseas migration is to conduct household surveys to gather relevant information on two groups of households, one with a migrant household member and another with none, and compare their income and spending patterns. Since the two groups of households may vary in ways other than having or not a migrant member, econometric methods are used to ‘control’ for the differences; but still the comparison may not be an ideal one because of the likelihood of ‘unobservable’ differences that may exist between the two household groups. Better results may be obtained by conducting repeated surveys over a period of time on both groups of households, known as *longitudinal* surveys, and applying appropriate statistical techniques to the data so generated.

⁷ Mahmud, W., “Mozena versus Tofail: Who pays for US tariff on Bangladesh’s garment export?”, *The Daily Star*, Dhaka, Nov. 16, 2014.

Even a more ‘scientific’ approach would be to conduct an experiment by sending abroad for overseas employment members of some randomly selecting households from a larger group of households each with a prospective migrant member, and subsequently comparing the situations of the two groups. The Nobel Prize in economics in 2019 was awarded to Abhijit Banerjee, Esther Duflo and Michael Kremer for pioneering this experimental approach, known as the randomised control trials, which is now considered by many in the profession as the “gold standard” of impact evaluation, particularly in the case of interventions for poverty alleviation in developing countries. While in terms of methodology, this experimental approach should be able to empirically capture the *counterfactual* as closely as possible, it has been critiqued for several reasons: the practical difficulties in finding an ideal experimental set up, particularly for policies that are not trivial; the validity of the results in other socio-economic settings, particularly when there are no *a priori* analytical framework of a causal relationship; and ethical issues involved in the random selection of the program beneficiaries instead of prioritising those who are otherwise considered to be more deserving.

Though not often practiced, there is yet another way of getting at the counterfactual in an empirical study based on field surveys; the survey questionnaire can be administered in a way that involves a mental exercise on the part of the respondent regarding the counterfactual. Consider, for example, an important question in evaluating the impact of microfinance on the poor borrowers: how is the loan utilised? Simply asking this question in a survey of borrowers of microfinance programmes may elicit misleading answers due to the fungibility of funds. For example, a particular expenditure such as to meet marriage expenses could have been incurred anyway irrespective of whether the loan was available or not, in which case the loan in question is not actually causing any *additional* expenditure but in effect may be substituting other sources of financing like asset sale, depletion of saving or borrowing from alternative sources. One could ask, instead, probing questions so as to engage the survey respondents in a mental exercise about the counterfactual, such as: would you have made a particular spending if you had no access to microfinance, and in that case, how would you have financed it? ⁸

Economic logic versus intuitive thinking

The logic around many economic concepts is not easily perceived by people not trained in economics, since such logic may be at odds with the intuitive thinking of people. Biases in people’s perception often give rise to popular economic fallacies that need to be dispelled for sound economic policymaking. The way an individual makes choices and judgments may also be influenced by such biases, which will be a deviation with the basic assumption made in the economic theory that individuals not only act *rationally* (which in economics means maximising own satisfaction), but also *logically* (such as adhering to basic deductive logic that if A is

⁸ For a discussion of how such probing questions in a survey can provide useful insights about the use of microfinance even if it may not be the exact counterfactual, see Mahmud, W. and Osmani, Siddiq. 2015. *The Theory and Practice of Microcredit*, UK: Routledge.

preferred to B and B is preferred to C, then A is preferred to C). The modern field of behavioural economics is helping economists to understand how such biased perceptions may make an individual act differently than would be expected in conventional economic analyses.⁹

Absolute and comparative advantage

An important example of popular misperception about an economic concept is that of “comparative advantage” used in the theory of international trade. The theory, originally formulated by David Ricardo, provides the logic of trade among countries in terms of a country having a *comparative* rather than an *absolute* advantage in producing a tradable good. The logic, though can be easily illustrated by numerical examples, may not seem obvious at a first glance. The *absolute* advantage Adam Smith talks about is simple and intuitive: it makes obvious sense for France to export wine to Scotland and import Scotch Whisky. *Comparative* advantage is more complicated. Ricardo introduced the notion in his 1817 book, *On the Principles of Political Economy and Taxation*; he demonstrated numerically that, even if Portugal is more productive than England in both cloth and wine, both countries can gain with a rise in the total output of both goods if England specialised in cloth and Portugal in wine. Since comparative advantage is a concept of *relative* costs of doing things, no country can have comparative advantage of everything, and every country must have a comparative advantage in something.

Being once called upon by a mathematician, Stanislaw Ulam (who did not have high opinion of social sciences) to name one social science proposition that was both true and not trivial, Samuelson nominated comparative advantage: that this idea is logically true can be shown by a few lines of mathematics, as anyone with an hour or two’s training in economics will know; and “that it is not trivial is attested by the thousands of important and intelligent men who have never been able to grasp the doctrine for themselves or to believe it after it was explained to them”.¹⁰ To be sure, as Samuelson further remarks, the term *comparative advantage* is widely used, but *absolute advantage* is what politicians or non-economist pundits will usually have in mind.¹¹

On a personal note, a friend of mine who used to teach economics at the University of South Asia in Delhi was once asked by a student from Nepal: why should India trade with Nepal

⁹ See, for example, a popular book by Richard Thaler, who won economic Nobel Prize in 2017 for his work on behavioural economics: *Misbehaving: The making of Behavioural Economics*. 2016. UK: Penguin Random House.

¹⁰ P. A. Samuelson, 1969. “The way of an economist” in Samuelson, P. A., ed., *International Economic Relations: Proceedings of the Third Congress of the International Economic Association*, London: Macmillan, pp. 1-11.

