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A note on Inflation, tracing its history

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Abstract:

"At a time when Inflation seems a dreary word, often on the verge of controversy in economic and political arena this article attempts to trace the evolution of the meaning that the word has conveyed over time. Has it always been a statement about prices or not? This article probes into the evolutionary history and extends itself till RE hypothesis linking shocks to fluctuations in price level. While undertaking this assessment this article also ponders on the significance attached to the notion of a general increase in price level, which might as well explain the limelight that it generally enjoys. It also explores the relation of price level with interest rate, rate of growth to contextualize the contributions made by early thinkers like Wicksell, Keynes and Pigou. We don't cover cost push and hybrid theories of inflation considering the fact that these theories implicitly led us to ponder on the condition of price and are sufficiently explored elsewhere in the literature."

JEL Classification: B1, B3, B31, E30

Introduction

Among the various cornerstones of macroeconomic theory, one finds Inflation held at high helm of affairs. There is a vast literature spanning across centuries treating the subject matter and as usual with epochs the meaning and significance of the word "Inflation" seems to have changed.

For many years the word Inflation was not a statement about prices rather a condition of *paper money*, which is a description about monetary policy. A testimony of it can be seen via these two quotes:

Inflation is the process of making addition to currencies not based on a commensurate increase in the production of goods.
—*Federal Reserve Bulletin* (1919)

Most prominent among these inflationary forces were a drop in the exchange rate of the dollar, a considerable increase in labour costs, and severe weather.
—*Federal Reserve Bulletin* (1978)

So what was once described as a monetary cause is now described as a price outcome. Well it also appears that in USA (1978) inflation was about things other than excessive money growth. As a condition of money stock, its treatment lies in central bank curtailing the rate of growth of money supply but as a condition of price level which may have its origin in other factors (e.g. severe weather, depreciating currency, supply shocks, etc.) the solution to and the discretion to squeeze inflation is much less clear.

In pre classical literature money almost always referred to metallic coin while the notion changed with Smith referring mostly to paper currency due to invasion of paper currency in nation states most notably America.

Currency Inflation

The word inflation began to emerge in the literature during mid-1830, commonly referred as 'free banking era' not in reference to something which happens to prices rather as something which happens to paper currency.

"The astonishing proportion between the amount of paper circulation ***representing*** *money, and the amount of* ***specie actually*** *in the Banks, during the past few years, has been a matter of serious concern … [This] inflation of the currency makes prices rise."*
—From the Bee (1855)

Now, one can see the notion is intrinsically attached to a Depreciation of a currency caused by change in quantity of currency relative to metal that constitutes the nation's money.

Price Inflation

By the late nineteenth century, however, the distinction between "currency" and "money" was becoming blurred. At the turn of the century, economists tended to refer to *any* circulating medium as money, and any change in the circulating medium relative to trade needs as an inflation of money. But this shift in meaning introduced another problem.

Although it is easy to determine the amount of currency relative to the stock of a precious metal, how does one know when the amount of the circulating medium exceeds "trade needs"?

Well via seeing the change in price level!

In other words, an inflated money supply will reveal itself through its effect on the price level. When Keynesian economic theory challenged the direct link between money and the price level, inflation lost its association with money and came to be chiefly understood as a ***condition of prices***. Indeed, Keynes spoke about different "types" of inflation, including income, profit, commodity, and capital inflation.

Technically speaking if there is inflation and all prices in the broadest sense of the term rise equally and simultaneously then it just confirms to the quantity theory at the micro/individual level, i.e. money in neutral and it just leads to a change in unit of account whereby every commodity has a new price now. This remains perfectly valid as long as additional money infused into the economy is amortized in all hands and is simultaneously spent on goods and services but in reality this is not the case so there are changes in relative prices and leads to redistribution of wealth (for money acts as a store of value also) making the onset of inflation a trouble for everyone. Also following a general price increase/decrease the relation b/w debtors and creditors become more contentious, creating more chaos and upsetting expectations. There is another reason why inflation assumes so much significance, particularly with its relation to growth. Empirically it's been true that with high price level there are more variations and unpredictability in the prices while at lower price levels one finds less fluctuating tendencies in prices, importantly it has to do with investment sentiments which are contingent on profitability which in turn is connected with rate of interest which is further connected with the price level. The last of the two must hold a relation between them, for the whole practice of loan transactions is dominated by the fact that both sides of transactions are in money form and the amount of money in the economy has a role to play in determining the level of prices and lastly continuing inflation comes at the cost of losing elections! So it seems justified why the subject under consideration attracts so much attention.

