

Chapter 17: Microeconomics in a Nutshell

I. The Scope Microeconomics

For the purposes of this book, microeconomics is defined to be the analysis of the individual choices that jointly generate the networks of exchange, production, and innovation that characterize markets. Contemporary markets are amazing, they allow individuals to benefit from the skills, knowledge, and choices of other individuals all over the world. Nearly every single contemporary electronic device is the joint product of millions of individuals in dozens of countries working in thousands of firms. Each person makes their decision independently from all of the others, yet each decision is partly conditioned on prices of various kinds. Prices thus influence choices through the networks of exchange, production, and innovation that produce the products that we purchase and use in our daily lives.

Input providers consider the prices that they can get for their raw materials, intermediate goods, and services from alternative firms. Such decisions take account of the value of payments for their goods and services in terms of what else can be purchased using the proceeds. Similar calculations at least partly determine the forms of human and physical capital that they have acquired in the past or are contemplating for the future. Thus, the inputs available for use in production at a given moment are partly determined by past prices that informed decisions about which inputs to accumulate or produce and past expectations about what they would be worth to prospective buyers in the future.

Firm owners and managers take account of the cost of inputs and the alternative ways that they can be used to produce various goods and services that can be sold to other persons and organizations. With such considerations in mind, they attempt to predict the prices at which the outputs produced can be sold. Once again, a variety of prices (and expected prices) are important determinants of economically relevant decision. They affect what gets produced and how much is produced and sold. Innovators, likewise, consider how refinements of existing products and production processes will affect particular markets and thereby the likely prices that they'll be able to charge for their creations.

After income is earned, either by selling products or by selling input services, individuals in their roles as consumers decide what to purchase and how much to save for future purchases or to

create rainy day funds to cope with future events not yet known to them. Again a variety of prices influence their choices.

All this is not to say that prices fully determine all of these choices, but it is to say that prices influence all of these choices. Nor, is it to say that extended and dense networks of exchange, production, and innovation emerge solely in response to market prices in the ordinary sense of that term, but prices play a role in essentially all of the decision made in the networks of exchange that characterize market activities. It is for this reason that economists focus so much attention on price theory.

Among the other factors that determine these choices are laws, regulations, and norms that affect whether a particular economic transaction is legal or not, has to be undertaken in a particular way or not, or is deemed legitimate, proper, or moral or not. These considerations all have effects on decisions—many of which are economically relevant. In many cases, they have such effects because they affect rates of return in a manner that affects personal decisions in much the same way that prices do. Although the penalties and reward determined by laws and regulations are not determined by market forces, they nonetheless affect the expected rates of return from economically relevant choices. Crime rates affect consumer and firm choices. Cost increases induced by regulation affect market prices and thereby the quantities of products produced and sold.

A subset of laws encourage individuals to engage in voluntary transactions rather than coercive ones and determine who owns what. If transferable ownership rights did not exist, trade would be far more difficult and risky to undertake. Indeed, without the possibility of lawful exchange, the ability to produce violence and threats of violence might be the main determinant of one's control over resources rather than the productivity of one's mind, hands, and team at producing goods and services for sale. Legal and informal normative incentives that induce persons to produce and sell rather than steal and extort clearly produce much more extensive networks of exchange than would have existed without such laws and norms.

These institutions provide the foundations for market exchange and do so through effects on individual decisions. The world has not always been characterized by high degrees of specialization, extensive networks of exchange, and constant innovation in the goods and services produced and sold those networks of exchange. The analysis of part III shows why changes in laws, regulations, and normative dispositions can affect the extent of markets.

The usual focus of texts would tend to suggest otherwise, because such factors are left out of the analysis, yet it is easy to use economic models to show why institutional and cultural phenomena affect gains from trade and thereby affect the scope of market activities.

II. Microeconomic Theory

Microeconomic theory abstracts from all the hustle and bustle of real-world markets and reduces market transactions to a handful of decisions by individuals and economic organizations. The theory normally begins by examining a single very competitive market with separate groups of consumers and producers and input providers. Although most people in markets are producers and input providers as well as consumers, within any single market relatively few of the producers and input providers are among the consumers of a particular good or service. Thus, this overlap is ignored in partial equilibrium models that illustrate how the prices of final goods and input prices influence the decisions of three groups of economic actors (consumers, firms, and input providers). The same models show that prices can emerge that generate outcomes where supply equals demand. The same models also show how that prices (implicitly) coordinate the decisions of consumers and producers and input suppliers. Such models demonstrate that most market phenomena are codetermined.

The logic of single markets can easily be extended to market networks. And the idea that there is an equilibrium price in one market can be expected to the idea that a vector of prices may generate an equilibrium in several markets or in all markets, the latter being a general equilibrium. Such models demonstrate that market networks are all interconnected. Production generates the income that individuals use in purchasing the various combinations of goods and services that best advance their individual interests. Prices induce firms to provide the goods and services that consumers are willing to pay the most to acquire, and competition among firms for consumer sales assures that products are produced at least cost.

