Part I

Introduction to the theory

1

Generalizing Neoclassical Economics: new tools and concepts

1.1. Neoinstitutional Economics and the theory of production and exchange

We are concerned in this book with recent attempts to extend and generalize the theory of price and apply it to economic and political institutions. Our focus is on a certain propensity in human nature, which Adam Smith pointed out – "the propensity to truck, barter, and exchange one thing for another" – and on the consequences of these activities for the use of scarce resources and the creation of wealth.[1]

The economic outcomes of production depend in an important way on the social and political rules that govern economic activity

1. Adam Smith, in Chapter 2 of *The Wealth of Nations* (1776), argues that it is this human propensity to exchange that gives rise to the division of labor. Smith, Adam (1776). *An Inquiry into the Nature and Cause of the Wealth of Nations*. [Reprint ed. R. H. Campbell and A. S. Skinner. Oxford: Oxford University Press, 1976.] Buchanan (1964) takes up this point from Smith and suggests that economists should place the theory of markets and not the theory of resource allocation at center stage. "Economists 'should' concentrate their attention on a particular form of human activity, and upon the various institutional arrangements that arise as a result of this form of activity. Man's behavior in the market relationship, reflecting the propensity to truck and to barter, and the manifold variations in structure that this relationship can take; these are the proper subjects for the economist's study." Pp. 313–314 in Buchanan, James M. (1964). "What Should Economists Do?" *Southern Economic Journal 30* (No. 3, January): 213–22.

and society in general. In his pioneering contribution to economics, Adam Smith sought to demonstrate how one specific set of rules contributes more to the wealth of nations than any other. The structure that Adam Smith recommended was one whereby individuals have exclusive private rights to economic assets.

In the more than 200 years following Adam Smith's contribution, the mainstream of research in economics has involved primarily an examination of a single set of idealized rules governing market exchange. In spite of this simplification, the approach has been fruitful: In terms of both analytical power and empirical relevance it overshadows all other theoretical systems in economics and the social sciences. The theory of price (microeconomic theory) has provided valuable insights into the fundamental nature of exchange and resource allocation in decentralized markets and also tools that enable us to predict how equilibrium outcomes are affected by changes in the constraints that individual decision makers face.[2]

However, the rate of return on traditional microeconomic analysis has diminished in recent decades. For some time now, the major implications of the basic model have been well understood, whereas the theory, without significant modifications, is unsuitable for examining a variety of important questions. Even when theoretical tools were available, the traditional model and the cumulative research tradition did not encourage certain lines of investigation. We can point to three areas of inquiry that until recently have been largely neglected by economists of the neoclassical school:

1. How do alternative sets of social rules (property rights) and economic organizations affect behavior, allocation of resources, and equilibrium outcomes?
2. Why does the form of economic organization differ from one type of economic activity to another, even within the same legal framework? In general, what is

2. For an introduction to the theory of price, see, for example, Hirshleifer, Jack (1988). *Price Theory and Applications*, 4th ed. Englewood Cliffs: Prentice-Hall.

the economic logic of various contractual agreements, such as the firm, that are used for organizing production and exchange?

3. What is the economic logic behind the fundamental social and political rules that govern production and exchange, and how do these rules change?

Although it must be admitted that neoclassical economists at various times have touched on all three issues, usually the examination has been ephemeral, neither contributing new theoretical concepts nor generating sustained research programs. Since the late 1960s, however, a good number of neoclassical economists have become interested in the structure of economic organization. A new research program has evolved that is aimed at generalizing microeconomic theory while retaining all the essential elements of the economic approach – *stable preferences,* the *rational-choice model,* and *equilibria.*

Lakatos (1970) divides a research program into two components: the program's invariable *hard core* and its variable *protective belt*.[3] A modification of a research program takes the form of readjusting the protective belt, but an alteration of elements in the core represents a switch over to a new research program (paradigm). Stable preference, rational choice, and equilibrium structures of interaction constitute the hard core of the microeconomic paradigm, which all this century has been the dominating research program in economics. Knudsen (1986) identifies the following three elements of the protective belt of neoclassical economics:[4]

