

The Behaviour of Income Velocity of Money in India : Institutional, Structural and Socio-Demographic Determinants

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The income velocity of money measured as the ratio of GDP at current market prices to money stocks - M1 and M3 - is found to display the characteristics of random walk during 1950-51 to 1992-93. Accordingly, effort has been directed towards searching for an appropriate functional specification for velocity, which accounts for influence of institutional, structural and socio-demographic changes presumed to affect the velocity behaviour. The empirical results derived from alternative specification of velocity equations reveal that failing to take the cognisance of institutional, structural and socio-demographic variables may produce an upward biased income elasticity of demand for money. Hence, this study arrived at the conclusion that the virtual decline in velocity when real income rises may be taken to suffer from the errors of ignored variables which act as potential shifters of demand for money.

I Introduction

A given rise in money supply may not raise prices if the potential flow of spending from a given stock of money i.e., the velocity of money falls sufficiently. In other words, the new equilibrium rate of inflation resulting from a given rate of increase in money supply depends on whether the velocity of money increases or decreases with rising real income over time. If velocity rises with real income a higher rate of inflation will result from a given rate of increase in money supply than would be the case if velocity falls with income. Hence, understanding the true behaviour and determinants of velocity of money is essential in monetary policy formulations.

There is, however, lack of unanimity among researchers in interpreting the secular movement of income velocity of money. Friedman and Schwartz (1963) observed a secular declining trend in velocity of broad money in the U.S. economy until shortly after the World War II. Their interpretation for this secular fall in velocity is based on the empirical estimation of income elasticity of demand for money. They estimated a money demand function in which the income elasticity turned out to be 1.8. It implies that people devote increasing fraction of their income to purchase monetary services i.e., the demand for money increases more than proportionately to the rise in income, hence, velocity tends to decline¹.

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¹ The conventional real demand for money in log linear form is defined as

$$\log(M/P) = a + b \log(RY) - c \log(r) \quad \dots(1), \text{ where } M \text{ is nominal money stock, } P \text{ is price index, } RY \text{ is real income,}$$

r is opportunity cost of money. The income velocity of money is measured as

$$V = (RY.P)/M = [RY/(M/P)] \text{ or}$$

$$\log V = \log(RY) - \log(M/P) \quad \dots(2) \quad \text{By Substituting (1) into (2) we get,}$$

$$\log V = -a + (1-b) \log(RY) + c \log(r) \quad \dots(3)$$

Equation (3) implies that the velocity function is inverse of the demand for money function. If $b > 1$ in (1) the income elasticity of velocity is negative indicating that velocity declines with rising income. Similarly, if $c < 0$ in (1) it is positive in (3).