The interconnectedness of markets is most evident when a surprise event disrupts a market previously at equilibrium. A frost that reduces a crop of oranges in California causes orange juice prices to rise, which induces consumers to shift a bit toward other juices not affected by the frost. Such shifts, in turn, raise prices of those juices, the fruits from which they are constructed, and the transport networks that deliver them to juicing facilities and factories. Some or all of those facilities expand to meet demand. When such frosts occur regularly, but not necessarily periodically, various

insurance like products may be introduced to reduce the risks from growing oranges and larger inventories (reserves) of substitutes for orange group may be accumulated. Even the simplest products are linked to a variety of other markets.

All participants in competitive markets are assumed to be “price takers.” Such persons all make decisions that advance their individual interests, but doing so requires them all to make various adjustments in their consumption, production, and input supply choices as prices change. If demand for a product increases, prices tend to rise which makes selling the product more profitable, which leads firms to produce more stuff to sell, which bids up the price of inputs in order to attract them to the market whose demand is increasing. Conversely, when consumer demand falls, prices fall, profits fall and firms divert their resources to other markets, and as willingness to pay employees falls, at least a few shift their efforts to other markets.

It is largely through the coordination provided by the price system that the thousands or millions of persons involved in supplying the goods that one purchases are induced to make the decisions that cause the goods of interest to be on sale at the firms where they are purchased.

Very similar logic operates in settings where firms are price makers rather than price takers. As demand falls, the quantity that maximizes profits tends to fall, which reduces demand for inputs, and causes the firm’s willingness to pay for their services to fall. As a consequence, input providers begin to look elsewhere for employment opportunities and/or for industries where their inputs are in greater demand.

Innovation in output markets, within firms, and by input providers, similarly, may alter the demand or supply of goods up for sale in a manner that affects the decisions of thousands or millions of market participants—both directly and indirectly.

The main difference between markets in which firms are “price makers” and those in which they are not is that prices emerge directly from the decisions of firm owners and managers when they are price makers, rather than being indirectly through very small adjustments by individual firms at or around the equilibrium price. It bears keeping in mind that most price making firms also compete for consumer dollars and the extent of that competition varies with the number of firms selling similar products. In equilibrium supply equals demand in both settings.

How long an equilibrium remains in place depends on a variety of “surprise” events—events that are not fully anticipated by market participants. Examples include unusually good or bad

weather, significant innovations in production methods or product designs, and the discovery of new sources of inputs. Such events happen quite frequently and so whether markets ever reach completely stable equilibria, even temporarily, is debatable. Nonetheless, insofar as equilibrium prices exist—which general equilibrium theory suggests they do—they act as “attractors” toward which market prices and outputs tend to gravitate. Thus, they remain useful models even in those cases—if less than fully descriptive of prices or demand and supply.

Rather than a circular flow of resources in long run equilibrium that endlessly repeats itself, contemporary commercial societies are characterized by constant innovation. Economic development is not simply the production and consumption of more and more of the same goods and services. Not only do the goods and services produced around the world vary at a given point in time, but the number and types of goods and services produced and sold tend to increase rapidly through time. New products are constantly introduced, and many older ones disappear as patterns of life change and as fads come and go. Far fewer buggy whips are sold today than were sold two centuries ago.

Mutual gains from trade are not static but change through time. Any factor that significantly affects those gains is properly part of microeconomics, and all logically consistent explanations of how such factors affect markets are properly part of microeconomic theory.

Microeconomic theories should be consistent with the “main facts” that characterize market networks, but a theory needn’t explain every possible outcome that may be observed to be useful. Nonetheless, more encompassing theories are normally regarded to be better than less encompassing ones.

III. Neoclassical Theory and Models

Neoclassical economics is one such theory. It was worked out by Western scholars over the course of about a century and a half and relies upon methodological individualism for both its theories and models. Its theories attempt to explain markets from the ground up. It rests on the more or less permanent interests of individuals and families, and the economic constraints that limit each person’s and family’s ability to advance their interests. Both interests—normally represented as net-benefits or utility—and scarcity provide the logical foundation of the theories and models worked out. Without scarcity, there would be no constraints on how interests could be advanced. Without relatively stable interests, there would be no underlying purpose to one’s actions. Without

purposeful behavior humanity would have been unlikely to survive or to create the knowledge, organizations, machinery, and pattern of lives that most of us take for granted.

Given both scarcity and purposeful behavior, models of individual decision making based on the mathematics of constrained optimization can be developed. Such models provide the core methodology of neoclassical economics. Such models, perhaps surprisingly, can account for a broad range of market phenomena and do so with very “lean” characterizations of the choice settings most relevant for market transactions. Thousands of tests of the main implications of such models have been undertaken and the models have accounted for many of the observed features of markets and for much—but not all—of the individual behavior that generates the extensive networks of exchange, production, and innovation that characterizes contemporary markets. Modest extension of the core models can, in turn, account for the effects of legal and political institutions and norms on the extent and scope of those networks.