1. Specification of the type of situational constraint the agent faces;

3. See, Lakatos, Imre (1970). "Falsification and the Methodology of Scientific Research Programs." In Lakatos and Musgrave, eds. *Criticism and the Growth of Knowledge*. Cambridge: Cambridge University Press.
4. Knudsen, Christian (1986). "Normal Science as a Process of Creative Destruction: From a Microeconomic to a Neo-institutional Research Program." Paper presented at the *International Symposium on Property Rights, Organizational Forms and Economic Behavior*. Lund: The Swedish Collegium for Advanced Study in the Social Sciences.

2. Specification of the type of information the agents have about their situation;
3. Specification of the type of interaction that is studied.[5]

The new approach constitutes a modification of the protective belt of neoclassical economics, primarily, as we shall see, by introducing information and transaction costs and the constraints of property rights. This line of inquiry has no generally accepted name, although such labels as the Property Rights School, Transaction Costs Economics, the New Economic History, the New Industrial Organization, the New Comparative Economic Systems, or Law and Economics are often used to refer to various contributions in this area. We shall refer to the new approach as *Neoinstitutional Economics* in order to emphasize the link with traditional microeconomics and separate our approach from recent contributions by institutional economists who reject elements of the hard core of neoclassical economics, such as the rational-choice model. We refer to this alternative paradigm as the *New Institutional Economics*. There have been outstanding contributions to the New Institutional Economics, especially by Oliver Williamson, whose work, which lies close to the neoclassical tradition, will be discussed in later chapters.[6]

Neoinstitutional Economics (NIE) is still at an exploratory stage: Definitions and terminology are not fully agreed on, and the use of mathematical models is less pronounced than in recent work in microeconomic theory, but there is stronger emphasis on empirical testing. Yet, in spite of certain differences in approach, common strands can be found in the work of contributors to the NIE.

First, the authors tend to make explicit attempts to model the constraints of rules and contracts that govern exchange, and the idealized structure of property rights in the neoclassical model is used primarily as a benchmark.

5. Knudsen (1986), p. 10.
6. See, for example, Williamson, Oliver E. (1974). *Markets and Hierarchies*. New York: Free Press; idem (1985a). *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*. New York: Free Press.

Second, the neoclassical assumptions of full information and costless exchange have been relaxed, and the consequences of positive *transaction costs* are examined.

Third, the usual assumption that valuable commodities have only two dimensions – price and quantity – has been eased, and the implications for economic outcomes and economic organization of qualitative variations in goods and services are investigated.

Finally, it should be noted that NIE has benefited greatly from the work of economists who, although usually not considered as belonging to this school, have strived to generalize economic theory. For example, this is true of the pioneering contributions of George J. Stigler to the economics of information, regulation, and industrial organization; Kelvin Lancaster's work on the quality dimension of commodities; and Gary S. Becker's prolific contributions to the theory of human capital and to the allocation of time, and his applications of the economic approach to exchange outside price-making markets, such as his economics of the family. Most of this work will get only indirect mention here.

1.2. Neoinstitutional Economics and the rational-choice model

The rational-choice model, with its emphasis on individual agents who maximize an objective function subject to constraints, is central to the NIE. The task of the theorist is seen as specifying both the decision maker's objective function and his or her opportunity set. However, the NIE has done away with the old dichotomy in neoclassical theory of assuming utility maximization by households and profit maximization by firms.[7]

The neoclassical simplification of personifying the firm and assuming that it maximizes profits made sense in the context of unrestricted market exchange, full information, and fully defined private property rights. In this environment, selfish utility-maximization by agents within the firm is constrained by survival

7. P. 66 in De Alessi, Louis (1983a). "Property Rights, Transaction Costs, and X-Efficiency: An Essay in Economic Theory." *American Economic Review 73*, (No. 1, March): 64–81.

considerations, as *competition* eliminates inefficient firms and forces survivors to operate on their least-cost curves and maximize profits. Admittedly, owners of competitive firms may prefer to trade consumption on the job for monetary profits, but the implications of such behavior for equilibrium outcomes are of limited interest, given the strict assumptions of the model.

