

## **The Economic Problem: Coordination, Knowledge and Motivation**

*“If a man will begin with certainties, he shall end in doubts. But if he will be content to start with doubts, he shall end in certainties.”*

Sir Francis Bacon (*Advancement of Learning*, 1605).

*“. . . rational action is possible only in a fairly orderly world. Therefore it makes sense to try to produce conditions under which the chances for any individual ... to achieve his ends as effectively as possible will be very high .... [P]rotection of private initiatives and enterprise can only ever be achieved through the institution of private property and the whole aggregate of libertarian institutions of law.”*

F.A. Hayek (1978), pp. 183–190.

**T**o understand the importance of institutions in economic life, one has to first understand what an economy is. It is an extremely complex, evolving system. An economy is not an organisation where top-down commands can be relied on to produce the wanted results. Rather, it is a living organism with an unimaginable multiplicity of complex interactions that evolve over time. The core problem of economics is scarcity because we tend to discover diverse and changing wants much faster than the resources required to satisfy them.

In the venture of matching wants and resources, the pervasive knowledge problem is compounded by frequent problems of motivation. We have only limited solidarity with complete strangers, on whom we frequently depend. Other people often make insufficient efforts to satisfy our wants. We therefore need to be specifically motivated, either by compulsion or by appeals to our self-interest.

As we shall see later, institutions are devices, which economise on what people need to know to be effective. They also assist in the motivation to contribute to the satisfaction of the wants of others. Therefore, institutions are central to everyone’s economic pursuits.

### **The Economic Problem: Scarcity**

Every beginners’ textbook on economics makes the point that the essence of

economics is scarcity—human wants having the tendency to exceed the resources needed to satisfy them. The human ability to discover more wants than resources to meet those wants has been an eternal obstacle to human contentment. The Biblical description of the Garden of Eden can be interpreted as the reflection of a yearning for a world without scarcity.

Scarcity forces people to choose between alternatives. The choice of one use of resources means that other opportunities have to be foregone, for example your decision to organise a big wedding for your daughter may mean that you cannot afford an air conditioner. Economists speak of “opportunity costs” to describe the concept that every choice costs alternative enjoyments. It is clear that opportunity costs vary subjectively. For you, the opportunity costs for reading this chapter may be that you cannot attend a rock concert, for someone else it might mean that she cannot flirt with her boyfriend, etc. In this age of dynamic changes, the economic problem is a dynamic concept. The human imagination continually discovers new wants, and a major part of the human pursuit is to search for and develop new resources and new methods to use them effectively. Opportunity costs change constantly.

Economics may seem a dismal science when seen in a static setting; it will appear as the attempt to ration scarcity. But it becomes a cheerful subject when one studies how people have incessantly searched for and found ways of satisfying their diverse and growing wants and of attaining their changing purposes. As we saw in the preceding chapter, the past 200 years have seen an enormous rise in living standards, and, over the past generation, the experience of economic growth has spread to an ever-wider circle of communities around the world. Hunger, filth, epidemics, ill health, boredom and early death are being overcome in more and more societies, although stagnation and acute human misery still persist in some places.

The main source of this economic growth is human knowledge, not only the wisdom, knowledge, know-how and aptitudes that reside in the individual, but just as importantly the shared human capital that allows individuals to make the best use of their assets, the institutions that guide human interaction.

### **The Economy as an Evolving, Complex System**

Since people satisfy their diverse wants in the pursuit of changing and self-set purposes by using increasingly diverse inputs, they have to draw on the productive contributions of more and more people. As a consequence, the modern economic system has become incredibly complex and inter-dependent. It never stands still or simply reproduces what was done before. Much of economic life is about innovative use of resources, new technologies, better ways of organising factories, commerce and service delivery, and testing new goods and services. In that sense, the economic system is open-ended (O’Driscoll, 1977). It evolves in unknown and unpredictable ways.

We need to pause here and define carefully what is meant by “system”, “complex” and “evolving”. These definitions are essential to understanding the contemporary economic problem.

We speak of a “system” when various elements interact on a fairly regular pattern. My watch is a system, as is my university department. The global telephone system, the internet, world trade, and international currency markets are other examples of systematically interacting systems. A system is simple if the parts interact only with regard to one characteristic, for example the battery in my watch driving the clockworks. We speak of complexity when elements interact with regard to more than one characteristic. My university department, for instance, is a web of complex social interdependencies and feedbacks. So are world currency markets where numerous hard-to-comprehend interactions take place among millions of decision makers.

