AN "ECONOMICS OF KEYNES" PERSPECTIVE ON MONEY

by

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[Handwritten note:]

The distinction between the "Economics of Keynes" and "Keynesian economics" is due to Thies. Despite this, I differ from some much to my colleagues in demand for unconventional wisdom. Paul Davidson, Sidney Weitman, Victor Chick, Jon Kessel, Robert Lerner and Axel Leijonhufvud among Americans and Joan Robinson, Karl Kehl, and Ernst Ketterer in England.
I. Introduction

Through the 1960's, and into the early 1970's, a monetarist counter-revolution swept through macroeconomic theory in the United States. Monetarism is a version of the quantity theory of money which differs from the older forms in that it explicitly substitutes the stability of a demand function for money for the stability to the velocity parameter that was implicit in the older formulations of the quantity theory.\(^1\) In truth, monetarism is based upon errors of understanding as to what neo-classical theory proves and errors of specification about the institutional characteristics of the economy in which we happen to live.\(^2\) The transitory success that monetarism achieved among politicians, pundits, and central bankers was mainly because the standard macroeconomic monetary analysis was superficial and error ridden rather than because of the logical or empirical case that was made for monetarism.

The standard macroeconomic theory of the 1950's and 1960's, which monetarism attacked, was an integration of an interest rate determination mechanism that was derived from the Hicks-Hansen special interpretation of Keynes with elements of neo-classical theory.\(^3\) The specification of monetary relations in the standard "Keynesian" models, and in the large


\(^2\) Frank Hahn's review (Economica Vol. XXXIII, No. 119, February 1971 p.61-86) of Milton Friedman's book Studies in the Quantity Theory of Money is quite explicit on the lack of understanding of general equilibrium theory that permeates Milton Friedman's work.

scale econometric models which are now the concrete statements of the standard theory, ignored the problem of capital-asset valuation that is central to Keynes' argument in The General Theory: what monetarism attacked was Keynesianism rather than the economics of Keynes, to use Leijonhufvud's apt characterization.4,5,6

A major concern of Keynes in The General Theory was how the structure of capital-asset prices, and thus the pace of investment, depends upon monetary and financial variables. This problem, as set by Keynes, is central to an understanding of an economy which is capital-using, capitalist, and financially sophisticated. In our economy all that is meant by money cannot be encompassed within a demand curve for a generalized 'market' that is designed to facilitate the exchange of commodities at a Village Fair. In our type of economy the monetary mechanism is most directly relevant to the generation and allocation of the surplus; i.e. to the determination and financing of investment. Keynes' insight of genius in The General Theory was the identification of the relation between the pricing of the stock of capital-assets and the flow of investment output as the key to an understanding of the behavior of a capitalist economy. By the time the monetarist attack was launched this insight of

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4 The argument that capital-asset valuation in a capitalist economy is central to Keynes is detailed in Hyman P. Minsky, John Maynard Keynes. (New York: Columbia University Press, 1975). Capital-assets are real physical things collected in plants and owned by firms which are valued by the attachment of a price (explicit or implicit). The price in turn is determined by capitalizing future expected quasi-rents.


Keynes had been lost, and what passed for Keynesian monetary theory was merely an appendage to a neo-classical model: The liquidity preference function of Hicks-Hanson is not substantially different from the money demand equation of Friedman.\(^7\) When Friedman first propounded the monetarist dogma, a conventional Keynesian in the Hicks-Hanson mold could wonder what the shouting was about.

To recapture lost ground, it is necessary to resurrect the monetary theory of Keynes in *The General Theory* and to contrast it with the omissions and errors of standard Keynesianism monetarism.

**Systemic Instability**

Even as the monetarist version of neo-classical theory scored points against the standard Keynesian version of neo-classical theory, the validity and relevance of neo-classical theory was being subjected to question. On one side the Cambridge (England) school made some devastating hits on the concept of capital as used in neo-classical theory and thus on the use of the marginal productivity of inputs as determining the choice of technique and income distribution.\(^8\) As a result the production function, a construct basic to neo-classical theory, is now an amorphous concept. On another side, from the middle of the 1960's, the American economy, as well as other advanced capitalist economies, behaved

\(^7\) In his review of *The General Theory* (Q.J.E. 51, November 1936) Professor Viner identified Keynes' liquidity preference relation as a treatment of velocity or the Cambridge K which made velocity a function of the interest rate. Keynes in his rebuttal to Viner's review (Q.J.E. 51, Feb. 1957) explicitly repudiated this interpretation.

in a way that is inconsistent with both the monetarist and standard Keynesian Theory. Quite suddenly the explanation of systemic instability, rather than of a tendency towards a stable equilibrium became a key problem for economic analysis.