Furthermore, full information and zero transaction costs eliminate all forms of shirking. For example, a monopolistic firm that is run by hired agents is not constrained by competition in the same way as a competitive firm, but, if we assume that the owners of a monopolistic firm contract with hired agents to maximize profits, the agents have no choice but to honor their contracts because the full enforcement of contracts is costless to the owners. These constraints on behavior are eased when positive transaction costs are introduced, and attention is now drawn to the discretion of all parties to a contract – workers, managers, owners, buyers, and sellers.[8]

The theoretical tools of neoclassical economics, particularly the assumption of rational choice, have always been the subject of much debate. Critics have argued that individuals tend to have unstable preferences, that they do not observe the principle of transitivity in their choices, and that people are not calculators who work at lightning speed through the complete set of data relevant to their decisions.[9]

8. In an early contribution to the neoinstitutional theory of the firm, Alchian and Demsetz emphasized that the key to survival for a business organization was how well it overcame the problem of shirking in team production. See Alchian, A., and Demsetz, Harold (1972). "Production, Information Costs, and Economic Organization." *American Economic Review 62* (December): 777–795.
9. The critics include both the new and the old institutionalists. Thorstein Veblen, writing in 1898, ridiculed the theoretical concept of economic man: "The hedonistic conception of man is that of a lightning calculator of pleasures and pains, who oscillates like a homogeneous globule of desire of happiness under the impulse of stimuli that shift him about the area, but leave him intact. . . . Self-imposed in elemental space, he spins symmetrically about his own spiritual axis until the parallelogram of forces bears down upon him, whereupon he follows the line of the resultant. When the force of the impact is spent, he comes to rest, a self-contained globule of desire as before." Pp. 73–74 in Veblen,

A school of thought, which we refer to as the New Institutionalists, has rejected the postulate of optimization and replaced it with Herbert Simon's concept of *satisficing* or other behavioral axioms.[10] According to Simon, man's rationality is bounded, and individuals use a satisficing strategy – that is, they seek to attain an aspiration level. The satisficing model describes a process leading to a decision: People initiate a search when they fall short of their aspirations, and they also revise their targets. One implication of Simon's theory is that the behavior of a rational individual cannot be deducted from the objective environment; a knowledge of his or her mental processes is needed.

The satisficing model represents a rejection of the "hard core" of the neoclassical research program, to use the terminology of Imre Lakatos. De Alessi (1983) argues that the addition of the constraints of property rights and transaction costs to the neoclassical framework offers a richer, more powerful set of testable implications than does the replacement of maximization with satisficing behavior. Although the satisficing model may offer a more realistically descriptive set of axioms, it yields fewer, less clearly specified implications.[11]

Only time can tell which research program will be more fruitful,

Thorstein (1919). "Why Is Economics Not an Evolutionary Science?" In his *The Place of Science in Modern Civilization*. New York: B. W. Huebsch, pp. 56–81.

10. Simon, Herbert (1957). *Models of Man*. New York: Wiley. A recent comparison of psychological and economic models of man by a psychologist and an economist is found in Stoebe, Wolfgang, and Frey, Bruno S. (1980). "In Defense of Economic Man: Towards an Integration of Economics and Psychology." *Schweizerische Zeitschrift für Volksvirtschaft und Statistik 116* (No. 2, June): 119–148. The authors argue that the underlying models of human behavior in economics and psychology, although developed in isolation, are very similar. However, psychology makes an effort to consider the subjectively perceived benefits and costs of alternative activities, whereas economics stresses the role of constraints.
11. De Alessi (1983a) [op. cit., note 7], p. 72. De Alessi's criticism was directed particularly at the work of Leibenstein, who responded to the criticism. See Leibenstein, Harvey (1983). "Property Rights and X-Efficiency: Comment." *American Economic Review 73* (No. 4, September): 831–842, and a rejoinder by De Alessi (1983b). "Reply." Ibid.: 843–845.