In relatively simple systems, someone in command can establish order because he or she can understand all interactions, what is needed and what consequences will follow from certain actions. But the cognitive capacity of those who wish to impose order are sorely overtaxed when the system at hand is complex, let alone when it evolves over time, as is the case, for example, in an ecological system or a national economy.

Some systems are static, repeating the same interactions in each period (such as my watch until the battery is flat). The economy is an example of an evolving system: We learn new knowledge and apply it. Others may select or reject our results, so that some concepts and elements gain critical mass and become widely accepted, others disappear again. Economic evolution follows a path, since structures, as well as memories of the past influence what evolves. Future directions are in our diverse imaginations. They can therefore not be precisely known to any one person—or a committee or government for that matter. With hindsight, the evolution of a system is evident. But its future path and detail cannot be easily predicted, as no-one knows beforehand what selections the many individuals will make when faced with changing circumstances (see “Evolution” in the Glossary at the end of this volume).

When too many elements change, we cannot decipher what happens and feel confused. Take, for example, a television picture. If only a limited number of pixels change, we can follow what happens. However, when all, or a great many, pixels keep changing randomly, cognition breaks down and we can make no sense of what we see. Similarly, overwhelming changes in economic life often lead to serious disorientation and breakdown of coordination, because people are confused. This may, for example, be the case when traditional village societies are exposed to overwhelming modern economic development. Economic and social chaos may easily result. People may miss guiding institutions that make their cognition task more manageable and restore a measure of confidence. It is therefore in most people’s interest that

systems change gradually and in a pattern that people can understand.

Even when complex systems evolve in a broadly predictable pattern, specific outcomes may not be predictable and may not be easily achieved. If an “ordering hand” intervenes in such a complex, evolving system, this is likely to produce unforeseen and often detrimental consequences (Hayek, for example 1974/1984 and 1988; Parker-Stacey, 1995).

In recent decades, complex, evolving systems have come to be better understood by scientists (Arthur, 1995; Parker-Stacey, 1995). We have, for example, learnt that ecological systems are complex and dynamic, so that interventions often have unintended, harmful consequences. Likewise, medical research has shown us what a complex evolving system the human body is. Some cures turn out to be worse than the ailment. We have learnt that often we do not know enough to intervene and that it is always wise to tread with care when tangling with complex systems.

This insight is, however, still rare when one turns to complex, evolving national economies. Here, millions of individuals interact in incredibly complex ways. They do so as producers and suppliers or as buyers of goods and services, or as owners and as users of assets. What happens in a distant part of the global economy may have untold effects in a factory or a field near you. For example, when oil supplies were curbed in the early 1970s and then again in the early 1980s, this affected virtually everyone on all five continents. The price rises sent a coded signal to millions of car buyers to drive less and to buy energy-saving cars. Others got the signal to save energy by setting their air conditioners to higher temperatures, to change methods in industry and transport, to replace petroleum by coal, to search for oil in new areas, to crack petroleum differently in refineries, to redesign technology and factories, and so on. Many of these changes had follow-on consequences for other producers, sometimes reinforcing, sometimes mitigating the original petroleum-price effect. Some observers thought the problems were unsolvable and predicted the end of modern civilisation. They were wrong. Numerous decentralised, spontaneous, flexible, creative adjustments overcame the energy crisis—admittedly costing effort and sacrifices—because people around the world heeded market signals. Humankind went on prospering. When an ordering hand intervened in this complex system, for example by fixing gas prices, chaos and unforeseen complications resulted.

Does it not seem paradoxical that people who preach caution when intervening in complex eco systems, frequently advocate interventions in equally complex and evolving economic life? They pretend that such interventions are feasible and that their effects can be fully predicted and controlled. Indeed, they often demand such interventions in economic processes on the assumption that one can intervene without causing unforeseen, hurtful side effects. Many intellectuals, academics and policy commentators still have a fundamental belief in the visible, coordinating hand

of government —as if governance was as simple as pushing a few policy buttons! Disappointments with simple-minded interventions in the past are not seen as proof that such a style of economic policy is not feasible. Many academic and media commentators have persisted with a preference for what has long been castigated as “social engineering”, based on an unrealistic “pretence of knowledge” (Hayek, 1988). Policy advisers and academics have typically operated with econometric models that are closed off to future evolution, assuming that interactions will continue as in the past. The more realistic and evolutionary, so to say “ecological”, view of economic life has not yet been widely absorbed into popular culture, or into development policy in many third-world countries (Kirzner, 1998).

