The purpose of demand theory is to explain consumer market behavior.

The theory of demand, or consumer choice theory, is prominently featured in the early chapters of every microeconomics textbook—introductory, intermediate, or graduate—and has appeared in essentially the same place and in the same basic form for over a half-century. The theory’s basic idea is quite simple, or at least seems to be so once the catechism has been learned. It goes like this.

The theory begins with the assumption that demand curves relating the amount of a particular commodity that a consumer is willing and able to purchase at various prices exist as phenomenal regularities in market economies. These regularities, it is argued, could be empirically observed by asking the individual how much he (or she) would be willing and able to purchase at various prices and/or by simply observing his actual consumption behavior. In either case it is assumed that the functional relationship \( q_i = D(p_i) \) between the price \( (p_i) \) and quantity \( (q_i) \) of good \( i \) exists and can be empirically estimated. Since the market demand curve is simply the sum of all of the individual demand curves for all the consumers in the market, these market demand curves are similarly assumed to exist as phenomenal regularities. Demand theory is simply an explanation—ostensibly a scientific explanation—of what is “behind,”
in other words what causes, these particular regularities. Things get a little messier when more variables are added—income, the prices of substitutes and complements, and so forth—but the core idea remains the same. There exist empirical regularities, demand functions, that require scientific explanation, and demand theory provides such an explanation.

So how does the explanation go? In brief, the argument is that a demand function is the result of a consumer choosing the most preferred bundle of commodities—the one that maximizes utility—subject to the constraint of the consumer’s limited money income. Changes in commodity prices will alter the set of bundles the consumer can afford and thus produce changes in optimal consumption. Each point on an individual demand function is thus a solution to a well-defined optimization problem. When the price of the good changes, the individual recomputes the optimal bundle, and the new optimal quantity is given by the corresponding point on the demand function. This, very briefly, is the theory of demand contained in every microeconomics textbook. The more advanced the textbook, the more variables considered and the more mathematically sophisticated the presentation, but the basic argument remains the same. Demand curves exist, they need to be explained, and individual utility maximization subject to budget constraint provides the explanation.

Notice that there are at least four key parts to such an explanation. First, the individual consumers have preferences and/or an associated ordinal utility function that characterizes their personal valuations of all bundles of commodities in the choice space. These preferences, or the corresponding utility function, are assumed to be sufficiently well behaved so that the optimization problem has a unique solution. Second, each consumer is constrained by a linear budget constraint with prices and money income as parameters. Third, the demand relationship between price and quantity is obtained ceteris paribus; that is, only the price of the good changes (not money income, the prices of other goods, the consumer’s preferences, etc.) as the consumer moves from one hypothetical consumption choice to another along the demand curve. Finally, the whole optimization problem is solved instantaneously: the unique solution exists for each price, and the consumer has the computational capacity to find it without cost, lag, or feedback onto any other part of the choice setup.

These are, of course, just the bare bones of demand theory—different economists and different subfields within economics add to this basic scaffolding in various ways—but these bones are universal and uncontested within contemporary economics. This is not a theory of demand,
this is the theory of demand; other conceptions of demand can be ignored, and there is no debate about this one (at least the basics). Obviously, this was not always the case. There was no “theory of demand” in this sense in classical economics. Demand theory is a development that preceded the first stirrings of the neoclassical revolution in the writings of men such as Augustin Cournot and Fleeming Jenkin. Nevertheless, it was cemented firmly to the neoclassical project in the late nineteenth century (Mirowski 2004, chap. 13). In even its most Whiggish renditions, the history of demand theory is a play in two (or possibly three) acts. The first version offered by the early neoclassicals was rooted in hedonistic psychology, rested on subjective introspection rather than objective observation, and required the cardinal (and interpersonal) measurement of utility. That earlier version was replaced as a result of the ordinal revolution associated with the work of Vilfredo Pareto ([1927] 1971), John Hicks and R. G. D. Allen (1934), Eugen Slutsky ([1915] 1952), and others. The ordinal revolution, according to the standard story, eliminated both hedonism and interpersonal comparisons, replaced cardinal with ordinal utility, and generally placed demand theory on more solid scientific foundations. Often a third development is added—the revealed preference theory introduced by Paul Samuelson (1938)—a move that is seen as further strengthening the theory’s scientific basis, in this case by reducing rationality (associated with maximizing a well-behaved utility function) to mere consistency of observed choice. This final, revealed preference, move is interpreted differently by different authors; some view it as a major change on par with the ordinal revolution, and others consider it to be just a further refinement in the ordinal utility program (a way of empirically “revealing” the consumer’s preferences). In any case, the development of revealed preference theory, whether a full third act or just a scene change, is considered to be the final move in the history of demand theory. Notwithstanding technical and mathematical improvements, and various pedagogical innovations, the demand theory of the 1940s is the demand theory of today. For most practicing economists there has been no reason for additional changes to demand theory, because it basically gets things right.

