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The Legacy of Keynes

Hyman P. Minsky

An important and useful way of contrasting the strain of economic analysis represented by Keynes with those rooted in more orthodox economic theory is by examining their differences in terms of the allocative and stabilization efficiency. This suggestive distinction was recently drawn by Jean and Peter Gray.[1] Once this distinction is made, the possibility needs to be investigated that those economic programs, institutional innovations, the evolution of usages, and changes in structures which tend to improve allocational efficiency may lead to the deterioration of stabilization efficiency. In the orthodox, Walrasian based, (barter type) system, exchanges simultaneously determine relative prices and resource allocation. Instability is explained away. Money is neutral and financial markets, institutions and instruments simply are lubricants and conduits, servicing real goods markets. Changes in the quantity of money affect the price and money income levels but the connections are not specified. In the Monetarist view, in the near term this change in money income is divided into changes in output and prices, but in the longer term money quantity changes affect only prices. For stabilization efficiency to be a criterion for evaluating economic structures and institutions, the economic theory used to evaluate the economy must be capable of engendering instability.

In the <u>General Theory</u> Keynes outlined a theory of why our economy is "so given to fluctuations" and why these fluctuations are eventually contained.[2] An apt way of interpreting <u>The General Theory</u>, in the light of Gray's insight, is that it provides the ingredients for the analysis of the endogenous potential for instability of an economic order and whether an economic order would dampen or amplify outside shocks that trigger instability.

The study of the characteristics that make an economy allocational efficient is naturally concerned with resource utilization. But an economy "creates tomorrow"

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each day by creating resources, i.e., capital formation. The Keynes integration of money with real and financial asset prices and asset prices with investment is obviously an economic theory that focuses on resource creation. In Keynes' type of analysis, institutions -- especially the financing institutions -- are well defined and the analysis really begins with the determination of the price system of assets. Finally, it is evident that orthodox theory is static whereas Keynes' theory deals first with production -- profit-seeking producers' demand for labor -- and examines the behavior of an investing system in historical time.

The role Keynes ascribes to money and asset prices is reviewed below, along with their affect on stability as part of the resource creation process through investment decisions. The implications of this resource/stability relationship for our contemporary capitalist economy is then examined.

Accumulation and Money

To Keynes, the accumulation process under capitalist conditions revolved around the pricing of capital goods assets, the cost of production of investment output, and financing conditions. Money and the operations of the institutions that deal in and create money--banking generically speaking--affect the prices of capital assets, the production costs of outputs with significant gestation periods, and the payment commitments that are specified in financing arrangements.

Even before the General Theory appeared in 1936 Keynes had introduced money into the analysis of price phenomenon by noting that:

> There is a multitude of real assets in the world which constitute our capital wealth -- buildings, stocks of commodities, course of manufacture and of transport and so forth. The nominal owners of these assets, however, have not infrequently borrowed money in order to become possessed of them. To a corresponding extent the actual owners of wealth have claims, not on real assets, but on money. A considerable part of this "financing" takes place through the banking system, which imposes its guarantee between its depositors who lend it money and its borrowing customers to whom it loans money with which 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 market characteristic of the modern world.[3]

Thus Keynes takes seriously the institutional reality of a banking system which

both borrows and lends. The lending by banks finances the holding of assets, economic activity in general and "creates" money and money-like assets. If the balance sheets of businesses and financial institutions are consolidated, then the end result is a balance sheet with real assets (both durable plant and equipment and goods in the process of production) on one side and equities (common stocks, bonds and money-like liabilities) on the other side. Money is like a bond in that it finances positions in real capital assets. There are also payment commitments due to debts which are exchanged for money, that would be evident in unconsolidated balance sheets but which disappear with consolidation.

This linkage of money and the financing of the ownership of wealth and of activity generally leads to the Keynesian view of the relation between money and asset prices. Each asset yields "utility" and "disutility" to its owners. The utility is derived from income (profits, interest, and dividends) and liquidity (the ability to trade the asset for money) and the disutility from carrying costs (storage, financing charges) and "wear and tear" (user costs) of the asset. Keynes used the symbol y for the asset's income, l for its liquidity and c for its carrying costs. The price of any asset reflects the utility derived from the sum of y + l + c and is such that on the trading margin the utility is the same per dollar for all assets.