### **Ignorance, Discovery and Knowledge**

In complex, evolving systems, knowledge becomes a central focus. Who can master what knowledge? How can the limited knowledge of various people be coordinated? How do people discover new information and build it into cohesive bodies of knowledge? How is knowledge tested and rejected in the course of evolutionary change? What are the best conditions for discovering and testing knowledge that other people find useful?

When discussing knowledge, one has to begin with a fundamental insight: Everyone has cognitive limitations. Our five senses—sight, smell, taste, hearing and touch—do not allow us to fully read the complex world around us. We have only a limited mental capacity to reflect and assimilate the new information that our senses pick up into a body of useful, cohesive knowledge. We therefore easily suffer from information overload and then cannot make sense of unfamiliar environments.

This knowledge problem is pervasive; it is *constitutional* to the economic problem. Therefore, it makes no sense to build models of human action and public policy assuming that people, or committees of policy makers, have ‘perfect knowledge’! One cannot simply assume away the vexatious knowledge problem and still hope to explain economic issues. Were we all-knowing, scarcity would not exist. Models that begin by assuming perfect knowledge “for simplicity’s sake” lead to nonsensical answers (Hayek, 1948, p. 94; also see O’Driscoll-Rizzo, 1985, ch. 6). We can illustrate this fundamental point with a non-economic example: It makes no sense to start analysing ballistics on the assumption that gravity does not exist, for gravity is a first-order (or constitutional) element of the subject matter. One may of course begin by assuming second-order elements away, such as humidity, air temperature, and wind, when analysing ballistic trajectories. Likewise, economists who assume perfect knowledge have unwittingly disregarded the essential economic problem—how to find and use evolving, complex knowledge. They have reduced economics to the petty issues of allocation of *given, known* resources to *given* wants with the aid of *known* technologies

(the reader may wish to refer to the “Postscript” on neoclassical economics at the end of this chapter). In such a closed, abstract world, there is no need for profit, entrepreneurs, and business management. When economists make the assumption that all relevant knowledge is available, businessmen and other practitioners—rightly—switch off, because they know that this is not so.

Knowledge is best understood if we consider it an open-ended, evolving stock of abstract ideas, information and concepts which are held in millions of human minds. All the time, completely new facts are discovered. New ideas emerge. By wilful search or chance discovery, complementary information is found and tested. As circumstances change, ideas that were once useful may lose their usefulness and new ideas are selected and accepted. All human knowledge cannot possibly be concentrated in any one place or any one human mind. Instead, the body of human knowledge continuously evolves under the influence of millions of decentralised human choices.

We have to distinguish in this context between genuine discoveries and new information (Kirzner, 1997). We should speak of a discovery when something becomes known of which a person or a community were previously totally ignorant. With hindsight, discovered facts will often be quite obvious. For example, we speak of Vasco da Gama’s discovery of the passage around the Cape of Good Hope to India and the discovery of America at a time when Europeans were unaware of the existence of that continent. A second-order type of ignorance exists where the big, general outlines of knowledge are vaguely known, but the details have to be filled in by supplementary information. Here, we speak of “information search”. Thus, the explorers who traced details of India’s coastline, the engineers who got nuclear power to work in power stations, the software developer who tests serial combinations to get new computer programs, and the market researcher who establishes where sales outlets should be placed—they all search for information. They are not after big discoveries. When we deal with such information search, we probably know enough to judge what is a more or less efficient way of getting results. By contrast, it would be nonsensical to speak of efficiency in making genuine discoveries because the object is totally unknown. Thus, Christopher Columbus cannot be called an “efficient discoverer”, because he chanced upon America. All we can say is that he had attributes of curiosity and tenacity that made him more likely than others to discover some genuinely new knowledge and that he was prepared to marshal resources for exploration.