The articles in this volume are all attempts to move beyond this simple two- or three-act story. They were initially presented at the 2005 HOPE conference, “Agreement on Demand,” held 22–24 April in Durham, North Carolina. The conference provided participants with an intense and spirited exchange on a wide range of topics in the history of demand theory and related literature.
The conference organizers saw two main areas of research on the history of twentieth-century demand theory that warranted further exploration. First, there needed to be additional work on the history of the theory’s stabilization from the 1920s to the 1940s: essentially, the ordinal revolution and revealed preference theory. A growing body of literature—Giocoli 2003, Mandler 1999, and others, including research by the conference organizers (Hands and Mirowski 1998; Mirowski and Hands 1998)—suggests that the simple, linear, two or three big changes story simply does not capture the complexity of the debate that took place during this period. Even if we restrict the investigation to economists operating broadly within the neoclassical framework—that is, neglecting institutionalists, those who saw demand as strictly an empirical relationship, and so forth—there were still many conflicting views and interpretations, only a small fraction of which came to be integrated into the theory that stabilized by midcentury. On close examination the history of demand theory, like that of most scientific ideas, is not as straightforward as the discipline’s brief and stylized narratives would suggest. The following articles clearly demonstrate that the history of demand theory is much more complex, contingent, and, to use Andrew Pickering’s (1995) apt word, “mangled,” than the standard story.

The seven articles in the first section—by H. Spencer Banzhaf, Manuel Fernandez-Grela, Jean-Sébastien Lenfant, François Gardes and Pierre Garrouste, John S. Chipman, J. Daniel Hammond, and D. Wade Hands—all investigate particular aspects of demand theory during this early period of stabilization. They all focus on different aspects of the story, but all aim at uncovering the complex details of the episodes they investigate and fleshing out a more-textured story about the development of consumer choice theory. In some instances, the received script is subverted; in others, it is merely complicated.

The second main area of historical research concerned the relationship between the theory of demand (as it came to be stabilized) and the broader program of mainstream neoclassical economics, particularly general equilibrium theory. In a sense, demand theory is the theoretical heart of neoclassical economics. Unlike, say, the theory of market price determination, the characterization of the competitive firm, or the theory of cost and production, demand theory has consistently been the centerpiece of neoclassical theory (originally called marginal utility theory). Thus, as goes the fate of neoclassical economics, so goes the fate of demand theory. As is well known (Ingrao and Israel 1990 and others), the third
quarter of the twentieth century was not the best of times for Walrasian
general equilibrium theory. The theory is still with us, but that which was
once considered to be the apogee of economic theory now seems a mere
shadow of its former self. Many of those things generally considered
to be key “problems” for general equilibrium theory—for instance, the
failure to be able to prove either stability or uniqueness of the general
equilibrium price vector under acceptable general assumptions and the
implications of the Sonnenschein-Mantel-Debreu (SMD) results on excess
demand functions—stem directly from the failure of demand theory to
deliver the theoretical goods. Since it is the theory of demand that puts
essentially all of the structure on the individual (and thus market) excess
demand functions in a Walrasian general equilibrium model, the failure
of the model to “do” what theorists wanted, and expected, it to do ulti-
mately reflects on the theory of demand. Demand theory stabilized with
Walrasian general equilibrium theory in the mid-twentieth century—they
grew strong together—but perceived problems in one are inevitably prob-
lems for the other.

The articles in the last two sections—“Agreement on Demand” and
“Demand Goes Transcendental”—all deal, in one way or another, with
the history of these issues. In section 2 Maarten Pieter Schinkel, Fer-
nando Tohmé, S. Abu Turab Rizvi, and Alan Kirman address aspects of
the perceived failures of general equilibrium theory and how they relate,
directly or indirectly, to the theory of demand. In some cases the articles
examine fairly broad swatches of the theoretical literature from the work
of many different economists, and in other cases the focus is on a small
set of texts or the work of a single individual. In all cases the focus is on
trying to understand better the evolution of the developments that came
to be seen as difficulties for Walrasian general equilibrium theory (at
least in the form that it existed around, say, 1965) and how these theo-
retical developments relate to the theory of demand.

The final set of articles moves beyond these perceived problems for
the Walrasian program—stability, SMD, and such—to address connec-
tions between demand theory and larger developments within contem-
porary theory (what might be called post-Walrasian economics). Kyu
Sang Lee, Esther-Mirjam Sent, and Shyam Sunder combine historical
narrative with reports from the front: Lee explores how the metaphor of
the institutional mechanism tended to displace concern over demand;
Sent points out there is no demand if trade is itself irrational; and Sunder
suggests that the reliance of demand theory upon rationality might itself
be dispensable. The volume’s final article, by Philip Mirowski, provides an overview and interpretation of—twelve theses on—the connections between various topics discussed in the other articles (as well as some topics that might have been, but were not, examined by other authors).

All in all, the following articles provide us with a much better understanding of the history of demand theory and its relationship to many of the major theoretical developments within twentieth-century microeconomics.

References


Part 1

Disagreement on Demand: Studies in Early-Twentieth-Century Stabilization of Demand Theory