There is a natural "numeraire" for the pricing of assets. A dollar (i.e. the unit in which transactions are denominated) is an asset that yields no or little income, y, and has no carrying costs, c. Its only return is of course subjective. It depends upon the time sequence of payment commitments for which liquidity is required, the felt assurance of income receipts to meet them, and the quantity of money available. Given that the price of a dollar is always one, the prices of other assets will be to the price of a dollar as the utility of y + c + l of the asset is to the utility of the l embodied in one dollar. The greater the number of dollars the lower the utility of the liquidity embodied in one dollar and the higher the dollar price of assets which are valuable because they yield money

income even though they share little liquidity.

The veil of money-as-finance that Keynes identified, yields a price system for assets. The assets that are priced are not only the real assets and inventories involved in the production process, but also the financial instruments that are used to finance ownership of assets. New financial instruments must be assimilated with the existing stock of financial instruments. (Whereas the expected yields from real assets are determined by the specifics of markets and management, the yield promised by a financial instrument is the same for all instruments with the same margin of safety after allowing for the prospect of the underlying asset.) Thus "financing" real asset ownership and investment by debts, involves judging prospects for the unique returns from real assets relative to the market determined terms on financial instruments.

Real assets (accumulated through previous investment) generate an inflow of cash over the lifetime of the assets. The debt instruments (financial assets to lenders) used to finance the purchase of these capital goods constitute long-term liabilities that require a cash outflow to meet interest and principal payments. An investment requires the simultaneous acquisition of an income generating real asset and a payment generating liability. The mixed game of luck and skill that is business involves selecting (betting on) combinations of specific income yielding assets (investments) and liabilities (financing instruments) with market determined payment commitments. This means that the cash payment commitments for financing investments are determined by the price system of financial assets. With the carrying costs (c) for capital assets determined, the minimum yields (discounted flow of y) must be expected to generate are given.

If, for example, the subjective value of liquidity (l) increases, then the dollar price of financial assets falls as a result of the sell of these assets, thus raising their market yields. If an investment in a real capital asset is now to be undertaken, its prospective cash inflow (and rate of discount) must be high enough to warrant financing it at the increased market interest rate (and higher

cash outflow). The (capitalized) present value (the price at which the capital good will be demanded) declines and investment demand declines as well. This Keynesian view of an integrated process by which capital goods assets and financial instruments are priced, integrates money and banking into the determination of investment. Financed investment (i.e., resource creation) generates demand for consumer goods (via a multiplier) and yields profit in their production. Therefore, the level, composition and the relative prices of output depend upon the behavior of money. This in turn depends upon bankers, who are merchants of money as finance.

Uncertainty about the future income flows from capital goods purchases (and, therefore, their demand price), the endogenous fluctuations in financial asset prices and, therefore, payment flow commitments, results in wide swings in investment demand and resource utilization levels. This characteristic of the capitalist system of making investment decisions is inherently destabilizing. Unlike the orthodox theory, this Keynesian explanation of fluctuations is integrated into the price determination mechanism.

The "prices" of output and of capital assets are related. The price of current output reflects the money wage rate and a mark-up. Expected y, c, and l yields of assets determine their prices. The demand price for an investment in a capital good is related (capitalized) to its prospective yield in relationship to the prospective payments flow commitment (the yield of the financial asset to the owner) required to finance it. The two price levels -- that of output and that of assets -- are therefore related to each other. Asset prices affect investment and investment impacts on the effective demand/supply situation for labor. Current output prices adjust to the capitalized value of the yields of assets by way of the effect of high or low level demand for labor on money wages.

The Two Faces of Economies: Allocational and Stabilization Efficiency

Paul Davidson and Sidney Weintraub have emphasized that Keynes was analyzing a "monetary-production" economy.[4,5] The phrase "monetary production" is a euphemism -- our economy is a capitalist economy with a complex and evolving financial system.

As examined above, the basic theorem of Keynes' analysis is that a decentralized capitalist (monetary-production) economy is inherently stability-inefficient even though a decentralized exchange economy is allocatively efficient. To Keynes the capitalist mode of organizing production is seriously flawed, but the condition of capitalism is not hopeless. While perfection cannot be reached, the policy conclusion of Keynes is that it is possible to retain much of the allocational efficiency of decentralized markets even as institutional arrangements are put in place that constrain the stability inefficiency of capitalist economies.