Monetarism rests on the construct of adding money onto an inherently and strongly stable Walrasian model. As a result, observed instability, especially endogenously generated instability, is inconsistent with the monetarist position. The standard Keynesian view, as embodied in elaborate econometric models, also rests upon production function postulates. Strong exogenous shocks are needed to generate instability. Endogenous instability is thus alien to both the monetarist and the standard Keynesian view — although it is not foreign to Keynes' view in The General Theory. Furthermore, the production function, which is central to both the monetarist and standard Keynesian view, is superfluous to the economic theory of Keynes. In 1976, if monetary theory does not have to go back to square zero it does have to return to square 1937: Hicks must be discarded and Keynes' rebuttal to Viner's great review must become our point of departure.

The Monetarist Perception

Perhaps the clearest single statement of the perception of reality underlying the monetarist revival of the quantity theory is captured by the following passage:

Despite the importance of enterprises and money in our actual economy, and despite the numerous and complex problems they raise, the central characteristic of the market technique of achieving co-ordination is fully displayed in the simple exchange economy that contains neither enterprises nor money.

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In this view "money has been introduced as a means of facilitating exchange, and of enabling the acts of purchase and sale to be separated into two parts." The simple exchange model that economic theorists constructed as they endeavored to demonstrate that it is possible, albeit under restrictive circumstances, for markets without overt control to achieve a coherent result does contain capital-assets of the kind that we can point to as existing in our economy. The pervasiveness of capital-assets within a capitalist financial framework is the major institutional oversight of both the monetarists and the standard Keynesians.

Introducing money into a simple exchange (or Village Fair) parable, where capital-assets do not exist and where the sole function of money is to enable trade to take place without the double coincidence of wants required by barter, is not the only misspecification that takes place in the basic theoretical underpinnings of the flawed views. The artifact of the Walrasian auctioneer, or of recontracting, vital to the determination of equilibrium within neo-classical economics, means (1) that trading only takes place at market clearing prices and (2) that everything occurs at one moment of time. Both time, and the uncertainty of false trading, are eliminated by the parables of standard Keynesian and monetarist theory. Because of the way in which the theory starts its Village Fair trading game, money is introduced to make "barter" easier. Monetarists can assert that money does not matter because in the world of (Walrasian) "real" theory money does not really exist. In the trading game with recontracting, each trading unit acquires as much money of account during the action at the Fair as it spends. All that a Village Fair requires is the way of a

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1 Ibid.
money mechanism is a set of books (or memories) and market processes that
guarantee that each spends what he gets (which is what the auctioneer
assures). As a result, every account will hold zero money at the begin-
ning and at the end of the trading day. But the effective trading "day"
is the barely perceptible minisecond in which the equilibrium prices are
announced. Almost always, in Friedman's simple exchange economy (as well
as in the standard Keynesian models) money "really" does not exist.

In a model of an exchange economy, production takes place off stage.
A Village Fair is a meeting place of peasants and artisans. Although
capital-assets may exist, they are simple and closely related to the
workers - the artisans own their own tools. Financial instruments of the
kind that pervade our economy do not exist. There is no problem of pric-
ing capital-assets that are valuable only because they yield inherently
uncertain future incomes.

Not much can be done to construct a serious theory of money starting
from the model of simple trade. Whenever monetarists (and standard
Keynesians) confront the problems of our economy they begin by assuming an
"existing" quantity of money - presumably exogenously determined - and
investigate the price-output-employment consequences of imposed changes in
the quantity of money, without specifying the economic forces that induces
the change and the financial relations affected by the change. A key ele-
ment in the neo-classical (monetarist and standard Keynesian) theory is the
treatment of money as a commodity just like any other commodity. As a
result, in a world where equilibrium is achieved so that excess supplies
must simultaneously equal zero over all markets, an "excess supply" of
money in the hands of any agent yields an "excess demand" for other com-
modities. In this way a determinate money price level of commodities that
are traded is obtained. The "real balance" effect of Patinkin becomes the full content of contemporary neo-classical monetary theory.  

But with money determining the price level of current output, the price level of capital-assets is left unexplained.