The knowledge problem in economics is further increased by the fact that everyone has different knowledge and that diverse people have various tastes and pursue their own, differing, subjective purposes. Everyone values options in her or his personal manner. People will not necessarily chose what others have chosen. Since any individual’s opportunity costs depend on subjective and changing preferences, they cannot be readily known to others. This adds

to the knowledge problem in economic life. It also means that given collective choices affect everyone's well-being in different ways. "One size fits all" may suit you, but be hopelessly inadequate for me. Summary collective purposes can therefore not be imposed on entire communities without great losses to individual satisfaction. This is at the heart of what has been called "subjectivism", a conception that has profound implications for one's view of the world and how one wants public policy to be run.

**Insert****On Subjectivism**

Since we cannot know fully what our fellow human beings feel, know and want and since we must accept that they will want to pursue their own purposes, we must respect differences in subjective valuations. This is the maxim of "subjectivism".

It is often disregarded when individuals hide behind collectives or when it is assumed that, somehow, collectives act and pursue goals which are separate from (or superior to) the goals of the diverse individuals who form a community.

In the ultimate analysis, only individuals know and decide. One therefore has to focus first on individual pursuits to understand social interactions. This is a central tenet of "Austrian economics", indeed of all individualist conceptions of society. This insight drives one to be wary of collectives as pseudo actors. Once presumed collective motivations are brushed aside, one comes to a much better understanding of public policy. For example, one should not say: "The government wants to maintain tariffs in the national interest", but rather: "The industry minister upholds tariffs that discriminate against consumers and benefit companies A, B and C, who are prepared to share the windfall with the minister and his political party!"

Readers are invited to be on the lookout for statements that imply phony collective actors (such as "the world community", "the UN", "the Indian public", "the national will") and to translate these statements into subjective, individual terms, naming who really decides. Consider this an exercise in truth-finding!

**Three Kinds of Rationality**

When individuals act in complex, evolving environments, they typically adjust their aspirations in the light of past achievements (adaptive or bounded rationality). But sometimes, they tackle long-tolerated constraints head-on, trying to overcome them (creative, entrepreneurial rationality). Only in simple and repetitive circumstances do people have fixed objectives that they maximise with known, available resources (end-means rationality).

When faced with incomplete knowledge, decision makers do not go on indefinitely chasing additional knowledge indefinitely. After all, knowledge acquisition costs resources, time and effort—it causes what economists call "transaction costs". Instead, experience tells decision makers when they should probably end the information search and make a decision based on what

they have been able to learn so far, rather than remaining locked into “paralysis by analysis”. When past experience shows people that they consistently under- (or over-)fulfil their aspirations, they will adjust their aspirations accordingly (Simon, 1982; Streit-Wegner, 1992).

Such pragmatic behaviour is a far cry from the end-means rationality that underlies most contemporary economic analysis. *Homo oeconomicus* is assumed to know all the ends and means and is then expected to maximise his utility. Standard textbook economics is based on the assumption that people set themselves fixed goals (such as profit or material satisfaction) and then maximise them on the basis of perfect information about all relevant alternatives. Yet, it is only possible to maximise the achievement of given ends when the situation is simple, and hence can be fairly fully known. Thus, the master of a self-contained household in Ancient Greece could, after the harvest, plan his household’s survival through the winter by “economising” (the rationing of scarce resources was called “oikos” by the Ancient Greeks). Or engineers may “maximise” the performance of a given machine. Similarly, we may aspire to maximise the distance we can jog within 30 minutes. However, in more complex constellations, we normally do not know enough and cannot control what is going on to pursue a given end “rationally”. Then, narrow, end-means rationality has to give way to bounded rationality. This important point can probably be best understood by discussing an every-day example: I can make a rational choice as to which shirt to wear today, but I cannot make a rational choice as to where on earth I will optimally live for the remainder of my life! Likewise, it makes no sense for the industry ministry of a developing country to choose what industries should be created — no-one has sufficient knowledge for that in a world, which keeps changing anyway. The narrow rationality of neoclassical economics would be totally inappropriate for such choices. In other words, the end-means rationality of economic textbooks is an inappropriate guide for analysing evolving complex constellations that are typically the concerns of economic policy.