¹¹ Subsequent developments in the trade theory have tried to explain why the actual pattern of global trade in today’s world is explained many factors other than the original theory comparative advantage; but the basic insight from the theory remain useful.

since it can produce nearly everything more efficiently.¹² My professor friend answered the student by an example which is perhaps the easiest way to explain the concept of comparative advantage, albeit referring to the era before the advent of laptops and word processing. Suppose a professor is more efficient than his secretary in typing, and of course in doing research, but it will not make much sense in sharing the work of both typing and doing research with his secretary.

There are more complicated uses of the concept of comparative advantage which are even far more difficult for non-economists to comprehend. Bilateral trade agreements are often made on the basis of mutual lowering or elimination of tariff barriers. The gains from such agreements depend on the balance of two types of impact: the usual positive gains derived by increased volume of trade between the countries through specialisation in producing tradable items according to their mutual comparative advantage (the so-called *trade creation*), against this, there is a possible economic loss because of diversion of imports from cheaper third-country source to the costlier partner country resulting from the withdrawal of import tariffs exclusively for the partner country (the so-called *trade diversion*). Before such a trade agreement is reached, negotiations are held between the two prospective partner countries regarding which items are to be kept out of the tariff-free status in order for retaining continued protection to certain domestic industries. When a negotiating high-level trade delegation, usually consisting of the government high officials of the commerce or trade department along with delegates of various business bodies all appear happy after ‘successfully’ signing the deal, an economist should have reasons to feel apprehensive. The benefit of trade creation should make some businessmen happy because of the prospect of exporting more to the partner country while others are bound to feel unhappy because of increased competition from imports from the partner country. *Trade diversion* represents a loss to the country, but it may not have much impact in lowering protection provided to domestic industries (depending on the extent to which domestic prices of imports are affected by diverting cheaper source of import from a third country subject to tariffs to the costlier but tariff-free imports from the partner country). The absence of seriously aggrieved businessmen in enough numbers may thus suggest that the negotiated trade arrangement may not result in much beneficial trade creation compared to harmful trade diversion.

The concept of sunk cost

The concept of what economists call “sunk cost” is useful in making economic decisions in a variety of circumstances, particularly in implementing investment projects; it is a cost that has been already incurred irrespective what decisions are taken for further action. Suppose, after already spending one-third of the estimated cost of a government development project, there is some rethinking on the basis of some revised assessment about the benefit to be derived from the completed project. Assuming that there is no cost for dismantling the work already done, the decision regarding whether to proceed further with the project should *rationally* depend only on the estimated gain from the completed project vis-à-vis the further cost to be incurred; the

¹² The friend being referred here is Syed M. Ahsan, Professor of Economics at Concordia University, Canada

spending already done, which is now a *sunk* cost, should have no role in this decision. People's instinctive reaction may, however, be different.

Recent psychological studies on instinctive thinking of people suggests that *irrational* decisions may be made by people who are not trained to think in terms of economic logic of the *sunk cost*, particularly when the problem is presented in a slightly more complicated way than in the above example. Let us consider the following example which is similar to the one cited by Daniel Kahneman who won Nobel Prize in Economics in 2002 for his ground-breaking work in applying psychological insights into economic decision-making.¹³ Suppose two friends residing in the same house are planning to go to a theatre show at a distance from their house. One of them has purchased his ticket, and the other was about to purchase a ticket when he got one free from a friend. On the evening of the show, heavy rains begin to pour in. Which of the two ticket holders is more likely to brave the rains to witness the show? The immediate answer is likely to be that the friend who paid for his ticket is more likely to go; but economic logic tells us that they both face the same choice. How?

A student of economics would realize that in making the decision the value of the ticket represents a *sunk* cost, whether the ticket is purchased or has been given as a gift. The decision to go or not should entirely depend on whether it is worth the trouble to go to the theatre hall to enjoy the show. If the friend who had purchased the ticket were himself an economics student, he would have been aware of the *counterfactual* possibility: Would I still go to the show if I had gotten the ticket free from a friend? It takes active and disciplined introspection to think in this way. Cool economic calculations don't acknowledge the emotions that people attach to their mental accounts.

Now, coming back to the earlier example of the development project which is already through one-third of its implementation, a parallel can be drawn by asking: Would it make a difference regarding whether one should proceed towards completing the project if the cost already incurred is financed, alternatively, from the government's own budget or from a fund received freely as foreign assistance. The answer should be 'no', assuming that the rest of the project cost would have to be borne by the government's own funds in either case.

Saving difficulties of the poor

While economists themselves are trained to apply economic logic in their analysis of policy choice, they need also to take into account the fact that people do act differently from the *rational* individual described in the mainstream economic theory (the so-called 'Econ' featured in the new field of behavioural economics). An example is provided by the saving behaviour of the poor. Economists have advanced various hypotheses to explain the saving difficulties of the poor in the developing countries, such as their livelihood risks that make it difficult for them to

¹³ Kahneman, D., *Thinking fast and Slow*, UK: Penguin Random House, pp. 343 - 4.; the example was originally due to Richard Thaler who earned Nobel Prize in 2017 pioneering the field of behavioural economics.

plan for the future, or an internalised psychology of fatalism, or their very high rate of time discount that puts a very high premium on immediate needs in relation to the future needs.