The Capitalist Economy

In truth in our economy there are capital-assets. Because our economy is capitalist, these capital-assets need to be priced and control over these capital-assets by various enterprises has to be financed. The existence of capital-assets of the kind that exist in modern economies, effectively changes the functions of the pricing process in capitalist economies from that specified in both the simple trading game of the Village Fair and in the simple production processes incorporated into standard theory. In a world with capital-assets there are two sets of prices that must be determined: The prices of current output and the prices of capital-assets. Classical quantity theory, the Hicks-Hansen over simplification of Keynesian theory, and modern monetarism only visualize one set of prices that needs be determined, namely that of current output. The classical quantity theory, standard Keynesianism, and monetarism use the monetary mechanism to determine the price level of output.

Keynes on the other hand used the monetary mechanism to determine capital-asset prices, leaving the determination of output prices to the

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money wage determination process and the mechanisms that determine profit mark ups. Only in a highly unusual and transitory state of the economy, in which investment is such that full employment rules even as the price of inherited items in the stock of capital-assets equals the price of like current investment output, are the two price levels the same. This congruence of the two price levels is fragile and depends upon financial and labor market processes. In particular, in a world with a cyclical past and with external finance® of positions in capital-assets and current investment, the successful maintenance for a time, of a full employment level of income will lead to an increase of capital-asset, relative to that of money, and the supply price of investment output. This takes place because the successful maintenance of full employment attenuates the value of the liquidity premiums embodied in money and some financial assets.

Neo-classical theory whether monetarist or standard Keynesianism fails on the logical ground that it cannot explain the prices of capital-assets unless it assumes that equilibrium not only now exists, but that it has existed since the creation, and will continue to exist until the final holocaust.

Capital-Using Production

The capital-assets that are used during any period are an inheritance from the past. Of the total revenues that accrue to a firm from a period's sales part is used to pay for labor and purchased materials; this is out of pocket or 'running' costs. The remainder becomes the gross income of capital, part of which is used to meet the commitments on various

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²See S. Weintraub's contribution to this volume.
financial contracts, such as bank loans, bonds, etc., part is used to pay dividends (if the firm is a corporation), and a third part is retained as an earnings. In Keynes theory once a capital-asset exists it is valuable, aside perhaps from some value as scrap, only as it is able to generate capital-income. Capital-income results from the scarcity rather than the productivity of capital-assets. The historic cost of production of the capital-asset or its current reproduction costs are irrelevant to the determination of the worth of any capital-asset, unless like capital-assets are in fact being produced or are expected to be produced.

The economic theory relevant for a capital-using capitalist economy has to explain how the set of prices of capital-assets are determined and how, if at all, these capital-asset prices affect system behavior, in particular how they enter into the determination of investment, i.e. the production of like capital-assets. In a capital using economy there are two sets of prices and two price levels. One set consists of the prices of current output, which presumably leads up to a price level measure such as the consumer price index or the gross national product deflator. The second set consists of the prices of inherited capital-assets and financial instruments, which presumably leads up to a price level measure such as the market valuation of total private indebtedness and equities, or the Dow-Jones (or Standard and Poors) index of stock prices.

Current output prices reflect wage rates, other out of pocket costs, and profit margins. Profit margins, in the aggregate, depend upon the overall level of demand. On the other hand capital-asset prices reflect

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the capitalized value of current and future capital-incomes: i.e. current and future total revenues minus out of pocket costs in a world without taxes. Investment will take place only as the capitalized value of particular future capital incomes reaches or exceeds some standard that depends upon the current price of like capital-assets as investment output.

Future capital incomes have a quantity and a time dimension. The ratio of capital incomes to current out of pocket production costs and the time path of future capital incomes that are needed for the price of a particular capital-asset to be high enough so that current production of like capital-assets takes place measures the capital-intensity of production. Telephone networks and power plants, whose current operating costs are a small portion of the income required to sustain the value of capital-assets and which are expected to provide such capital-incomes over a long period of time, are examples of capital-intensive outputs. As an institutional fact, such capital intensive modes of production in a capitalist economy are usually financed by means of bonds and other debt forms as well as common or equity shares. For capital intensive productions in a capitalist economy the price mechanism has to yield a large enough excess of current revenues over out of pocket costs so that inherited debts are validated and equity share prices are sufficiently high so that new investment can be financed by some combination of retained earnings, new equity, and debt. A major portion of such product prices can

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This definition of capital-intensity has nothing to do with production functions. It has to do with the cash flows that are needed (1) to validate debts used finance positions in capital-assets and (2) to induce investment in like capital-assets.
be conceived of as a tax, rather than a device for drawing currently allocatable resources, which enter out of pocket costs, into this particular endeavor.\textsuperscript{16}