Neoinstitutional Economics or the New Institutional Economics; or, perhaps, both approaches will be productive but in separate lines of inquiry. The critical issue for institutional economics is to rise above methodological criticism and advance a workable research agenda. This is where the old American institutionalists, led by John R. Commons, failed. According to Ronald Coase (1984), the work of American institutionalists "led to nothing. . . . Without a theory, they had nothing to pass on except a mass of descriptive material waiting for a theory. . . . So if modern institutionalists have antecedents, it is not what went immediately before."[12]

1.3. Wealth maximization and positive economics: a search for criteria

A fair segment of the NIE literature is normative in nature and reflects a search for socially optimal structures of exchange. Many economists have attempted to derive the optimal structure of rules or property rights in the context of externality problems (spillover effects) such as pollution. For example, Buchanan and Stubblebine (1962), in their famous paper on externalities, state as their basic ethical axiom that the individual has an inviolable right to the status quo.[13] No changes in property rights are justifiable unless they result from voluntary exchange, and those who lose valuable rights should receive full compensation for their losses. Therefore, owners of a factory that emits pollutants should

12. See p. 230 in Coase, Ronald H. (1984). "The New Institutional Economics." *Journal of Theoretical and Institutional Economics 140* (No. 1): 229–231. This viewpoint is generally accepted by modern institutionalists. For example, see Williamson, O. E. (1985b). "Reflection on the New Institutional Economics," *Journal for Theoretical and Institutional Economics 141* (No. 1): 187–195. Incidentally, Williamson (1985b) provides a concise summary of the field which we refer to as the New Institutional Economics, and a comparable, lucid account of Neoinstitutional Economics is found in North, Douglass C. (1986). "The New Institutional Economics." *Journal of Institutional and Theoretical Economics 142* (No. 1): 230–237. Note that North and Williamson use the same name to refer to two distinct paradigms.
13. Buchanan, J. M., and Stubblebine, W. Craig (1962). "Externality." *Economica 29* (November): 371–384.

be compensated for all costs imposed on them by a new "Clean Air Act."[14]

Other economists have set the maximization of utility or the maximization of wealth as their norm, but both approaches involve severe measurement problems. Utility is inherently unmeasurable. Wealth can be measured relatively easily in a well-functioning market system, and, theoretically, we can conceive of an omniscient economist selecting, from the set of all possible rules structures, the structure that maximizes wealth. The optimal set of rules, then, is the one that directs resources into uses generating the most wealth; alternatively, when the rules are optimal, resources are in their most highly valued use.

It is important to realize in this context – that is, the context of neoclassical economics – that value is defined in terms of ability and willingness to pay for a marginal unit of a commodity, and depends indirectly on the ownership of rights and wealth distribution.[15] The value of a miracle drug to a patient dying of cancer is fifty dollars, if that is all she is able and willing to pay for it. If this same person wins a million dollars in a lottery and is willing to allocate that amount to saving her life, she now values the drug at one million dollars. In general, the market value of a commodity is equal to the value of the marginal unit to the marginal buyer.

14. Buchanan (1959) tries to reconcile this approach and positive economics, but his success is limited. "The political economist is concerned with discovering 'what people want.' The content of his efforts may be reduced to very simple terms. This may be summed up in the familiar statement: *There exist mutual gains from trade*. His task is that of locating possible flaws in the existing social structure and in presenting possible 'improvements.' His specific hypothesis is that *mutual gains* do, in fact, exist as a result of possible changes (trades). This hypothesis is tested by the behavior of private people in response to the suggested alternatives." (p. 137) Buchanan's advocacy of the unanimity test, "appropriately modified," does indeed represent a value judgment. This is not denying his important point that "the economist can never say that one social situation is more 'efficient' than another. This judgment is beyond his range of competence." (pp. 137–138) Buchanan, James M. (1959). "Positive Economics, Welfare Economics, and Political Economy." *Journal of Law and Economics 2* (October): 124–138.
15. See Demsetz, Harold (1972). "Wealth Distribution and the Ownership of Rights." *Journal of Legal Studies 1* (No. 2, June): 13–28.