Recent developments in behavioural economics have put forward another explanation for the saving difficulties of the poor, namely, the so-called *time-inconsistent* preference. This type of behaviour represents a kind of psychological barrier for implanting a plan; it may involve some kind of procrastination that separates the ‘doer’ from the ‘planner’ within oneself. The poor may thus need a so-called psychological ‘nudge’ to help them implement their saving plan. The microfinance institutions (MFIs) operating in various countries usually require their borrower-members to keep a compulsory savings, mainly as a security against repayment default. But as the system gains maturity, as in Bangladesh which is regarded as the birthplace of microfinance, the members were induced by various means to voluntarily accumulate savings for use at times of needs, and even to commit to long-term saving for old age. The various contractual saving schemes of the MFIs, like the Deposit Pension Scheme of Grameen Bank were in fact designed to facilitate such a psychological commitment to long-run saving.¹⁴

While still on the topic of rational versus instinctive behaviour, we may recall a story caricaturing the folly of both people’s instinctive behaviour and economists’ overemphasis on making logical decisions. An evolutionary biologist and an economist were taking a walk in a deep forest when they encountered a large bear aggressively confronting them. The biologist knew about the evolutionary human instinct of “fight or flee” and made the split-second decision to run. The economist sat down with his laptop to figure out an optimal policy choice. The biologist was killed by the bear because he was not aware of the advice given by every experienced forest ranger: stand still if you come face to face with a bear, never try to run away since it will catch up with you. The lesson: going by the instinct does not always work, but there is also a right time and place for fine-tuning economic logic, since urgent situations may need urgent policy decisions. The economist in this story was lucky, but not for the right reason.

Analysing markets and institutions

Economics is mainly about analysing how markets work. The performance of an economy depends to a large extent on whether markets work badly or efficiently; and the functioning of markets, in turn, is determined not only by the quality of the regulatory framework under which they operate but also by the socio-cultural institutions in which they are embedded. To understand why some developing countries perform better than others, it is thus important to analyse the functioning of markets in various formal and informal institutional settings that evolve over time.

¹⁴ See Mahmud, W. and Osmani, Siddiq. 2015. *op. cit.*, pp. 220 -3. The MFIs in Bangladesh were initially dependent mainly on foreign funds for their credit operations; by 2012, their member-borrowers’ net savings had grown to 30 percent of the total volume of outstanding loans equivalent of about 5.3 billion US dollar (which was slightly less than their total revolving loan funds); see Mahmud, W. and Osmani, Siddiq. 2015. *op. cit.*, pp. 17, 245.

Students of economics in the developing countries have an advantage in this respect, if only they have an inquisitive mind. They have the first-hand knowledge of observing the functioning markets under very different institutional settings, representing various stages of development, varying from rural *hats* and *bazars* to modern shopping malls in cities. Shabana Azmi, the noted Indian film actress and social activist, once remarked that India lived simultaneously in three centuries; that is certainly true of the varying nature of markets in the less developed countries, such as in terms of the formal-informal divide, supply variability in agricultural markets, lack of product quality standards, nature of price expectations, integration with the global economy, and so on. The students of economics can thus have an enriching experience in trying to apply the toolkits of economics textbooks to analyse such a variety of markets. Such analyses may vary in analytical sophistication, so as to suit the level of economics study, from the simple so-called cobweb model of annual agricultural price fluctuations to the testing of price expectation hypothesis in the context of food-grain market behaviour during food scarcities.¹⁵

Markets with information asymmetry

The 2001 Nobel Prize in economics went to George Akerlof, Joseph Stiglitz, and Michael Spence, whose contributions laid the foundation of what is now known as the theory of markets with imperfect information. The theory breaks away from the traditional neoclassical economics by introducing market situations characterised by asymmetric information between actors on two sides of the market: borrowers know more than lenders about their loan repayment prospects, sellers are often better judge of the quality of their products than are buyers, prospective employees know more about their abilities than does the employer. Both Akerlof and Stiglitz got their ideas from observing the markets in a developing country setting.

While in Delhi, Akerlof observed that most of the milk in open market was adulterated by the mixing of water with pure milk. How did this happen? Suppose, to start with there was only a small proportion of adulterated milk in the market. Since the buyers could not distinguish between the watered and the pure milk, they would be ready to buy at a price which would reflect the small probability of getting the adulterated milk. That price would be a good incentive for the dishonest seller, but less so for the honest ones. So more dishonest sellers will enter the market and the honest sellers will be discouraged. Buyers will then know by experience that the probability of getting adulterated milk has become higher, so they will offer even less price, which in turn will bring in more dishonest sellers and further drive out the honest ones. The process will continue until only adulterated milk is available in the market. The situation began to improve in the Delhi market when the authorities started a campaign for improving the quality of milk by introducing inexpensive devices to examine the water and butterfat contents of milk at different points of the supply chain.

¹⁵ See, for example, Ravallion, M. 1985. "The performance of rice market during the 1974 famine". *Economic Journal*, vol. 95 (March).

Akerlof had to find a market familiar to his fellow Americans; so he theorized the problem of market with imperfect information in his seminal 1970 paper, “The market for lemons”, by using the example of the second-hand car market (‘lemons’ is a colloquialism for defective old cars and resembles the informational characteristics of watered milk in the Delhi market). In the affluent countries, this informational problem is solved by various means of quality assurance, such as product standardisation, labelling and packaging, and promotion of product branding for reputation. But this remains a serious problem in many less developed countries resulting in markets functioning poorly. In the absence of strong market regulatory measures and product standardisation, markets are often pervaded by low-quality products ranging from adulterated food items to low-quality medicines, resulting in various kinds of “transaction costs” for buyers in identifying good-quality products.

