

Impact of Money Supply on Wholesale Prices During 2005-2015

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Abstract

Conventional linkages in economic parameters are intricate yet incontrovertible in functioning of the economy of a country. The infusion of money by the Reserve Bank of India into the country's economy is the consequence of highly sophisticated mechanism and pragmatic wisdom although they remain undisclosed in the public interest. The aggregate supply of money, according to the principles of monetary economics, has the conceivable and substantive impact on the wholesale price index numbers. This paper is an attempt to unfold the degree of sensitivity of the whole price index numbers with reference to the aggregate money supply. The decadal mean degree of sensitivity as worked out arrived at 1.871 while the co-efficient of co-relation for the same decade was around + 1.149. Assuredly, the impact was compatible and in conformance of the generally accepted propositions in the free economic system. The results were based on the reported data in the authoritative publications.

Introduction

The role of money in market is visible but less understandable. In order to explain the market phenomenon relating to the money supply and wholesale prices umpteen

theories have been enunciated, yet no conclusive proposition could have been designed. The more one mulls over the issue, more he makes the mess of it. The practical wisdom generated through market experience empowers the monetary authority to take appropriate decision at the appropriate time. Nonetheless, system does not prohibit re-inventing and re-engineering the newer strategies for planning and controlling the aggregate money supply.

Paul Kurtis (1) while propagating the theory of the Introversive Money Cycle observed, “all classes of circulating money within the national border while purveying economic power to value generating processes gear up the reversibility in a substantive fashion seriously affecting the price cycle of goods and services within limited range”. His unconventional undertaking is the evidence of his conviction on productive utilization of money. The theory of Introversive Money Cycle stands out due to its sound logic and pragmatism. However, in exploring the commercial consequences of the money supply Von de Aries and Ludwig P Donaldson (2) had long ago expressed their considerate views in these words, “It is the fundamental duty of the Central Bank of a country to take utmost care to be cautious in permitting the infusion of additional money considering the economic policy of the government as well as the volume and value of trading and manufacturing activities. It should not adopt prohibitive but promotional strategy for the boosting the market sentiments”.

Recently, the Three-Factor Consequential Model developed by Swedish Economist Larsen Rm. Bonato (3) stated that “the major policy of the Central Bank of the country in regulating the flow of money must be holistic and equitable; it must promote and protect economic interest of all the three basic engines of capital formation”.

The Policy of the Reserve Bank of India, by and large, had always been in conformance of aforesaid views. Its aggregate money supply was once highly castigated by the Parliamentary Committee headed by Dr. Subramanian Swamy (4) during the pre-

emergency period. It reported to say, “ The parameters for formulating the policy of the money supply must not be essentially be dictated by New Delhi but merely by Bombay which is the financial and commercial capital of the country”. Indications were certainly telling.

Hypothesis

According to the generally accepted propositions of monetary economics, the aggregate supply of money must not prevent but promote the capital formation by all the basic sectors of the economy. In the dynamics of trade and money supply the role of wholesale prices cannot be demeaned in any circumstances. Hence, the hypothesis proposed for the present exploratory paper reads, “In the market, the undercurrents of the wholesale prices of goods are the products of the public demand in correspondence with their supply attuned by the inflow of money”. Further, “the industrial and service sectors are comparatively more sensitive to the flow money than them agriculture and mining sectors”. Since the public interest is highly absorbed in the wholesale prices, their sensitivity or elasticity toward money supply matters significantly. Hence, the objectives of this paper are as described herein below.

Objectives

The objectives of this paper are:

- (i) To examine the impact of money supply on wholesale prices during the previous decade i.e., 2010-11 2019-20 the pre-Covid 19, period
- (ii) Find out the co-relation between the wholesale price index numbers and the aggregate money supply.

Limitations

[1] This study takes into the consideration only the aggregate money supply and not it's several components which would complicate and require comprehensive exposition;

[2] Despite various sector based price index numbers are readily available, merely the wholesale price index numbers are covered in this brief substantive study for the similar reasons;

[3] This study belongs to post-demonetization period as a result of which nothing extraordinary or emergent events affecting the money supply had happened;

[4] The aggregate money supply is subject to fragmentation and segmentation among several different sectors of the economy which could have thrown ample light on the components of the wholesale prices, but the objective prohibited it; and

[5] Economists have developed a number of techniques to examine the impact of money supply on the wholesale prices, but the technique of elasticity is comparatively simple to work out and easy to understand.