One can trace the inflation theories under these heads whereby one looks at (1) Demand side inflation having its roots in Aggregate demand analysis and (2) Cost inflation whereby average wage rate being pushed up without labour shortage are seen as its causes. (3) Mixed demand cost inflation. The demand side inflation can further be divided into 3 relations, relation between interest and prices, relation between money and prices and finally introducing expectations into prices thus relation between expectations, prices and interest rates.

Now we will take a historical tour of thoughts emerging over the subject matter in connection with the historical events which mark periods of epoch in economic analysis.

Historically one looks back at the 'Bullionism' in 16th-18th century Europe for studying price level fluctuations. Adherence to Bullionism led counties to engage in securing trade surplus and export as much as possible. The underlying ideology was bullion/specie is important as they represent wealth. Soon it came under attack for its inconsistency and logical fallacy by pre-classical economists most notably by Hume, who emphasized the real and nominal variables and the famous classical dichotomy whereby nominal variables can't affect the real variables and thus wealth of nations isn't determined by accumulation of bullions than it's determined by stocks of factors of production and techniques of production. The attack on bullionism led classical economists to stress that money had no intrinsic value and it played a role only in facilitating exchange. The quantity theory of money depicts quantity equations equating a flow on money payments to flow of goods and services. From the time of Smith to the great depression, the transaction version formulated by Newcomb (1885) and popularised by Irving Fisher (1911) and the Cambridge cash-balance approach developed by Pigou (1911) remained dominant. The difference b/w the two can be understood by simply understanding that in the former "act of purchasing by money" assumes significance while in the later "possession of purchasing power interim between sale and purchase" is emphasized. The QTM takes for granted that the real quantity rather than the nominal quantity of money is what ultimately matters to holders of money and, second, that in any given circumstances people wish to hold a fairly definite real quantity of money. So starting from an equilibrium situation (nominal quantity they hold correspond to real quantity at current prices they wish to hold) say there is unexpected infusion of money, now everyone would try spending what they regard as excess money balance, but they as a group can't succeed since ones' payment is receipt of other and the society as a whole can't spend more than what it has received, leading either to output expansion or price rise. One can pick from here that quantity theory lacks explanation of the channel by which an increase in M produces an increase in money spending, which in case of maximum output, bids up prices. This was explained by Wicksell, who saw new money coming into the economy in the forms of bank loans to businesses, to finance investment in excess of current rate of saving. This represents a net increase in aggregate demand from an unchanged supply of goods(already at max production), bidding up the prices of all goods and extracting forced saving from the community as a whole, whose money income were based on the earlier price level. Which is fairly logical provided after a lag, money income would rise in proportion to prices, which leaves consumers in same position as before to compete with investors for the limited supply of goods. If the lending institutions still infuse new loans to the investors the inflationary process would continue. Otherwise if they stopped lending thus ceasing the money supply the market rate of interest would have to rise to natural rate crowding out the extra investment demand and stimulating saving, thus halting inflation. Wicksellian analysis also propounded relation between interest and prices whereby cause of price fluctuation was attributed to the difference in loan rate of interest and natural rate of interest.

First round effects and Keynes' attack:

The quantity theory neglects any effect on the outcome, of the source of changes in money supply. Tobin and Mill also emphasized that the way the quantity of money is increased affects the outcome in some measure or other. Say, if the newly printed money is spent on the first round for goods and services, it adds directly at that point to the demand for such goods and services, whereas if it is spent on purchasing debt, or simply held temporarily as a buffer stock, it delays effect on the demand for goods and services. One way to characterize the Keynesian approach in the wake of the great depression (1929) is that it gives almost exclusive importance to the first-round effect by putting primary emphasis on flows of spending rather than on stocks of assets whereby one does invoke the non-neutrality of money to stimulate employment and output generation.