Stiglitz was considering the rural credit markets in the less developed countries. In particular, he analysed the problem of providing a collateral-free business loan to a poor prospective micro-entrepreneur. Since the lender has no means to monitor how the loan is actually used and can recover the loan only if the business venture is successful, it can be shown that the borrower is likely to go for more profitable but riskier projects, and also spend less effort on the project, compared to what the lender would like her to do, since the risk of the failure is borne by the lender; the result is an inefficient credit market.¹⁶ Stiglitz further theorised how the introduction of the Grameen Bank’s microcredit programme in Bangladesh sought to solve this problem through a system of group-lending; the members of the group monitored one another’s use of loan because of the joint-liability for loan repayment.¹⁷

Agricultural markets

The markets for agricultural products in less developed countries are often characterised by large price fluctuations, which are often explained in the introductory texts on agricultural economics in terms of the so-called cobweb model. The model deviates from the usual supply-demand market model by assuming that the supply (production) of a crop responds to the market price only with a time lag; the supply this year is determined by the price prevalent in the previous year, while this year’s price will determine farmer’s decision of production next year, and so on. In this situation, depending on the nature of the relative patterns of the supply and the demand curves, the price and production could either gradually converge to the usual market equilibrium position or move away from it. While the model can provide useful insights, actual market outcomes for agricultural products may be quite different, depending on how both supply and demand are affected by a host of other non-price factors, including the impact of any international trade in these products.

In the 1990s, when I was doing a study along with some researchers from the Bangladesh Institute of Development Studies on the relative profitability of crops in Bangladesh, we gained

¹⁶ For numerical examples on this, see Ray, Debraj. 1998. *op. cit.*, pp. 532-34.

¹⁷ For detailed discussions on the nature of rural credit markets and the effectiveness of the microcredit system, see, for example, Mahmud, W. and Osmani, Siddiq. 2015. *op. cit.*

some fresh perspectives on the cobweb model.¹⁸ As expected, the variations in the production and price of rice, the staple food crop, has very little to do with the cobweb model. Leaving aside the long-run trend in growth of rice production due to the adoption of high-yielding technologies, there is not much scope for farmers' response to price fluctuations since rice cultivation already accounts for much of the cropped land in a year. The market price of rice is also relatively stable except at times of production shocks from natural disasters like floods; the governments also often intervene in the market to moderate any price fluctuations.

The case of some minor crops is, however, a different story with a very high annual price variability. We found that, for the preceding decade, the *average* annual price deviations (positive and negative signs ignored) around the estimated *trend* level (a kind of annual projected price for the period under review) varied between 15 to 25 percent for fruits and vegetables and 20 to 40 percent for spices. This means that the year-to-year price fluctuations, say, from above the trend price in one year to below the trend in the next year were way much higher than suggested by these estimates of average deviations. These are mostly high-value crops and much more profitable compared to rice; but because of the very high price risks, farmers usually grow one or more of these crops on small plots and also rotate the crops from year to year. The supply can thus vary to a large extent in response to the expected price. Although the extent of price variability for some of these crops was found to be too high to allow any rational price expectation, one can reasonably assume a kind of cobweb model to play a role in this case. As we could see, the way to address the problem was by country-wide dissemination of real-time information among farmers regarding the arable area being devoted to a particular crop, which was not easy at that time. But, with the currently widespread internet access through mobile phones, the government's agricultural extension agencies are now moving towards gathering such real-time information on cropping patterns

There are many other ways in which agricultural markets in less developed countries work poorly. For example, it is a common practice in South Asia to use harmful chemicals (mostly, calcium carbide) to ripen fruits like mangoes, bananas, litchis and jackfruits. These chemicals are highly hazardous to human health and there are laws prohibiting their use; but these laws are only poorly implemented, if at all. Traders pick fruits before maturation to take advantage of the early-season high prices and also because of the ease of transportation of green fruits with minimum damage and ripening them artificially at the points of retail sale. For the farmers, they have to weigh the increasing risk of theft of the fruits from the trees as the fruits ripen against the lower price they get for harvesting the fruits before the proper time. This again adds to the reason why the fruits need to be ripened artificially. The extent to which the "invisible hand" of the market system results in public welfare thus depends on the socio-cultural settings into which the system is embedded.

¹⁸ Mahmud, W., Rahman, S. H., and Zohir, S. "Agricultural growth through crop diversification in Bangladesh", Chapter 12, pp. 236 -37. In Ahmed, R., Haggblade, S. and Chowdhury, T. (eds.). 2000. *Out of the Shadow of Famine: Evolving Food Markets and Food Policy in Bangladesh*, Baltimore and London: The Johns Hopkins University Press.

The governments in the less developed countries often intervene in the agricultural markets particularly to ensure stable supply and prices of the staple foods, given the seasonality of their production in the annual crop cycle and occasional production shocks due to natural calamities. The market intermediaries play the important role of carrying stocks from the harvest season to the lean season, which involves costs that are reflected in the normal variations in seasonal prices. However, in the event of an impending harvest failure, say, because of floods, they have to speculate the price and supply situation over the coming crop cycle. In such a situation, the government often alleges the businessmen for the price hike and take actions against “hoarding”, without having any means of distinguishing between the necessary business stocks and excessive speculative hoarding. A more practicable policy would be to stymie untoward price speculations by providing credible signals for containing any price spike by building up adequate public food stocks through import and public food procurement during good harvests; the later in turn also helps supporting prices that farmers get.