In spite of the emerging instabilities during the 1970s the overall performance of the capitalist economies in the years since World War II has been superior to the overall performance of these economies in earlier epochs.[6] This overall performance is better because big government has led to significant contra-cyclical deficits, which tend to stabilize profits even as private investment declines in recession. Furthermore the Federal Reserve now always shifts to an accomodative and interventionist policy whenever instabilities emerge in the financial structure.[7] In spite of the enormous political, propagandistic and purportedly scientific arguments for the Federal Reserve to follow money supply (monetary aggregate) rules, the Federal Reserve has always had the good sense to accommodate and refinance markets whenever distress becomes evident. In my view, in 1975 (the Franklin National episode) and, in 1980 (the Hunt-Bache affair) the Federal Reserve may have accommodated too soon and too much. The Federal Reserve did not even extract significant reforms after intervening to abort a threatened debt deflation in those years. Inasmuch as the dominant, orthodox economic theory offers no guide to action during times in which the Federal Reserve believes a crisis to be imminent, perhaps they should not be blamed.

Profit Expectations

The primary emphasis in Keynes is on the economies of resource creation under capitalist conditions. Capitalist conditions means that behavior is motivated by profits. Private organizations undertake resource creation because of

income prospects. For business the prospective income from owned resources are profits. At the center of Keynes' thought is a theory of profit expectations in terms both of the effect of profit expectations and the formation of profit expectations. In contrast to the fashionable "rational expectations" school, Keynes held that the process of expectation formation in our economy is potentially destabilizing.[8]

The current rational expectations variant of the neo-classical synthesis begins with the fully acceptable assumption that expectations reflect all the information available and processed. This correctly is taken to mean that the information includes a generally accepted theory of system behavior. The heroic step in the neoclassical rational expectations school is that the theory that is integrated into expectation formation is the Walrasian allocational view of how the economy works. In particular endogenous destabilizing interactions are ruled out from the theory that is incorporated in the study of resource allocation.

Let us view today's (April 1984) economy from the perspective of a "portfolio manager." Recent experience includes being buffeted by high interest rates, inflation, bankruptcies due to price and interest rate changes, and managerial inadequacies, bank failures, and an overhang of nonperforming (i.e., discounted) assets in the financial structure. It also seems currently to be a period of comparative tranquility in which the real measures of income and employment show improvement. Not only are portfolio decisions being made with the background of a "disaster barely avoided" but with a belief that there will be a "need to jump" -- to change assets and liability mixes, once the fully expected resumption of "discord and disarray" takes place. The view is not whether but rather when will turbulence return. The leading question portfolio managers want answered is what are the early signs of a resumption of turbulence. With their recent experience of turbulence it would be highly irrational for portfolio managers to work with and accept as a basis for behavior a model of the economy in which the instability that was so evident in 1982 cannot happen again. Moreover, it is not rational for economists

to use a model which "cannot find room for" money, to formulate policy rules for a monetary economy. It is also irrational for economists to attempt to explain the behavior of an economy in which profit flows that validate or do not validate liability structures are central to the behavior of the system by a model which leads to theorems of the irrelevancy of liability structures.

Any serious theory of expectations for our economy will have to focus on profits. Keynes, being aware of the distinction between resource utilization and resource creation, separated expectations into short and long run expectations of profit. Short run profit expectations relate to profits to be earned from using existing resources. They relate therefore to the expected level of current and near term aggregate demand. These profits are like rents; hence Keynes labeled such demand-determined profits quasi-rents.

Long term profit expectations affect decisions to use current capabilities to produce resources that will yield profit in the future. Thus Keynes distinguishes between the profit expectations from using existing plant and the longer run profit expectations that guide investment decisions. This distinction is central to Keynes' notions of the equilibrium of expectations and the significance of the validation, or lack of validation, of liability structures in changing expectations. The inflow of cash from current production must be sufficient to meet the outflow of cash required by the firm's debt structure plus a profit. That is, it must validate the liability structure it erected to finance the capital asset purchases that are now generating current sales income. Firms may be overextended (due to their own judgmental errors or a deficiency in aggregate demand) and liquidity positions become inadequate. Or the reverse may occur. Performance with respect to the validation of liability structures leads to changed valuations of liquidity and therefore to changes in the relative prices of assets, financial instruments and capital goods.