The core models explain a good deal of behavior, while abstracting from many of the considerations that individuals take account of every day and at nearly every instant. That such factors can be ignored without much loss is more than a bit surprising. It suggests that some aspects of one’s interests are more economically relevant than others and that the “purposes” or “interests” of individuals are sufficiently stable that abstract representations of them are sufficient to illustrate how market prices affect individual choices in a variety of market contexts.

Every good and every place where one can purchase a good or service has obvious differences. The places are architecturally different, the employees have different personalities and wear different clothing. They may be more or less polite and more or less interested in consummating a sale—but in other respects they are similar. Goods and services are for sale, and customers purchase them when they seem to be “worth the price.” “Worth the price” turns out to mean that they best advance the interests of the purchaser, given his or her budgetary constraints and knowledge of the possibilities. Consumer choice models show how a thoughtful person would deploy their economic resources to do so—and it turns out that, on average, this is how consumers behave.

Similarly, merchants, managers, and firm owners are all different. They have different personalities, networks of families and friends, educational backgrounds, and personal histories. They are all individually unique. Yet, all have an interest in realizing income by selling goods and services to consumers. And all would regard “more income” to better than “less income” other

things being equal. Thus, profit maximizing models of economic organizations work well at characterizing the various tradeoffs that “firms” confront when attempting to maximize their profits from selling goods and services. Again, the commonalities are less than completely obvious, but exist nonetheless and play a significant role in a wide variety of decision within firms and among investors in firms.

It is these underlying interests that allow the lean models developed by neoclassical economists to shed light on a huge range of choices by firms and consumers, and also to both explain and predict the outcomes of those choices. Were these economic aspects of decisions less important and less universal, the models would have far weaker predictive and explanatory power than they do.

This book has provided an overview of those models using various combinations of geometry, calculus, and game theory to show that individual interests and interdependencies, together with scarcity, can account for a good deal of the behavior of consumers, firms, input sellers, and innovators that we observe in well-functioning markets.

IV. What Is Unique About This Book

Part I of this book would be covered in every advanced microeconomics textbook and many of the topics of Part II would also be covered—although less attention is normally given to topics such as uncertainty, entrepreneurship, and innovation than in this text. However, the latter are necessary if one is to understand technological progress. Technology cannot advance unless knowledge is bounded, and, thus, ignorance and uncertainty are commonplace. Technological improvement reduces ignorance but does not eliminate it. Both learning and experimentation are important features of economic systems. Opportunities for innovation and voluntary exchange vary for a number of reasons left out of most textbooks.

Similarly, the topics reviewed in Part III are rarely included in microeconomic textbooks. This may be because other authors are more comfortable taking them as “given,” or believe them to be as well-functioning stable systems that can be ignored for purposes of analysis. However, the resulting analyses ignore the many effects that institutions and norms have on economic development. Such factors at least partially account for the significant differences in the productivity of market networks through time and among nation states and regions at a moment in time.

Another reason for neglecting such factors is that they may initially appear to be too difficult to incorporate into economic analysis. However, the fields of law and economics, public choice, and socioeconomics demonstrate that the effects of law, politics, and norms can easily be brought into microeconomics. Indeed, many of their effects can be modeled with minor extension of the models used to characterize equilibrium prices. Part III demonstrates that models very similar to the models used in neoclassical models of price determination can be used to understand and predict the effects of differences in laws, regulations, and internalized norms on markets.

Most laws, political decision, and internalized norms affect choices in rather ordinary ways. They affect the risks and returns associated with various activities, and thus affect economically relevant choices by individuals and firms. Those choices, in turn, affect patterns of production and types of goods and services that can be profitably produced and sold. That their effects on markets can be modeled using straightforward rational choice models demonstrates that they are natural parts of a complete neoclassical micro-economics, rather than being too abstruse for economic analysis or entirely irrelevant for economic theory.

Moreover, these institutions are among the fundamental determinants of the extent and scope of market networks. Opportunities for exchange, production, and innovation tend to be quite limited unless legal systems exist that tend to facilitate such exchanges. Formal and informal laws characterize ownership rights, the rules through which ownership can be lawfully transferred, and a discourage transfers that do not make all the directly affected parties better off.

Similarly, networks of voluntary exchange are unlikely to become extensive and dense unless public policies facilitate them are in place, rather than their opposites. Examples include the adoption and enforcement of supportive civil and criminal laws, support for integrated transport systems, and policies that facilitate the development of useful innovations, such as patents and intellectual property rights. Differences in the extent of economic development are partly the result of differences in capital as often emphasized by neoclassical economists, but a good deal of evidence also suggests that they are caused by differences in education, legal, political, and normative systems. Such differences and their effects on economic activities imply that they should be considered part of neoclassical economics.

From the perspective of this text, microeconomics is a broader field than often acknowledged by other microeconomic textbooks. However, this is not an entirely new idea. Classic

works from the period before neoclassical economics emerged often included or at least mentioned the effects of legal, political, and normative systems.

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