Overcrowding of microenterprises and scaling up

Abhijit Banerjee and Esther Duflo, the winner of 2019 Nobel prize in economics, pointed out one important characteristic of less developed countries, namely, the proliferation of small businesses like roadside shops, vending, hawking and pretty trading; this represents a wastage of manpower and lack of opportunities for growth through scaling up of enterprises.¹⁹ They also point out that the inability of the self-employed poor to scale up their businesses beyond subsistence results in their having multiple occupations, which prevents them from acquiring skills and experience in their main occupation.²⁰ Mahmud and Osmani (2017, *op. cit.*, 225 -30) looked at the evidence regarding the problems faced by the clients of the Microfinance Institutions (MFIs) in Bangladesh in scaling up their business enterprises by borrowing larger amounts of loans that the MFIs were willing to offer.²¹ While the returns to investment is found to be quite high in subsistence-type businesses, the potential tapers off quite fast with the increase in the size of the enterprise. The returns are high to start with due to some advantages derived from the subsistence-type characteristics of these enterprises, such as the availability of unpaid family help, free use of homestead space or common property resources, and personalised nature of marketing of products. These advantages start to disappear as soon as there is an attempt to expand the enterprise size to a small extent; instead, it requires a jump to a much higher level of investment to shift to production and marketing technologies that are economically viable at a higher scale of operation. An evidence of this, for example, is provided by the fact that the few relatively successful members of the mainstream microcredit programmes seek significantly larger loans, not just incrementally larger loans, if they want to

¹⁹ Banerjee, A. and Duflo, E. 2011. *Poor Economics: A Rethinking Radical Rethinking of the Way to Fight Global Poverty*, pp. 215 – 8. New York: Public Affairs.

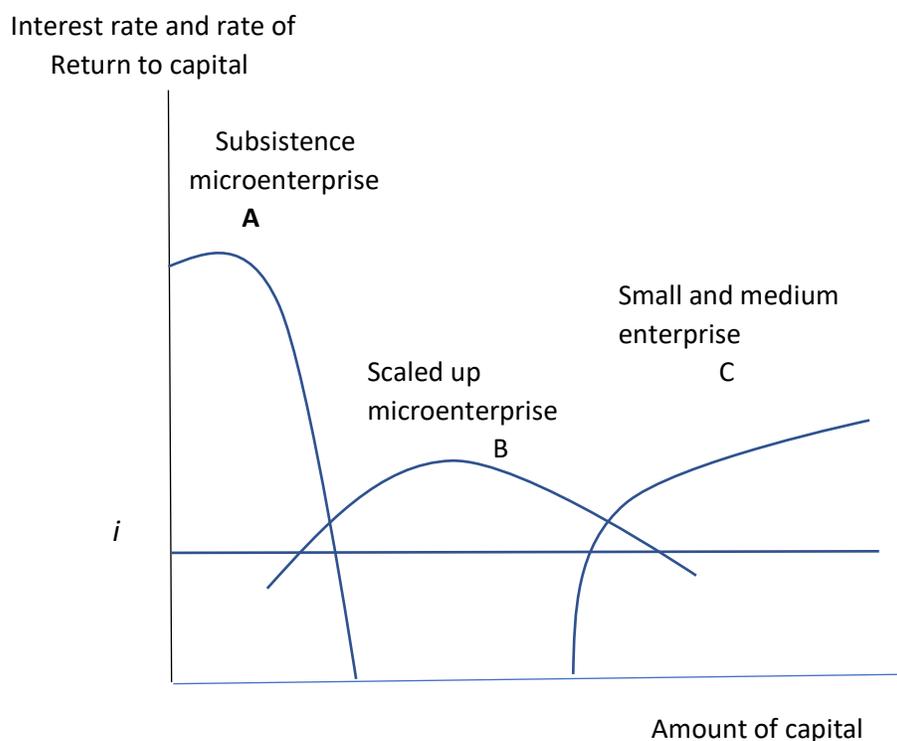
²⁰ Banerjee, A. and Duflo, E. 2011. *op. cit.*, p. 143.

²¹ Mahmud, W. and Osmani, Siddiq. 2015. *op. cit.* Chapter 9.

expand their businesses, and also that the majority of the MFI clients who take larger-sized loans are lateral entrants rather than graduates of the mainstream programmes.

According to Mahmud and Osmani (2017, *op. cit.*, 225 -30), the explanation of this phenomenon lies at least partly in a “technology gap” or a “missing middle” that prevents a process of gradual scaling up through any incremental change in the size of businesses, but requires a quantum shift in scale and technology. The challenge for the MFIs and their ‘entrepreneurial’ clients is to find ways of bridging this “technology gap” in innovative ways by supporting and adopting appropriate production and marketing strategies (see the diagrammatic illustration in the Box 1.2).²² Banerjee and Duflo (2011, *op. cit.*: p. 222), in a similar context, show diagrammatically how a transition can be made from a subsistence technology to a superior one, but without recognising the possibility of any such technology gap.

²² The PKSF, which is an apex institution for wholesale funding of the microfinance programmes in Bangladesh, has been providing support to its partner MFIs towards this end during the recent years.

Box 1.2 Scaling up of microenterprises by bridging the technology gap


In the above figure, the amount of capital invested, including both fixed and working capital, is measured along x-axis and the rate of return to capital along y-axis; the return is profit net of wage cost including imputed cost of unpaid family worker. Assume that loans are available at the interest rate i . The curve represents the technology of a typical subsistence-type enterprise of microcredit borrowers. It provides very high returns to capital but has limited opportunity of profitable expansion, since the rate of return tapers off quickly. The curve C, on the other hand, represents a superior technology of small and medium enterprises that needs some minimum amount of capital investment before it reaches its potential and becomes profitable at the given interest rate. We need not explicitly show labour use, but can assume that technology C will be relatively more capital intensive compared to technology A. Notice that for technology A, there is no minimum requirement of capital, since the activity can start with minimal amount of working and fixed capital. It can be seen how an innovative 'bridging' technology represented by B can help a smooth incremental transition by scaling up of the subsistence-type microenterprises, eventually to small and medium enterprises, while remaining profitable at the given interest rate.

