



The FRIEDMAN Factor

TIM CONGDON LOOKS AT THE
LONG STANDING DEBATE OVER
THE QUANTITY THEORY OF
MONEY

Official monetary statistics were first published in the United Kingdom in 1963, following a recommendation in the 1959 Radcliffe Report on *The Working of the Monetary System*.

Kaldor was of course aware of the quantity theory of money, expressed in the well-known equation $MV=PT$, where M is the quantity of money, V is the velocity of circulation, P is the price level and T is the volume of transactions.

Robertson's ideas, the quantity theory of money and indeed monetary economics in general.

He persuaded the Radcliffe Committee to believe – in the words of its report – that “we cannot find any reason for supposing, or any experience in monetary history indicating, that there is any limit to the velocity of circulation”.

By implication, attempts to control inflation by restricting the rate of money growth were misguided. Taken at face value, the Radcliffe Report said that changes in velocity were unpredictable and could offset any effect from a change in the quantity of money.

At roughly the same time, in the US, Milton Friedman and Anna Schwartz were compiling and interpreting

THE RADCLIFFE REPORT SAID CHANGES IN VELOCITY...COULD OFFSET ANY EFFECT FROM A CHANGE IN THE QUANTITY OF MONEY

The Radcliffe Report brought together a range of views on monetary policy, but it was heavily influenced by the evidence of Nicholas Kaldor, then a Cambridge don and soon to become a leading adviser to the 1964–70 Labour government.

In the late 1950s the then Conservative government was struggling to curb inflation, and it acted on recommendations from Dennis Robertson (also a Cambridge don) and others to limit the rate of money growth.

Kaldor pooh-poohed

money data for their own country going back to the Civil War.

The fruit of their research was soon to be published in *A Monetary History of the United States, 1867–1960*, one of the most celebrated economics books of the twentieth century.

In a subsequent entry in *The New Palgrave Dictionary of Economics*, Friedman said that a large body of information supported “the generalization that changes in the velocity of circulation proceed slowly... [S]ubstantial changes in prices or nominal income are almost always the result of changes in the nominal supply of money.”

Kaldor versus Friedman – the evidence

Whatever else might be said for or against the Radcliffe Report, we do now have one blessing from its work.

Over 50 years of good-quality data are now available for the UK. They enable us better to judge whether the velocity of circulation is

subject to a limit of some sort, and hence to arbitrate on the dispute between Friedman and Kaldor.

Key numbers are brought together in Table 1, which shows the average annual per cent changes in the quantity of money and nominal gross domestic product from 1964.

I have split the 52-year period into nine sub-periods, to give a sense of the shorter-term relationships

THE DATA DEMONSTRATE THE VALIDITY OF FRIEDMAN'S OBSERVATIONS

that might be relevant to the business cycle.

So, we have eight six-year periods and a shorter one (of four years) at the beginning.

It cannot be disputed that velocity changed and indeed changed substantially, both over the whole period and in the shorter periods I have identified.

Over the whole period, the ratio of money to GDP

(that is, the inverse of velocity) increased by 1.8 per cent a year or overall by about 150 per cent.

Further, the record of several of the sub-periods does not look good for the quantity-theory argument.

In the 1970s the quantity of money grew more slowly than national income, whereas, in the two six-year periods starting in 1980, money rose in a typical year by 4 or 5 per cent

more than national income.

But do the figures mean that, if Friedman and Kaldor were still alive, Kaldor could claim victory?

These are matters of opinion to some degree, but my verdict is “certainly not”. Even a cursory glance at the data demonstrates the validity of Friedman’s observations.

Yes, the velocity of money changed in this long period of time, but the change in velocity did “proceed slowly”, just as Friedman would have expected.

Moreover, it was trivial relative to the much larger movements in both money and national income. Money went up over 140 times and nominal GDP by 60 times, both enormous numbers relative to the decline in velocity.

Even more striking is the obvious connection between the changes in money and national income in the sub-periods. The sub-periods of high money growth



(the four six-year periods from the end of 1967) were also the sub-periods of high increases in nominal GDP and, unsurprisingly, of inflation.

When money growth slowed after the early 1990s, so too did the rise in nominal GDP. Inflation came down and economists applauded the stability of the Great Moderation.

Nominal national income does not tell the whole story about ‘T’

A technical point reinforces the correctness of quantity-theory thinking in the UK context.

The equation of exchange (MV = PT) has “T” as one of its terms, where – as noted above – “T” stands for the volume of transactions.

It has to be conceded to the critics that this notion of “transactions” is ambiguous and awkward. Strictly speaking, every economy has transactions in inputs and assets, and these are not the same thing as

output or income.

But economists have a tendency to see output and income (and income per head and living standards) as the Alpha and Omega of their subject. By concentrating on the relationship between money and national income, I have succumbed to this tendency.

An important characteristic of growing economies needs to be highlighted. Over time an increasing share of national wealth is quoted on the stock exchange or becomes easier to buy and sell as the technology of payments improves.

Long-run patterns in most economies are for financial services activity to expand relative to output in general and for transactions to increase relative to national income. When we allow for these patterns, the explanatory power of money becomes impressive, perhaps even remarkable.

In 1964 national income

was almost £30 billion and the value of bank clearings (which were the bulk of transactions) was just under £360 billion.

So transactions were 12 times as large as nominal GDP. Today the multiple is nearer 40 times.

It follows that, in the half century or so since then, the quantity of money has become larger relative to national income, but smaller relative to total transactions.

Much careful and detailed work is needed to understand these developments, but the falling cost of transactions – mostly because of advances in computer power and information technology – has clearly been a major influence.

When the facts stay the same, don't change your mind

In the 52 years to mid-2016, the quantity of money, national income and the value of transactions advanced on average annually by 10 per cent, 8 per cent and 11 per cent respectively.

The half century saw stop-go and boom-bust cycles, and much economic turmoil and stress, but through it all basic and traditional economic theory worked.

The similarity of the annual rates of change provides persuasive evidence in favour of the quantity theory of money.

True enough, that evidence still allows discussion and differences of view, and Kaldor and the Radcliffe Committee might still have their defenders. But surely the facts are very much in Friedman’s favour•

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Table 1: The quantity of money and nominal GDP in the UK, 1964-2016

	Average, % annual change	
	Broad money	Nominal GDP
Q1 1964 to Q2 2016	10.0	8.2
Q1 1964 to Q4 1967	8.8	7.5
Six years to: Q2 1974	14.2	11.9
Q2 1980	13.4	18.9
Q2 1986	14.4	10.1
Q2 1992	13.9	8.9
Q2 1998	7.4	5.1
Q2 2004	6.6	4.9
Q2 2010	7.1	3.3
Q2 2016	3.7	3.6