Volume Title: The Behavior of Prices

Volume Author/Editor: Frederick C. Mills

Volume Publisher: NBER

Volume ISBN: 0-87014-010-8

Volume URL: http://www.nber.org/books/mill27-1

Publication Date: 1927

Chapter Title: Introduction to "The Behavior of Prices"

Chapter Author: Frederick C. Mills

Chapter URL: http://www.nber.org/chapters/c5316

Chapter pages in book: (p. 31 - 36)

INTRODUCTION

That prices play a part of extreme importance in the working of the economic system requires no demonstration. The production, distribution and consumption of goods are, of course, fundamental activities, but as the modern economic system is organized they are conditioned and influenced at every point by prices and price relations. Prices constitute the medium of economic control. It is futile to study modern economic life without regard to the part which money and prices play.

This part has been described in a general way elsewhere, and calls for no extended treatment here. The prices of individual commodities, in their changes, stimulate or retard production and consumption and, in turn, reflect changes in production and consumption. So, also, the prices of individual services affect, and reflect, changes in the direction of human effort. But there exists a broader set of price relations, of importance equal to the specific connections between changes in the prices and quantities of individual commodities. These are the numerous relations, of varying degrees of intimacy, which tie all prices into a system—"a highly complex system of many parts connected with each other in diverse ways, a system infinitely flexible in detail yet stable in the essential balance of its interrelations, a system like a living organism in its ability to recover from the serious disorders into which it periodically falls."[1]

The objectives of the present study are, first, to secure a fuller understanding of the behavior of individual commodity prices and, secondly, to increase our knowledge of the working of the price system and of the interrelations between its component elements. To attain the first objective we shall make use of various methods of measuring the characteristics of individual price series. In seeking to attain the second we shall be searching for uniformities and regularities in the behavior of prices in combination. We shall be measuring tendencies which manifest themselves when a group of prices is studied, and tracing relations between prices and groups of prices. We shall be seeking principles of order in the realm of prices.

[1] *Business Cycles*, by Wesley C. Mitchell. Berkeley, University of California Press, 1913, p. 31.

This search for uniformities and regularities is that which engages scientific workers in all fields. It is a simple undertaking—before the data are collected and one immerses himself in masses of facts. Then there emerge those "profundities, complexities, involutions, analogies, differences and dependencies" which both harass and encourage the research worker. In all work in the biological and social sciences these complexities are intensified by the omnipresent fact of variation, a reflection of the presence of numerous forces behind the phenomena we are observing.

Yet, in spite of the number of factors and the complexity of the facts, there is hope of finding regularities in the field to be studied. It was one of the most fruitful scientific discoveries of modern times that regularities appear even where sheer chance rules. Though in the realm of chance the individual event may be unpredictable, definite principles of order prevail among groups of such events. When we are dealing with the price system it is with groups of observations that we shall be concerned, and when we seek for regularities it will be regularities among large groups, to which individual prices may furnish numerous exceptions.

The reason for the existence of regularities in the price system, as in all fields marked by the presence of such variation and complexity as here prevail, may not be a matter of immediate economic interest. Yet a suggestion of Charles S. Peirce is so pertinent to the study of prices that it may be touched upon. Peirce found the explanation of regularities in the universe in a tendency to form habits, a tendency toward mutual assimilation, which he believed to prevail in nature.[1] The validity of this hypothesis, as applied to all nature, does not concern us here. But the price system seems to furnish a striking and curious illustration of such a tendency in the realm of economics, a tendency of which there is, perhaps, a rational explanation which cannot be found for Peirce's broader generalization.

The isolated prices that were quoted in the dawn of the money economy must have been connected to other prices by ties that were but feeble and remote, and the circle within which the influence of a given price transaction was felt must have been a very narrow one.[2] But as the money economy developed these ties increased in

[1] *Chance, Love and Logic*, New York, Harcourt Brace, 1923.

[2] It is probable that in early historical periods price transactions were few, comments Dr. Gay, and that the ties which would create a system of prices were feeble. But the telations among such prices as existed, and the temporal ties binding given prices to those earlier and later in time, were close and rigid. The few established prices (e. g. rhose for cattle, slaves, salt) changed but little or not at all over long periods of time.

number and in strength. Small net-works of price relations expanded and established contacts with other such net-works. The price system grew until the mesh of price relations included, as it does today, all industrialized communities. While this "mutual assimilation" was taking place, those regularities which, in Peirce's view, constitute the "habits" of nature were coming into existence. Characteristic modes of behavior were being impressed upon various groups of prices by underlying natural forces, by the pressure of competition, by factors connected with the business cycle, and by other agencies the effects of which probably cannot be traced in detail. And the process by which price ties have been formed and by which characteristic modes of behavior have been acquired still goes on.