Technique of Elasticity

It is assumed that the wholesale price index numbers, incorporating and assimilating the whole sale prices of major consumer products from agricultural and industrial sectors, are the function of the aggregate money supply, hence

Wholesale Price Index number (W_t) = $f(M_t)$

Therefore,

$[W_{t+1}] / [W_t] \times 100 = W_x$ = percentage change in the whole sale price index numbers.

$[M_{t+1}] / [M_t] \times 100 = M_y$ = percentage change in the aggregate money supply.

$E = [W_x] / [M_y] > 1$ prices are acknowledged as more sensitive to money supply;

< 1 prices are acknowledged as not sensitive to aggregate money supply.

[2] Co-efficient of correlation of 'W_x' on 'M_y' = $S.D 'W_x' / SD 'M_y'$

On the basis of above method the elasticity of wholesale price index numbers was worked out and presented in the following Table.

Table 1 Elasticity of Wholesale price index numbers to the Aggregate money supply.

Year	Money supply (Rs. Crores)	Wholesale price Index Base2001=100	Elasticity
2010-11	648,12	428	
2011-12	653,27	443	1.0661
2012-13	686,32	519	1.0875
2013-14	727,19	572	1.1192
2014-15	791,63	620	1.1058
2015-16	816,17	681	1.1011
2016-17	831,38	728	1.1205
2017-18	884,56	761	1.1311
2018-19	925, 18	779	1.1003
2019-20	941,45	832	1.1306
Annual Average	811.76	654	Nil

Sources: Aggregate Money supply-Reserve Bank of India Bulletins for the concerned years, published by the Reserve Bank of India, Mumbai

Whole sale Price Index Numbers from the Annual Reports of the Ministry of Labour, Government of India, New Delhi.

Observations

[1] The figures of annual aggregate money supply have been constantly surging almost every year during the period under review, and similar trend of upward movement in wholesale price index number has been observed;

[2] the aggregate money supply increased by 44.4 per cent while the wholesale price index numbers went up as high as 94.6 per cent during the decade under consideration;

[3] the average elasticity of the wholesale price index numbers did not evince any sharp ups and downs but astonishingly remained highly stable between 1.0661 to 1.1306; and

[4] Decadal mean of the aggregate money supply was Rs. 81166crores while the average price index for the decade was around 641.

[5] The coefficient of correlation was arrived at 1.149 as worked out applying the formula given at point [2] relating to Tools and Techniques.

Interpretation

The wholesale price index numbers have been observed to be sensitive towards the aggregate supply of money but not highly sensitive. The harmonious trend in the elasticity during the decade was perhaps due to gradual monetization of the agricultural sector. When the wholesale prices are sensitive to money supply, it should not be misconstrued that for the purpose of controlling the wholesale prices, the Reserve Bank of India should adopt the strategy of preventive money supply.

Elasticity in different countries

Elasticity of whole sale price index numbers with reference to the aggregate money supply in a few countries is shown below:

Table 2: Elasticity in different Countries (Year=2017)

1. Germany	0.9132
2. France	1.4311
3. Italy	0.8211
4. Canada	1.0482
5. U.K	1.2717
6. U.S.A	1.2081
7. Japan	1.2142

Sources: World Bank Papers 2018. Published by the Directorate of Publications, New York,

In the countries like Germany and Italy, the sensitivity of whole sale prices with reference to their aggregate money supply was lower probably due to high rate of capital formation. The highly developed countries have had the elasticity nearing 1.2081 to 1.2717. The subdued sensitivity has been observed in many countries including India.

Summary

Theoretically speaking, the aggregate money supply by the Central Bank of the country causes to encourage the value adding operations in almost all the sectors of the economy of the country. Hence, more often than not, the Central Banking authorities are approached to improve the supply as much as possible. However, theory and practice as well as the policy and strategy hold it back.

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In this paper an attempt is made to understand the relationship or linkage between the aggregate money supply and the wholesale price index numbers. No doubt, the wholesale prices are reasonably sensitive to the size of aggregate money in circulation. Like many other developing countries, the elasticity of wholesale price index numbers was almost around 1.1306 which suggests that :

- Wholesale prices in India during the previous decade, subsequent to the demonetization, were equally sensitive toward money supply; and
- The elasticity of prices to money supply in India was mostly in conformance with those of many developing countries of the world.

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