Keynesian Monetary Theory

In contrast to the view exemplified in the quotation from Friedman, that money really does not affect anything essential, Keynes's view was that we cannot explain what happens in our economy by first ignoring, and then tacking on money and finance. Money to Keynes was a special type of bond. It came into being as banks financed the acquisition of capital-assets by firms:

There is a multitude of real assets in the world which constitutes our capital wealth - buildings, stocks of commodities, goods in the course of manufacture and of transport, and so forth. The nominal owners of these assets, however, have not infrequently borrowed money (J.M. Keynes emphasis) in order to become possessed have claims, not on real assets, but on money. A considerable part of this 'financing' takes place through the banking system, which interposes its guarantee between its depositors who lend it money, and its borrowing customers to whom it loans money wherewith to finance the purchase of real assets. The interposition of this veil of money between the real asset and the wealth owner is a specially marked characteristic of the modern world.\textsuperscript{19}

Money in this Keynesian view is created in the process of direct or indirect financing of investment and of positions in capital-assets. In the first instance, an increase in the quantity of money finances

\textsuperscript{16} Turnover and value added taxes are ways of generating mark ups over current out of pocket costs and are equivalent to profits in assuring that wages are not sufficient to buy back output. This is the basis of the Kalecki formulation: See M. Kalecki, Theory of Economic Dynamics (London: Allen and Unwin, 1943).

either an increase in the demand for investment output or an increase in
the demand for items in the stock of capital-assets. Furthermore as
money is created borrowers enter upon commitments to repay funds to the
lending bank. Money is in its origins in the banking process part of a
network of cash flow commitments, a network that for the capital-asset
side of the economy rests ultimately upon the cash flows or quasi-rents,
(fo use Keynes' terminology) that firms receive as capital-assets are
used in production processes.

In our complex sophisticated financial structure there are a multi-
tude of capital-assets and financial instruments. Each capital-asset and
financial instrument (1) will yield some cash flow or quasi-rent, \( q \); (2)
will entail some carrying costs, \( c \); and (3) will yield an implicit cash
flow in the form of an ability to gain command over cash quickly by sale, \( l \).
The \( q \), the capital-income, and the contractual interests payments on a debt
instrument, and \( c \), the carrying costs, whether they be the warehousing
costs for inventories or the financing costs for positions in capital-
assets and financial instruments, are obvious and need no explanation. 18

We posit a world of uncertainty and a world with a complex financial
structure, which means that units of various kinds have debts outstanding,
so that financial cash payment commitments exist. Typically the cash that
firms and households need to fulfill these commitments will be forthcoming
from income receipts — such as the gross profits, after taxes and before
interest payments, of corporations or the wage income of households. However

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Chapter 17 of *The General Theory — The Essential Properties of
Interest and Money* — is the key to Keynesian monetary theory as a theory
of the determination of the price of capital-assets. For a detailed argu-
ment for this interpretation see H.P. Minsky, John Maynard Keynes, (New
and the Pricing of Capital Assets"
errors in the payment process and deviations of actual from expected cash flows can occur. To allow for this contingency units carry "cash kickers", i.e. they hold stocks of assets in a form acceptable to meet payment commitments. Money of course is just this asset, for the basic financial contract is an exchange of money today for money later. In Keynes' view it is convenient to hold "assets in the same standard as that in which future liabilities may fall due." Thus a financial demand for money exists because debts exist. Furthermore, the greater the quantity of money in existence the greater the amount of cash kickers that exist and thus the greater willingness of units to go into debt. But debts are entered into to finance positions in capital-assets or financial instruments. Thus the higher the quantity of money for given income streams from capital-assets the greater the price of capital-assets and similarly the higher the price of outstanding financial instruments, i.e. bonds.

Money affects the price of capital-assets two ways: (1) the greater the quantity of money, for a given value placed upon the implicit cash flow, λ that holding money generates, the greater the price of capital-assets and (2) the value placed upon the implicit cash flow that money yields, λ, depends upon the subjective assurance of liability emitters who have payment commitments, c, on their debts) that the q's their assets will generate will be large enough to meet debt commitments and sustain capital-asset prices. A period in which capital-asset income has been stable, if not generally rising, will lead to a downgrading of the value placed upon λ and a willingness to more closely articulate c's to q's. Such changes in

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subjective feelings can only be realized in market prices by a change in the relative prices of money, which yields only \( l \) and whose price per unit is $1.00, and capital-assets. Thus the price of capital-assets and non-money financial instruments will rise as the subjective valuation of \( l \) decreases and will fall as the subjective valuation of \( l \) increases. The relevant liquidity premium is on capital-asset prices and not on Treasury bill rates. The power of monetary policy to affect output and employment depends upon its ability to raise - or lower - capital-asset prices rather than its affect upon the prices of default free near monies such as Treasury bills.