Institutional transformation for development

Economic development is accompanied by a process of institutional transformation in which traditional production technologies, local knowledge and informal behavioural norms are replaced or complemented by improved technologies, modern know-how and formal regulatory enforcement of business dealings. The less developed countries provide interesting case studies of how this transformation may take place in different ways, by creating frictions or resulting in beneficial socio-economic dynamics.

The 2009 recipient of the economics Nobel prize, Elinor Ostrom, was the first ever woman to receive this prize; her works as a political economist was mainly based on case studies from developing countries providing insights about how communities can manage local common resources. For example, she studied the management of the irrigation systems in Nepal to show how development projects can perform poorly when implemented by a central bureaucracy without local knowledge about the communities that are to be benefited by the project. She found an apparently paradoxical phenomenon: The large irrigation projects of the central government, with modern dams and canals often built with the support of foreign donors, seem to work poorly compared with the traditional rudimentary system of irrigation built and maintained by farmers themselves. An irrigation system, whether built with mud (as in the traditional system) or with bricks and concrete (as in the modern projects) essentially needs regular maintenance of the canals, so that the water diverted by the dam can flow from the upstream all the way to the farmlands that are at the far ends of the canals. The farming communities worked out a system of cooperation, in which the farmers downstream offered their labour to construct the dams and the canals in exchange for assistance by the farmers upstream to maintain the channels afterwards. While the details of the arrangement of this division of labour may differ from one community to another, the basic principle is the same. When the modern system was built, not much attention was given to the maintenance of the canals, while the traditional system of cooperation among farmers was also gone. The supposedly more efficient and cost-effective modern irrigation projects became dysfunctional with the eventual clogging of the canals.²³

There are several lessons to be learnt from Ostrom's above analysis of how the designing and implementation of development projects can go wrong. The civil servants and donor agencies are more concerned with the construction of "prestige" infrastructure projects than with their eventual maintenance; they also tend to ignore the needs and incentives of the local communities. For the civil servants, being involved in the construction phase of such high-profile projects are more rewarding than the more arduous and less glamorous tasks of supervising the routine work of maintenance. The donor agency officials are more interested in meeting their spending targets and completing the projects than in evaluating the results. All this points to the need for involving the local communities in the designing and maintenance of such projects; in the case of the Nepalese irrigation projects, it is the farmers who would be most interested in maintaining an irrigation system once it is built. In Bangladesh, an evaluation by the World Bank in respect of the rehabilitation of local-level projects of flood management, drainage and river erosion control found that the original purpose of the projects were endorsed by more

²³ For a discussion on this, see, for example, Hareford, T. 2005. *The Undercover Economist*. New York: Random House, pp. 181 -85.

than 80 percent of the people in the respective localities, but only one out of the 35 projects could be successfully rehabilitated; the neglect of the details of local circumstances and poor maintenance were found to be the main cause of failure.²⁴

Looking at the historical roots of how cooperative behaviour evolved in different communities is still a largely unexplored field of research. Some recent studies have found links between historical agricultural practices in various regions of the world with community attitudes towards cooperation. Some studies have found that cooperative behaviour is more common in the rice-growing areas of China, where rice production was dependent on availability of water for irrigation, than in other parts of the country. The reverse may be true of Bangladesh (the original East Bengal) which historically attracted migrants from outside because of the lure of easy rice cultivation, entirely dependent on monsoon rains and broadcast method of cultivation (that is, by throwing of seeds on land). One may wonder whether this has anything to do with the fact that microcredit, which essentially supports individual enterprises, has become so widespread in Bangladesh, while the once-heralded Comilla model of farmers' co-operatives of the 1960s could not eventually sustain due to alleged elite capture and conflict of interest among farmer groups. Whatever may be the historical origins of cooperative behaviour, economic development all over the world may now need increasingly more cooperative arrangements in many areas ranging from optimal use of scarce land or water resources to sustainable urbanisation to environmental protection.

GDP and all that

Among various economic statistics and indicators, gross domestic product (GDP) is perhaps the one that features most frequently in public economic discourses; it also often arouses much confusions and passionate political debates. Much of the controversies surrounding GDP (in common with other national income measures like GNI²⁵) arise from the varying perceptions about what GDP stands for. When politicians claim about good economic performance, they talk about growth in GDP. The critics of the concept of GDP point to its well-known shortcomings: it ignores non-income aspects of well-being, it does not take into account the environmental damage caused by economic activities, and it tends to ignore or undervalue things that contribute to the quality of life but are not amenable to valuation in monetary terms. The estimation of GDP is based on market prices that reflect society's preferences only at the given distribution of purchasing power in the economy, which is often highly unequal.

Much of the confusion arises from the fact that GDP is a measure of material output, not well-being. The first national accounts were estimated by Simon Kuznets immediately before

²⁴ See Mahmud, W. 2002. "National budgets, social spending and public choice: The case of Bangladesh", IDS Working Paper 162. Brighton, England: Institute of Development Studies at the University of Sussex.

²⁵ GNI is estimated by adding to GDP the net income received from abroad such as income from foreign assets, but more importantly for many less developed countries, remittances received from the nationals working overseas.