Stagflation, Friedman, and the return of classical?

The apparent success during the 1950s and 1960s of governments committed to a Keynesian full-employment policy in achieving rapid economic growth, economic stability, and relatively stable prices and interest rates, led the belief in the initial Keynesian views about the unimportance of variations in the nominal quantity of money, I must tell here though Friedman himself has acknowledged despite Keynes stressing the consumption function stability and investment spending the received wisdom within and outside the economics profession became, "Money doesn't matter", so one shouldn't blame for the catastrophe thereafter to Keynes!

"The 1970s administered a decisive blow to these views and fostered a revival of belief in the quantity theory. Rapid monetary growth was accompanied not only by accelerated inflation but also by rising, not falling, average levels of unemployment "(Friedman, 1977) and by rising, not declining, interest rates.

"Keynesian orthodoxy … appears to be giving seriously wrong answers to the most basic questions of macroeconomic policy. Proponents of a class of models which promised 3½ to 4½ percent unemployment to a society willing to tolerate annual inflation rates of 4 to 5 percent have some explaining to do after a decade [i.e., the 1970s] such as we have just come through. A forecast error of this magnitude and central importance to policy has consequences ". Lucas (1981)

Well this was a blow to the golden age of capitalism and debates over non-neutrality of money affecting prices assumed a centre stage again. This phenomenon of inflation and unemployment together crashed the belief that the price level could be at any rate as determined by forces other than money; and that absolute liquidity preference was a normal state. Needless to say Irving Fisher's famous nominal and real interest rate distinction re-entered prevailing doctrine. It would became clear that differences between Keynesian and quantity theorist were more about range of assets to be used as reference for Interest rate.

The Keynesians for a given increase in money believe interest rates to be affected first which are defined over a narrower set of assets which would be affecting consumption spending while for quantity theorists the excess money balance would be disposed on everything, thus raising the prices of assets and thus reducing interest rates whereby again encouraging investment and asset creation. This increase in spending tends to raise prices of goods and services which by lowering the real value of the quantity of money and of nominal assets, tends to counter the initial decline in interest rates, even overshooting in the process. This difference over range of assets can be understood in terms of 'price rigidity' whereby treating prices as rigid or institutional datum reduces the no of assets for speculation demand, also it appears close to reality since it's unusual to think of

interest in sales of chicken, hen, clothes, etc. hence the prices were assumed institutional datum for a large set of commodities while for monetarists there was no such inhibition so it was evident why they interpret transmission mechanism in terms of relative price movements over a broad range rather than narrowly defined interest rates.

Extensions:

Abraham Lincoln had said, "you can't fool all of the people all of the time".

1. Phillips curve & Natural rate hypothesis: The evolution of this doctrine prior to 1975 is widely accepted and no longer triggers much debate. The discovery by Phillips and his disciples Samuelson-Solow of an inverse relationship b/w inflation and unemployment suggested an exploitable policy that was destroyed by the Friedman-Phelps natural rate hypothesis of the late 1960s. The quantity theory distinction between real and nominal magnitudes implies that the Phillips curve is theoretically flawed. The nominal wage rate that corresponds to any given real wage rate depends on the level of prices. Whether that nominal wage rate is rising or falling, depends on whether prices are rising or falling. If wages and prices change at the same rate, the real wage rate remains the same. Hence, in the long run, there need be no relation between the rate of change of *nominal* wages and the rate of change of *real* wages, and hence between the rate of change of nominal wages and the level of unemployment, a proposition that came to be termed the Natural Rate Hypothesis.

2. Rational Expectations: The authorities can affect the course of events only by "fooling" the participants, that is, by acting in an unpredictable, ad hoc way. But, in general, such strictly ad hoc intervention will destabilize the economy, not stabilize it, serving simply to introduce another series of random shocks into the economy to which participants must adapt and which reduce their ability to form precise and accurate expectations. This when applied to monetary policy regime, random shocks manifest in the form of inflationary or deflationary pressures, and this is the crossroad where we are standing today.

   Beside these theories as mentioned earlier there exist cost inflation theories and hybrid theories which depart from AD analysis

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