**Speculation**

Central to the notion of the financing of positions in a yielding capital-assets by means of debts which require future payments \( c \) is the notion of how funds for the repayment of debts are going to be obtained. In the simplest financial markets - where debts are used mainly to finance working capital- the completion, in the near term, of a set of transactions will yield sufficient cash to fulfill financial obligations. This is the principle underlying the commercial loan theory of banking which properly should be interpreted as a normative guide to bankers and their clients rather than as a positive rule for monetary policy.

In our economy debts can be, and are, used to finance positions in capital-assets whose values are determined by cash flows that are expected at dates further in the future than allowed for in the term of the debts. We have as Henry C. Simons noted a pervasive system of short term financing of long term assets.\(^2\) Whenever such financing exists the borrower and the

lender on these contracts expect that the funds to repay debt when due will be obtained by the issuance of new debt. If we call the type of financing in which the cash flows expected from capital-asset ownership are sufficient to fulfill debt contracts "hedge finance" and the type of financing in which refinancing is necessary to fulfill debt contracts "speculative finance" it is clear that the greater the capital intensity of production, in the sense that we have defined it above, the greater the potential for speculative financing.

A unit which engages in speculative finance, as well as the unit which lends to one engaged in speculative finance, rely upon the normal or appropriate functioning of financial markets for the fulfillment of contracts. If the interest rate used in determining the capitalization of short term and long term cash flows move together, the impact upon present values of changes in financial market conditions is much greater for long term cash flows than for short term cash flows. Thus rise in market interest rates can transform an excess of present value of asset cash flows over the value of debt into a shortfall. Under such conditions refinancing which is available at one set of financing terms would not be available at another set. Under these circumstances attempts to acquire

Illinois: The University of Chicago Press, 1948). Simons, although a Professor at the University of Chicago, was much closer to the views about the monetary-financial process put forward by Keynes than he was to the current "Chicago School" of monetarist economists. To monetarism,


cash by selling out positions can lead to a marked fall in capital-asset values below their past price - and below the current production costs of like investments. Such developments can and will bring investment to a halt, and will bring about a decline in income and employment.\footnote{23}

In our economy speculative finance as defined above is pervasive. Keynes' speculative motive for holding money can best be interpreted as an initial "speculation" to get out of money and into short term debt, followed by a reversal of this speculation as refinancing becomes expensive. The impact of swings in speculative financing is upon the ratio of capital-investment to income and employment. Instability of asset values, financial relations, income, prices and employment are inherent properties of a capital-using capitalist economy.

Conclusion

The monetary theory of Keynes, but not the monetary theory of Keynesians as derived from the Hicks-Hansen-Patinkin formulations, is much richer than the quantity theory of money in either its traditional or its monetarist dress. One dimension of this richness is that it enables economists to deal with capital-assets and financial inter-relations of the type we know exists. Another dimension of its richness is that it allows for various modes of behavior of the economic system -- and the existence of various modes of behavior of the economy means that no simple policy rule will do for all times. Economists because of this diversity of system states really have to know what is going on before they can

prescribe. Universal, global cure-all remedies should be foreign to
economists pharmacopeia.

Inasmuch as money arises out of the financing of investment and
of positions in capital-assets and financial instruments new forms of money
and new financial instruments will develop as financing needs change.
Money — and banking for that matter — are pervasive phenomena within a
capitalist economy. No rule for the desired behavior of any particular
concept of money can be once and for all set in an effort to make the
economy achieve some objective. 24

Because of speculation and the endogenous evolution of monetary
and financial practices a capital-using capitalist economy has a number of
different modes of behavior. In particular financial instability — both
upwards into an euphoric boom and downward into a debt deflation deep
depression — are endogenously generated results. It is not possible to fine
tune a capital-using capitalist economy. What is possible is to make policy
recognizing that a number of different modes of operation of an economy
with our institutions is possible and that these various different modes
of operation require different policy approaches. The result will not be
a state of bliss but rather a closer approximation to full employment with-
in a regime that more closely approximates price stability. 25

But such a result will only be possible over the longer haul if
some constraints on speculative finance are introduced and if policy
makers recognize that an inherent tendency to strong instability follows
from the nature of the pricing process for capital-assets in our type of economy.