Keynes' view of profit expectations is related to what is now considered the Kalecki view of profit formation. In the Keynes-Kalecki view capital assets are valuable--yield a profit--not because they are productive but because they are scarce. But the scarcity of capital assets is determined by aggregate demand and aggregate demand is determined by investment and the multiplier. Thus the adequacy of today's profits is determined by today's investment--which in turn is determined by today's views of future profits.

The signals that today's economy generate (which affect current views of the prospects of future profits) are today's profits, the ability of today's profits to validate today's maturing financial commitments, and the commitments which need to be undertaken today to finance investment--i.e., today's financial market conditions. Thus, the relevant expectation formation in a capitalist economy involves the way _today's_ profit (and debt validation performance) affects today's views of _future_ profit (and debt validation performance) and how these views of the future affect today's investments and debt creation behavior. Once the profit and debt validation process is set up this way, once nominal values--such as debt payment commitments--are integrated into the investment formation process it is clear that market reactions to say excess supply of labor can be, nay are often, destabilizing. Furthermore the extent of destabilizing reactions will depend upon the properties of the economy's liability structures. It is not rational to assume that the stability properties of the economy are independent of its liability structures. Furthermore, whereas a "small government" non-interventionist capitalism may be allocationally more efficient than a "large government" interventionist capitalism, the ability of a large government and interventionist capitalism to stabilize profits and refinance debt structures makes big government capitalism more stability-efficient than small government capitalism. However, because big government capitalism with an active interventionist central bank constrains downside instability, the presumed knowledge about the stability of system behavior (which determines profit expectations and acceptable liability

structures) leads to an increase in debt financing. Thus both upward instability and potentially troublesome liability structures will result from the successful containment of downside instability. Stability, in a capitalist environment, is itself destabilizing.

why?

The Socialization of Investment

The contrast between the allocational efficiency of decentralized markets in determining resource utilization and the stability inefficiency of decentralized markets and capitalist financial practices in determining resource creation stands out in the Concluding Notes of The General Theory (Chapter 24). On the one hand Keynes argued that "a somewhat comprehensive socialization of investment will provide the only means of securing an approximation to full employment, although this need not exclude all manner of compromises and devices by which public authority will co-operate with private initiative...If the State is able to determine the aggregate amount of resources devoted to augmenting the instruments and the basic reward of those who own them, it will have accomplished all that is necessary."[9] On the other hand, he held that once "central controls succeed in establishing an aggregate volume of output corresponding to full employment as nearly as is practicable--there is no objection to be raised against the classical manner in which private self-interest will determine what in particular is produced, in what proportions the factors of production will be combined to produce it, and how the value of the final product will be distributed between them."[10]

The early 1930's when The General Theory was written was a period of unprecedented turmoil in capitalist economics. The Great Depression brought the very continuation of both Capitalism and Democracy in question. Hitler showed that there was a totalitarian potential in Capitalism even as Stalin demonstrated that there was a totalitarian potential in Socialism. For democracy to survive the economies of democratic countries had to achieve greater stability and equity. Keynes' diagnosis of the strengths and weaknesses of market processes was paralleled by the development of market socialism in the hands of Lange and Lerner.[11,12]

Lange, replying to the critique of planning by VonMises and Hayeck, among others, argued that the instructions to the operator of production units need be no more then to maximize profits, given the prices of outputs and purchased inputs. The 'planning' agency sets price and achieves allocational efficiency by in effect confronting each firm with an infinitely elastic demand curve; furthermore prices are adjusted according to whether excess demand or suppoy of outputs or allocatable inputs exist. The exposition by Lange of the operations of the market mechanism under market socialism is a masterful statement of the equilibrating behavior of interrelated markets.

However, whereas markets make planning a reacting adjuster of price signals to producers and consumers, in market socialism resource creation is not left to the market. The extent to which resources are to be used to create resources is to be decided by a political planning process. The particular direction of investment is to be determined by a combination of planning and reactions to the profitability of existing capital assets. The key to an understanding of market socialism is that the power of markets to coordinate the way existing resources are used is acknowledged even as the instability flaw of the capitalist technique of determining resource creation is recognized.