World War II, it was primarily intended to provide a framework for managing the resources available to the wartime economy. James Meade and Richard Stone of Cambridge University, under the tutelage of Maynard Keynes, produced the first official and comprehensive set of national accounts; that framework still provides the basis of the modern national accounting system.²⁶ The internationally agreed standard set of recommendations about how to compile national income estimates, called the System of National Accounts (SNAs), are revised from time to time to finetune the estimates in light of the changes in the structure of the global economy and by my finding ways of imputing monetary values to items that previously remained outside the national accounts (e.g. scientific discoveries or works of arts).

Introductory textbooks define GDP in a closed economy (that is, an economy without trade or where exports equal imports) as the sum of the value of *final* goods and services produced in a year. The qualifying word *final* is important, since it avoids “double-counting”, an important concept in national income accounting that guards against not counting the value of an intermediate product, say, fertilizers used in rice production, since its value is already accounted for in valuing the final product, that is, rice. From the production side, GDP is thus estimated by adding what is called *value-added* across all production activities in the economy by deducting the cost of intermediate items from the value of output. While the concept of *value-added* has been made familiar in many developing countries by the introduction of the value-added tax (VAT), not many besides the students of economics are aware that GDP is actually the total value-added in an economy in a year, which, in turn, is also the total income generated in the economy in that year.

A convenient way to show that GDP estimated in terms of total value-added is *identically* equal to the value of total expenditure on *final* goods and services is by means of the so-called input-output analysis. In the actual estimation of national income in the less developed countries, which often has to cope with the scarcity and poor quality of data, an input-output framework is helpful in cross-checking the consistency of such data and arranging these in a systematic way. In introductory economics, a simple way to introduce the input-output analysis is to consider a numerical example of an imaginary economy with only a few production activities; the output of each activity may have several uses, namely as input in another production activity or for final use for consumption or investment.²⁷ This leads to a clear demonstration of what are called the national income identities in a closed economy; namely, that national income or GDP (Y) is identically equal to the sum of total consumption (C) and investment (I) in a year, that is, $Y = C + I$. Since the part of income (Y) which is not consumed is by definition savings (S), that is, $S = Y - C$, it also follows that total saving in the economy is also *identically* equal to total investment, that is, $I = S$.

²⁶ Cf. Kay, J. 2004, *Culture and prosperity: Why Some Nations Are Rich but Most Remain Poor*, pp. 38 – 40. New York: Harper Collins. Meade, Stone and Kuznets are all economics Nobel laureates.

²⁷ Non-economists do not often have a clear idea about investment, which in concrete terms means buying machinery or constructing factories, roads, etc., or investing in working capital in the form of adding to stocks for business purposes.

Identities and equations: the Keynesian Model

The above national income identities can lead to another puzzle for non-economists or for students studying introductory economics. Decisions for investments such as building a factory or buying an agricultural machinery are made by investors who are a relatively small proportion of the population, whereas those for saving are made by the large majority of households (and businesses) in the economy. Then how is it that the two on the aggregate have to be always equal in the annual national income accounts? Explaining the puzzle may serve two purposes: explaining the difference between an identity and an equation, and also introducing the basic Keynesian model and its relevance to less developed countries.

First, identities are in fact a matter of definitions; they always hold because the variables on the two sides of the equation are defined in that way. An equation, on the other hand, holds good only for some particular values of the variables on the two sides of the equation; for example, supply and demand in a market, both of which depend on the price, is equal only at the so-called equilibrium price in the typical textbook market model of crisscrossing supply and demand curves. Likewise, in the basic Keynesian model, the equilibrium is reached when the aggregate demand in the economy ($C + I$) equals aggregate supply (Y) at full employment, representing full productive capacity of the economy. This is similarly true of the equality of I and S as well at that equilibrium. However, irrespective of whether the economy is in equilibrium in terms of the aggregate demand and supply, national income identities discussed above will still hold. How?

This is because of the way we define investment, so as to include both physical investment as well as investment in working capital which means net additions to stocks of commodities. Some desired level of stocks in the pipeline are held by producers and businessmen for the smooth supply of their products, but they may be left with more or less stocks than needed. If aggregate demand in the economy happens to be less than the aggregate supply, there will be unwanted build-up of stocks and the macroeconomy will not be in an equilibrium and will need adjustment, but the national income identities discussed above will still hold because of the very way investment is defined, which includes net additions to stocks, desired or not.

The Keynesian model is, however, more than about an equilibrium between aggregate supply and demand. The equilibrium can be established even at a level of national income which is below the productive capacity of the economy (which Keynes called full employment in the context of industrialised countries). The model, devised in the wake of the Great Depression of the 1930s, can show in terms of simple diagrams how a deficient aggregate demand can lead to unemployment and underutilised production capacity. The remedy thus lies in increasing government spending along with providing incentives for investors to invest more and for consumers to save less.