People do not always adapt their aspirations to what they believe to be feasible. At times, they decide to tackle existing and hitherto tolerated constraints head-on: they take a “creative leap” and act like an entrepreneur. Thus, someone may try to overcome resource, technical, social, or institutional constraints by launching into an innovative venture. Such action is risky, but it promises gain. It is wholly rational, too (see Insert below). Entrepreneurship is at variance with the end-means rationality of *homo oeconomicus*. But such creative, entrepreneurial rationality is typified by two things: an alertness to opportunity and a preparedness to incur the necessary search costs (Schumpeter, 1961; Kirzner, 1997; Kasper-Streit, 1998). Entrepreneurial behaviour is fairly prevalent when people have confidence, even though they can never be absolutely sure of the results. As we shall see, discovery and the use of knowledge, which are so important for economic development, depend greatly on the prevalence of the entrepreneurial spirit to break away

both from end-means and the adaptive kinds of rational behaviour and on the institutions that create a degree of confidence.

When one allows for adaptive and entrepreneurial behaviour—rather than just the maximisation of given ends by known means—one begins to appreciate the importance of devices that economise on the need to know, namely institutions that create confidence. Economists who approach what is an open, ongoing process of economic evolution with the familiar assumption of *ceteris paribus* (all other things being known and remaining the same) and who operate with the construct of *homo oeconomicus* are blind to the different kinds of rationality in the real world. They fall into the trap of an unrealistically narrow kind of “economic rationalism” and will contribute little to the understanding of economic development.

#### **What Motivates Us?**

Another fundamental consideration in discussing the economic problem and economic development is motivation. Individuals are sometimes motivated by altruism and by coercion, but—in the modern mass society where millions interact—people are best motivated by self-interest.

Most of us have of course experienced motivation first on the plane of altruism, solidarity, and love. In the small setting of our family we know each other fairly intimately. We could also influence their reactions. Altruism is a highly effective way of cooperation in such small communities (Hayek, 1988; Giersch, 1989). Yet, even in small communities, love and solidarity have to be backed frequently by authority and coercion. At times the parents—or tribal elders—have to coerce other members of the group. This tends to be tempered by empathy and intimate knowledge of the others. However, in modern macro societies, we interact with millions of strangers and depend on their motivation to fulfil their promises to us. We cannot depend on love, solidarity and benevolence alone because we do not even know many of those people with whom we interact. Therefore, other motivating mechanisms are needed, either compulsion and fear, or self-interest.

The latter is the main motive that drives human cooperation in the capitalist market economy. People pursue their own ends, generating by-products which are welcomed by others. Shocking as it may appear to some readers, the baker who provides you with your daily bread, the doctor who makes a house call in the middle of the night and the employer who provides you with a job, do so not because they like you, but because they want to earn an income! Your bread, health care, and job are mere by-products of their selfishness! Whether such a system works well, depends—as writers from David Hume (1786/1965) and Adam Smith (1776/1965) to Friedrich Hayek (1988, pp. 6–47) have pointed out—on an institutional system, an extended order which co-ordinates spontaneous human actions as if by an invisible hand.

Those who reject self-interest as a valid motivation—for example Fabian

socialists and some church leaders—implicitly advocate coercion. This requires, however, (i) that the leaders know what they want, what they are able to achieve, and what their agents are doing, and (ii) that they can induce discoveries by central directive and coercion. These conditions are rarely fulfilled, as we know—at the latest since the demise of coercive socialism in the Soviet bloc and the massive failures of industrial development plans in the third world.

The voluntary coordination of self-interested people and organisations through markets requires shared, respected rules. People can only interact effectively, given their cognitive limitations, if recognisable, predictable patterns of behaviour exist. They depend on an “order of human conduct”, which normally requires that arbitrary and opportunistic behaviour attracts punishment (a sanction). In other words, an effective division of labour through the marketplace comes into existence only if the institutions are conducive to the sustainable interaction between free, self-motivated individuals. The rules will be more effective in stabilising behaviour if they themselves are stable or evolve along predictable paths. Frequent regime changes will hamper economic development through market interaction.

Human interaction in complex macro societies, such as a national economy, can—on the whole—be coordinated only by relying on spontaneous actions in response to individual incentives through voluntary cooperation (people agreeing on contracts). Individuals take responsibility for their actions, which must remain compatible with a system of shared, mutually enforced rules of conduct. This is normally preferable to a coercive, collective planning approach to the economy, because the planners, too, suffer from limited cognition and motivation. Besides, a coercive planning approach imposes high costs of supervision, monitoring and enforcement if it is to work at all. It was, for example, found that slavery, which required a planner and numerous supervisors, was very inefficient and costly. When slavery was abolished in America, it was discovered that free, paid workers had much higher productivity and needed much less monitoring.