In some such way has the price structure developed. Out of the bids and offers of burgher, craftsman and wandering trader has grown an all-embracing system, with the "profundities, complexities, involutions, analogies, differences and dependencies" which it is the duty of the economist to trace. The pioneer work of Wesley C. Mitchell marked a beginning in the charting of this system and in the tracing of the bonds which tie together the component parts. The completion of this work lies far in the future. If the price system could be fully explored, if all ties and connections could be traced and all fluctuations explained, then, perhaps, man could understand and control the economic system he has created. We can doubtless come much closer to that objective than we now are. It is doubtful, in a changing world, that it will ever be attained.

In attacking this general problem the first step has been the securing of measures which describe the behavior of individual commodity prices. Not all the characteristics of individual prices are subject to measurement according to a standardized scheme, but such a scheme is necessary if comparable results are to be secured. The first part of the present report is concerned with the development of such measures. These measures possess interest and economic significance in their own right for the light they throw on the behavior of individual commodity prices, and for this reason the results have been given in detail. They are of interest, also, for another reason. Such measures for a number of individual price series furnish the raw materials for the study of tendencies, variations and relations of various sorts within the system of prices. This is the primary purpose for which they have been assembled. These measures are dealt with in the first two chapters of the present volume.

The third and fourth chapters are concerned with the behavior of prices in combination. The various measures discussed in these chapters relate to the price structure as a whole, without regard to its component elements. We might view the sections which relate to prices in combination as dealing with the stability and instability of prices. George Darwin has said that the study of stability and instability furnishes the main problems with which physicist and biologist are alike concerned, and it is probable that most economic problems have a similar genesis. It is certain that the main problems to be faced in an analysis of the price system are essentially problems of stability and instability. It is the instability of this system and the economic effects of this instability which render so imperative a fuller understanding of it, and make so necessary an increase in our power to control it. This necessity of understanding holds, no matter what the cause or causes of price instability may be. Whether price instability be traceable to specific money and price conditions, whether price instability be merely a reflection of general economic instability, or whether price instability and economic instability react upon each other, this subject is a matter of crucial importance.

The nature of price instability is itself a matter for investigation, before methods of measuring instability may be considered. Our primary interest here is not in the instability of prices of individual commodities, though this is involved in the problem, but in conditions of general price instability, where large numbers of commodities are concerned. But the term "price instability" in this general sense is often used ambiguously. What is meant by a condition of price instability? What kinds of instability may be present in the price structure? How shall price instability be measured? Are the currently compiled index numbers of prices adequate measures of all the disruptions and distortions which may develop within the system of prices? These are some of the questions which will receive consideration.

In a later study the materials assembled in the present volume will be used, with other data, in seeking to define certain of the component elements of the price system, and in attempting to trace relations between these elements.

Satisfactory data constitute, of course, a prime requirement in such an investigation. In the field of prices we have data which serve in a fairly satisfactory fashion for the construction of wholesale price index numbers of the usual type. But data which will

serve this purpose may not be satisfactory for a detailed study of price behavior of the type here suggested. For this latter purpose we need a considerable number of pure price series drawn from various geographical regions and representing all stages of the productive and distributive process. By a *pure* price series is meant one which relates to a homogeneous commodity, which is drawn from a single market (i. e., is not an average of prices in several markets) and which is derived throughout from the same type of transaction. Having a wide variety of such series, representing all geographical areas and all economic stages, the application of a standardized technique of analysis would yield a wealth of information regarding the behavior of individual prices, the relations among elements in the price system, the incidence of the business cycle, the characteristics of a competitive price, and the price structure in general. The compilation of such data, adequate both in quality and scope, is a task for the future.

Considerable emphasis has been placed in the present study upon the technique of analysis. A few of the elements in this technique are novel; most of them are orthodox statistical devices. Their application, in combination, represents an attempt at a systematic study of price behavior. The technique is doubtless capable of improvement, but only by the extensive application of some such standard method can economists build up that body of concrete facts and principles relating to price behavior and price relations which is necessary to an understanding of the price system.