In contrast, the labour-surplus developing countries chronically suffer from unemployment (in the form of underutilised labour in different forms) not so much because of lack of aggregate demand as because of lack enough production capacity due to low accumulated

capital stock resulting from previously low investment.²⁸ Once the contrast is explained, one can proceed to show how the basic Keynesian model *per se* applies only obliquely to such an economy when suitably modified to explain such policy choices as regarding “forced savings” and inflationary financing of investment vis-à-vis the “inflationary barrier” to public investment through deficit financing. The government may resort to investment by deficit financing to an extent that aggregate demand will tend to exceed aggregate supply (which also means that investment will tend to exceed saving); this will lead to a redistribution of income in which workers find their real wages to decline and are *forced* to save more, thus restoring the savings-investment equilibrium. Much of the discussions about the causes and consequences of inflation are discussed in this framework of excess demand, although there are also other approaches involving the monetary policy (the so-called “monetarist” theories of inflation).²⁹

Spotting signs of development: some concluding thoughts

Economic development can be viewed from different perspectives, but the overriding theme is one of improving human well-being. Given the various shortcomings of GDP even as a measure of material living standards, let alone of well-being, there have been attempts to find other measures of economic development. The idea of gauging economic development by indicators other than GDP, such as the *Human Development Index*, or measures that reflect footprints of environmental damage, has grown out of the dissatisfaction with GDP.

When a visitor from a less developed country arrives at an affluent, or a relatively more advanced country, he can see the difference instantly from casual observation; he does not have to check with the publications of the World Bank or of the UNDP to find the relative ranking of that country in terms of per capita GDP or the *Human Development Index*. Knowing what are those apparently visible signs of development may sometimes help one to have a *reality check* on the claims of his government regarding economic development and may also reveal some missing elements of development in his own country. After all, a student of economics, doing elaborate statistical exercises in measuring and comparing economic development across countries, should not be accused of missing things which even the untrained eyes of a visitor can easily spot. Leaving aside a visitor’s first general impression about how orderly the immigration procedures are at the entry airport, the signs of development will be obviously more detectable in the metropolitan areas, since that is where economic development has most impact. The following could perhaps serve as a tentative list:

- The quality of public transport; whether a time schedule is maintained and passengers get in and out at fixed stops and not in the middle of the road; the very look of the vehicles.

²⁸ On the contrast between the industrialised and the less developed countries regarding the relevance of the Keynesian model, see the pioneering paper, Rao, V. K. R. V. 1952. “Investment, income, and the multiplier in an underdeveloped economy”. *Indian Economic Review*, vol. 1, pp. 55 – 67.

²⁹ For a discussion on these issues, see, for example, Basu, Kaushik. 1997. *Analytical Development Economics: The Less Developed Economy Revisited*, Chapter 4, pp. 65 – 81. Cambridge, Mass.: The MIT Press.

- How orderly is the traffic; adherence to traffic rules and the extent of sound pollution through honking; whether roads are well maintained and there are not many potholes; how much priority is given to pedestrian facilities, and the extent to which the sidewalks of main roads are crowded by hawkers and vendors and make-shift shops.
- The quality of tap water, the standards of food safety, the efficacy of the waste management system and the availability of public toilets.
- The availability and quality of public libraries.
- The degree of etiquette and politeness people show in public.
- The aesthetic beauty of the main riverside or the lakeside that grows naturally with the development of urban amenities, as distinct from any artificial beautification projects that more often than not give a lacklustre look because of poor maintenance.

If the visitor happens to venture into the countryside, there may be a few visible signs of development, such as the outward look of the homesteads, the availability of power supply, or the nature of agricultural implements on farm lands. Also, in the above list, there may be other candidates for inclusion, but there is also no point of lengthening the list if a single indicator can represent many other hidden indicators. Notice that we have not included such indicators like the degree of air pollution or the number of pavement dwellers, since there may not be a regular pattern to match with economic development (the San Francisco area in the USA may have more pavement dwellers than in many cities in poor countries). To an economist, such a heterogeneous mix of indicators may not have much value in explaining development, since these may be variously related to development either as the ingredients or the results of development or merely as associated with development with apparently no causal significance. One may still wonder why these indicators are so systematically and stubbornly related to economic prosperity and whether these indicate some underlying broader socio-cultural settings into which the functioning of the economies is embedded. After all, economists have not yet got much of a clue in explaining how a present-day less developed country could become an industrialised one, beyond, for example, prescribing that it should follow the example of the East Asian miracle economies; which is like saying that, if you want to play good cricket, play like Sachin Tendulkar.

A visiting economist will, in any case, be interested to delve deeper, possibly by staying longer in the country he is visiting. What signs will he be looking for to assess the stage of development, and the quality of governance that goes with it? The Nobel laureate economist Douglas North, who is a pioneer in institutional economics, once noted that an economic expert arriving in a developing country should refrain from providing policy advice to the government until he has spent at least six months in that country.

A discerning economist will note how much time, trouble and speed money (that is, bribe) it takes to get even a simple thing done, like getting a permit to stay longer than originally permitted by his visa. Are things done more through personal connections or according to impersonal rules that do not discriminate between the elite and the ordinary citizens? He may be trying to assess the quality of human resources and the education system as reflected, say, in the number of expatriates in technical and managerial positions, and in the quality of the college and

university graduates; do many of these educated young seek jobs abroad, which may be a sign that the education they have received has not much contributed to their employability at home and also may indicate their lack of confidence in the country's economic future. Are there many large-scale infrastructure projects of only "prestige value" but not well-planned to serve their purpose? Even amid a general environment of deficient governance, do there still exist at least some government agencies that are well-resourced and professionally competent and able to work out solutions and act promptly? Such dynamic agencies can potentially set examples for the work culture in other agencies, or at least can act as agents of change in their spheres of activity.

Overall, one may be looking for a system of governance in which there is vertical mechanisms for *accountability* of the government functionaries at each layers of administration, as well as horizontal coordination across various government agencies. The opposite extreme is perhaps an unwieldy leviathan-like governance structure in which even the well-meaning and honest actors feel alienated; although aware of the pitfalls of the system, they are unable to do anything about it on their own like the characters in Kafka's novels.