When previously stagnant, hierarchical economies make the transition to undergo modern economic development, as is the case now in most parts of India, a problem arises with motivation. Motivation to perform and compete requires of course (i) that people are aware of desirable goods that they can obtain if they put in more of an effort, and (ii) that those who make an effort and innovate are able to keep the rewards that they earn in the market. These conditions are not automatically fulfilled. While news of new products and desirable services reach people even in remote parts through markets and communications, many societies do not favour the individual accumulation of market incomes. Instead, automatic sharing is the norm. Such behaviour was appropriate to local village economies (see Chapter 1), indeed served as the only ‘social security system’ available and enabled poor societies to survive through famines and other crises. But the modern market economy is

coordinated by expected individual gain, which requires a degree of selfishness. Only when enterprising individuals and their immediate families can accumulate incomes, will they be able to invest in further economic development. Where such selfish accumulation is considered a vice and sharing is the social norm, people have little motivation to compete in markets and exploit their skills and assets to the fullest. This motivation problem occurred in the early phases of European development, too. In the early 19th century, British entrepreneurs who set up factories in Germany found the local population indolent and incapable of being productive factory workers. Only when the big clan and the village tradition faded, because young workers had moved to the cities and had learnt to act more selfishly, or far-sightedly, was it discovered that German staff were hard-working.

It always takes some time for learning and attitude change, until new sets of rules work effectively when they are transferred from one society to another.

#### **Principal-Agent Problems**

What has been said about knowledge and motivation is closely related to another pervasive problem of economic interaction, which has become known as the “principal-agent problem” (see Glossary). Whenever someone (the principal) draws on the services of someone else (an agent), there is a possibility that the agent will be better informed than the principal about the task at hand. The agent is closer to the action and will thus know more about what can be achieved and whether the best is being made out of given opportunities. But the agent will of course frequently be motivated to pursue his own purposes, not necessarily those of the (ignorant) principal.

This principal-agent problem came to prominence in the economic literature in the 1930s when it was said that modern share companies were owned by often poorly informed principals, but run by well informed, self-interested agent-managers. These were inclined to shirk risks, prefer high on-the-job consumption, and pay themselves high salaries at the expense of the principals' profit (Berle-Means, 1932). In the meantime, it has been found that share companies outperform other types of business organisations—such as mutual societies and family firms—because competitive markets, which surround the share company, produce a lot of useful information for the share-owning principals. Competitive markets exert control over agent opportunism because the principals, once informed, can act to assert their interests. The competitive discipline that matters here results not only from the market for the products of those companies, but from agile, competitive share markets, take-overs, reflecting a market for corporate control, and markets for managerial skills (Jensen-Meckling, 1976; Jensen, 1983).

The principal-agent problem has proved to be a much more serious handicap to motivating the agents in areas that are not subject to competition. Serious motivational deficiencies can, be observed in centrally-planned

economies where most resources are socialised. This can extend to the point where lack of motivation leads to widespread starvation, as was the case in Marxist-era Ethiopia, Khmer Rouge Cambodia, and 1990s North Korea.

The principal-agent problem is prevalent in all government organisations around the world: The appointed political and bureaucratic agents of the citizen-principals are normally better informed than the citizens about the task at hand and exploit this in their self-interest. The citizens face high information costs, so that the agents—the parliamentarians, bureaucrats and judges—are frequently able to run the government to suit their own purposes, even when this is at the expense of the citizens. The problem is particularly acute in poor countries, where ordinary citizens lack not only the education but also the material means to defend their rights and liberties and to confront corrupt officials (Friedman, 1962)

We shall return to this important problem in Chapter 6—Limits of Public Choices.

### **Conclusions So Far**

To sum up the argument so far: the economic problem has to be seen in an open-ended, dynamic context. Growing human knowledge can help to satisfy existing human wants. But people have an even greater capacity to discover new aspirations and new wants, so that scarcity persists all the time. Because the knowledge necessary to tackle the economic problem is evolving continually and is dispersed, complex coordination is necessary to satisfy human wants. This coordination tends to be motivated by empathy and love in small, intimate communities. But in complex modern mass societies, this does not suffice. Then, either compulsion or self-interest channelled by institutions have to be relied upon. Experience has shown that voluntary, rule-bound interaction through markets and motivated by appropriation of returns is—a large communities—the far superior system to deal with the constitutional problem of human ignorance and inertia.