The organization of a modern conglomorate corporation conforms to the distinction between resource utilization and resource creation that was drawn by Keynes and is basic to Lange-Lerner market socialism. In a modern corporation there are "profit centers" that are constructed around capital assets or product lines. These profit centers are under instructions to "maximize" profits with the resources that are allocated to them by "authority". These operating units have restricted powers to finance externally. In addition to the operating units a modern corporation will have a "finance" or an executive "authority" that is responsible for the acquisition of resources and how the organization is to be financed. This authority not only decides which serious investment projects will be undertaken by the various operating units but it also controls the internal funds (retained earnings plus depreciation

allowances) and the liability structure of the corporation. This authority has responsibilities that are analagous to those Lange and Lerner assigned to the "planning" boards of their socialist economy.

Thus the line that Keynes drew between what the market can do perfectly adequately--determine how resources are to be used--and what leads to the instability inefficiency of capitalist economies--the resource creation processes--is "parallel" to both the way the modern multidimensional corporation distinguishes between the use of existing resource and the creation of new resources and the distinction between the market determined and the planned facets of a socialist society. This distinction furthermore corresponds to the distinction drawn earlier to the two "types" of economic theories, for whereas markets tend to lead to an efficient allocation of given resources, the market determination of investment (resource creation) under capitalist conditions (in which markets deal not only in commodities or factors but also in finance) tends to lead to a system that is stability inefficient.

Conclusions

The policy and programatic conclusions of The General Theory rested upon a distinction between the economics of resource utilization and the economics of resource creation. The instability inefficiency of a capitalist economy was imputed to the interaction between the financing techniques which force "resource creation" and the need for adequate capital incomes to validate debts. The solution that Keynes envisaged was to socialize part of investment, for socialized investment breaks the financial link between investment today and the aggregate ability of today's profits to satisfy inherited liability structures.

But socialized investment implies that government spending is mainly concerned with resource creation. Under the influence of Beveridge[13]--and perhaps Hansen[14]--a conservative alternative to socializing investment developed in the form of transfer payments and the provision of services. The government of the United States is big not because investment has been socialized but because government

subsidizes consumption. As a result of this tack that policy took, the deficits that big government runs in recessions are able to prevent a debt deflation and deep depression, but these deficits are not the result of employment in resource creation.

We have now reached a "dead end" to the welfare-transfer payment state. Various cries for reindustrialization and industrial policy are poorly articulated realizations of the flaw in the capitalist techniques for creating resources. The flaw is especially serious if innovative ventures are so expensive that the unit undertaking these ventures must be very large and, even so, it "bets the company" on the success of the venture. Experience with commercial planes and nuclear power indicates that a minimum risk absorption by government may be necessary if ventures of such size, expense and complexity are to be undertaken. Instability, bred of liability structures that cannot be supported by profits, taxes or foreign exchange earnings, is leading to a need to either transfer the "bank" "assets"(that are such liabilities) out of the balance sheets of "banks" and onto "governemtn agencies" or to envisage a near future with a greatly impaired ability and willingness of "banks" to finance resource creation. Circumstances, rather than ideology, is leading to an "ex-post" socialization of asset ownership.

If we are to have "ex-post" bailouts and the socializations of risks, should we not also have "ex-ante" programs which explicitly define the rules for both the creation of resources (that are not expected to meet the narrow profit calculus that determines private investment decisions) and how the refinancing of organizations that cannot meet payment commitments is to take place? The socialization of invest-metn that Keyens suggested offers an alternative to both the present threat of stagnation and instability and to the inefficiencies inherent in an economy where transfer payments are large enough so as to be an effective barrier against the collapse of profits that leads to deep depressions.

Keyens is of little import in today's dominant theory and policy, but this only underscores the banality of theory and helps explain the inadequacy of policy.

As the inability of today's theory to foster an understanding of the instability so evident in our economy becomes evident, a reconstruction of theory will need to occur. Thus if it becomes evident that present policy is unable to cope with instability, a serious review of policy will need to occur. At such time--and I venture to say the time is soon--Keynes will become of increased import, not as a set of inherited doctrines but as providing the discipline and policy analysis with the insight for future progress.

FOOTNOTES

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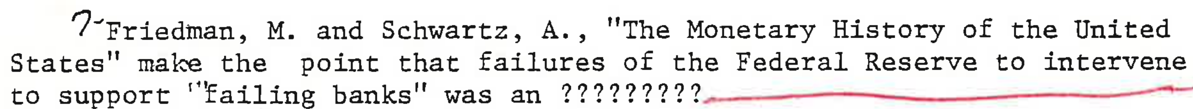
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