A Real Money Theory

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This short note has been produced to summarize the reasons why the quantity theory of money (QTM), which has turned out to be unable to explain the impact of quantitative easing, is flawed. A substitution is proposed in the form of A Real Money Theory.

Introduction

This note provides the final conclusion to two previous explorations:

> McNeill, H. W., *"A Real Theory of Money", Charter House Essays in Political Economy*, 26 March, 2020, ISBN: 978-0-907833-30-7
>
> McNeill, H. W., *"A New Theory of Money", Charter House Essays in Political Economy*, 03 May, 2020, ISBN: 978-0-907833-31-4

These explorations were undertaken to unravel the inability of the quantity theory of money (QTM) identity (equation) to explain the results of quantitative easing. The deterministic or functional relationships that relate money volumes and interest rates to price inflation do not reside within the QTM. This is why proponents of monetarism are unable to explain the mechanisms whereby money volumes and interest rates influence price levels[2].

Background

The quantity theory of money (QTM) is not a determinant model because it provides no functional components to represent the means whereby money volumes influence inflation. This is a logical consequence of inflation having no direct relationship to the volume of money or interest rates, as established by the Real Incomes Approach to Economics. The causes of inflation have been described in the 1981 paper in this series which was a reprint of the original, released in Rio de Janeiro, in 1976.

QTM limitations

The current formula for the QTM does not account for non-circulating money in the form of savings or asset holdings. The common QTM equation was developed by Irving Fisher and others as:

$$M.V=P.T \quad .... (i)$$

Where:
M is money supply;
V is velocity of circulation;
P is average price level;
T is volume of transactions of goods and services.

Quantitative easing

According to the QTM, increasing money volume increases P.T. Quantitative easing (QE) is an extreme form of “expansion” combining large M and a low, close to zero, base interest rates.

The “theory”, according to monetarists, was that QE would help banks build up their balance sheets following the 2008 crisis and investment and growth would take place with a probability of a tail end inflation which would be “controlled” by raising interest rates. The “logic” of this transition was the QTM. However, the outcome has been insipid economic growth, falling investment and productivity and falling real incomes in the real productive economy. The most direct outcome of QE has been a significant investment in assets (land, commodities, precious metals, share-buy backs) for speculative rather than productive reasons.

Clearly the QTM possesses no variable to explain this combination of circumstances and it is therefore of doubtful value as a transparent deterministic model.

The Cambridge equation

In the development of a more realistic substitute for the QTM, to reflect the actual outcomes of changes in money volumes, the Cambridge equation, based on contributions from Marshall, Pigou and Keynes, was a modification of the QTM where an additional determinant “k” was included to account for savings as a non-circulating asset.

$$M = k.\ P.\ Y \ldots. \text{(ii)}$$

On further examination this equation makes "k" a component of M but its functional relationship is not explicit. It appears as a multiplication whereas it should be an additional component alongside (P.Y) so it should be added to (P.Y) to create a sum equal to M.

Therefore, from the standpoint of a decision analysis model, to be able to simulate and project the impact on real incomes, the appropriate format is of the form:

$$M = (P.Y) + k \ldots. \text{(iii)}$$

This is because k reduces the “active” or “transactional funds” in the economy which are to be found in (P.Y).

In order to isolate and quantify the resulting real incomes element, the savings component needs to be transferred to the left of the equals sign as an amount that reduces M.

$$M - k = (P.Y) \ldots. \text{(iv)}$$

The real economy

The real economy is made up of the productive activities and the transactions between economic units within factor supply, produce and consumer markets. Savings and asset holding do not feature in this transactional economy and remain separate until used in liquid form, as cash, within the real economy. The real economy is essentially P.Y.

Quantitative easing and real incomes

Because of the inability of the QTM and the Cambridge equation to account for the outcomes of quantitative easing (QE) they have been modified to include an additional determinate, “a” for assets, to expand the money categories within non-circulating assets.

Experience with QE demonstrates the flow of money into assets has been a notable feature under this policy. This has been associated with lower investment and depressed real incomes and stagnating prices

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A deterministic model of this relationship needs to replace the QTM, of the form:

$$M = (P.Y) + (a + k) \ldots. (v)$$

or

$$M – (a + k) = P. Y .... (vi)$$

Where:
M is the quantity of money;
P is the price level;
Y real income (substituting T in the Irving equation);
a is assets;
k is savings.

As can be observed, by moving "a" and "k" to the left, as a deduction from M, the very obvious depressive impact of rising asset holdings on the availability of money can be seen to reduce P.Y.

This has been the experience of countries who have applied QE, including the early introduction in Japan in the late 1980s. The universal impact has been depressed transactions and real incomes Y. This explains how the exogenous funds, that were not generated by the supply side (bank loans), were diverted in such a manner as to be inaccessible by the supply side for use as investment or transactions. With low interest rates, savings become less significant and assets become more significant. As a result, rather than see economic growth, in spite of close to zero interest rates, this has resulted in lower real incomes, lower substantive investment and deficient growth in productivity.

As is self-evident, the rise in exogenous money did not have any practical impact on "aggregate demand" and even less so on real economic growth.

Exogenous and endogenous dealings

The Aggregate Demand Model (ADM) relies on the introduction of additional money beyond the current volume of nominal turnover of the real economy. This is an exogenous lever. The Production Accessibility and Consumption Model is the real incomes framework where actions on the supply side determine the prices, investment from savings, payment of worker incomes and establishment of consumption levels. This is endogenous and real income growth depends upon rises in productivity and price setting rather than exogenous levers. The PAC model and logic arises from the Real Incomes Approach which is a supply side logic

(see: ***A clarification of the role and significance of supply side operations***). However, this should not be confused with "supply side economics" which is a fiscal variant of the ADM.

Inflation

Inflation, under this more transparent relationship, can be seen to be singularly related to the direction that prices move (P). The average P for the whole economy is the mean of the aggregate prices of all economic units. These prices are set by each economic unit independently as the unique decision-making processes of each unit. The QTM and the RMT

do not possess any functional relationship to price movements or quantities of goods. This is because these depend upon price setting by economic units, the resulting revenues that are dependent on the price elasticity of consumption. The range of operational price elasticities of consumption are a function of consumer purchasing power which is determined by wage levels paid by these same units to their workforce (endogenous). Inflation therefore has no direct connection to the volume of M (exogenous) or the price of M in the form of interest rates (exogenous).

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[2] Monetarists are never able to provide a clear explanation of the functional mechanism of how money volumes influence inflation. Milton Friedman a leading proponent of this approach was equally unable and during the 1970s his default explanation was that "*it happens in the long run*"; this is not an explanation of the mechanism.

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He has been the global pioneer of RIO-Real Incomes Objective economic theory and practice development since 1975. The real incomes approach to economics is gaining an important place as one of the few credible alternatives to conventional macroeconomic policies in developed economies. RIO has also gained increasing recognition as a more transparent basis for designing economic development policies in low income countries based on the Production, Accessibility and Consumption Model. This places more emphasis on the supply side components of the economy than the demand-centric Aggregate Demand Model used by conventional policies (Keynesianism, monetarism, supply side economics and modern monetary theory).

In 2020 the most credible post-Covid recovery proposals are based on RIO theory and propositions.