Since it is necessary to understand what the rules for a healthy economy are and what it takes to discover better ways to satisfy human wants, we will need to explore institutions that facilitate human interaction and discovery.

### **A Postscript for Those Whose Perceptions Have Been Deformed by “Economics 101”**

#### ***The Knowledge Problem and Some Commonsense Consequences***

Cognitive limitations are a constitutional part of the human condition. This is why one cannot simply assume “perfect knowledge”, as neoclassical economics textbooks habitually do. Most economic activities are in reality tied to the search for knowledge, the peering into the “fogs of ignorance”. This is an essential and constitutional condition from which one cannot abstract without getting nonsensical answers.

If one takes the knowledge problem seriously, as Austrian economists have done (Hayek, 1945; O'Driscoll, 1977; Boettcke, 1994), this has a number of important consequences. Certain widely accepted assertions, which have trickled down from neoclassical “know-all economics” into popular policy and culture, can in reality not be upheld:

- (a) The pursuit of “efficiency” requires perfect knowledge of all the inputs and the processes to generate outputs. In simple contexts, this is a realistic assumption. One can say that “A moves his cart faster from this suburb to the central market than B”, or “washing powder C washes whiter than D”. But in more complex, evolving situations, where different people may value inputs and outputs differently, it is not readily clear what we should call most efficient. If you were asked “what is the best book”, you would hesitate and first seek to find the criteria on which your choice should be based. In complex, evolving situations, typical of national economic policies, it is therefore not practical to speak of ‘efficiency maximisation’ or to assume that policy makers can make rational choices—they simply do not know enough. Nor can one assume that their valuations are the same as mine or yours! The simplistic end-means rationality of *homo oeconomicus*, which often dominates the policy debate, is not applicable where the means and the ends are unknown, as is for example typically the case in development policy.
- (b) In complex situations, rational choice is typically not based on a maximum or minimum (which cannot be known), but is based on the limited information at hand. Utopian assumptions about what they assume easily mislead economists to pass critical judgements about an assumed maximum which markets should achieve, but have failed to achieve. ‘Nirvana judgements’ of ‘market failure’ frequently lead to policy interventions. In reality, all these end up frequently in ‘administrative failure’. Perfectly informed people might be able to achieve perfect outcomes when interacting in the market place, but—in reality—these outcomes are not achievable because we deal with normal, ignorant people. They will seek information and judge when to act, based on limited information. To say that the outcomes of such rational behaviour are “market failures” only betrays the arrogance of eggheads assuming perfect knowledge.
- (c) Another consequence of human ignorance is that all human interaction requires, often costly and risky, information search. Markets do not function without cost. They require buyers and sellers to incur what economists call ‘transaction costs’, most of which are information search costs or costs to cope with the risks of imperfect knowledge (contracting, supervision, enforcement). Much of real-world economic activity deals with this problem. Over half of all costs of producing and distributing the national product in advanced modern economies are such transaction costs (North, 1990). Because of a lesser division of labour, these costs are likely to be lower in less developed countries, but they are rapidly rising in the course of economic

development. Indeed, the fastest-growing part of national economies everywhere is now the transactions-and-communications services sector that deals with transactions: the law, communications, advice-giving, accounting, finance, business services and the like. Traditional mainstream economics has little to say about this important and dynamic part of the service sector because it assumes that all is known, and that market transactions are cost-free.

If one assumes away the knowledge problem and deprives the model of what in reality is an open-ended evolutionary process, then one can derive convincing and precise policy 'solutions'. However, it has been learnt time and again that precise solutions and predictions are often wrong, because many complications and consequences have been simply assumed away.

On a more philosophical plane, one can draw parallels between the open-ended evolutionary model of classical liberalism and Austrian economics and the Darwinian probabilistic world view on the one hand, and the closed-off neoclassical model of 20th century modellers and econometricians with a Cartesian, deterministic world view on the other. The two approaches are mutually exclusive. They will often lead to policy conclusions which differ diametrically.

No amount of mathematical or econometric escapism can disguise that the neoclassical assumption of perfect knowledge limits the usefulness of what most economists and econometricians can contribute. Economic models are therefore now less in demand and economists, who stick to neoclassical economics, now have less credibility. The public and policy makers are increasingly aware of the evolutionary, unpredictable nature of economic life. Attention therefore turns increasingly to studying systems that enable people to improve their knowledge, which neoclassical economists so glibly assume as given.