THE DYNAMIC THEORIES OF INFLATION

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Abstract

A reduction in the valuation of a currency is characterised as inflation. Or, to put it another way, a rise in the cost of goods and services that lowers the purchasing power of the economy. Inflation is one of the most contentious macroeconomic complications in the implications for the economy. The argument differs from their premise mostly because of a variety of traditional opinions on the best approach to controlling inflation as well as the fact that it is discussed differently in developed and developing countries. Contrary to popular belief, it is challenging to separate inflation's pragmatic character into its monetary, cost-push, demand-pull, and structural components. Inflation, on the other hand, can lead to further inflation in the future. The purpose of this research is to look at the core and supplementary inflation hypotheses. Inflation is generated by complex dynamic interactions between monetary aggregates, internal supply and demand shocks, and structural and political factors.

Key Words: Inflation, Demand Pull Theory, Cost Push Theory, Quantity Theory of Money

Introduction

Among the most significant macroeconomic discussions in economic history have addressed the investigation of the causes of inflation. However, it is challenging to separate the factual nature of inflation into demand pull, cost push, and monetary and structural components in exercise. Inflation may further serve as a springboard for future inflation. Inflation, on the other hand, is the outcome of a complex interplay of demand, monetary, supply, structural, and political factors. Therefore, inflation has always been a macroeconomic and institutional phenomenon. Due to a range of conventional viewpoints on the best way to manage inflation and the disparity between developed and developing countries, the assumptions in the arguments varied. In developed countries, the rise in the money supply is often seen as the source of inflation. In emerging countries, on the other hand, inflation is not solely a monetary issue as reviewed by Sergent & Wallace (1981) and Montiel (1989), who found that the inflation process in developing countries is dominated by factors associated with fiscal imbalances, such as higher money expansion and currency rate devaluation brought on by a balance of payments crisis.

Methods and Material

The methodology adopted in this research is purely descriptive in form. The review of literature from different studies has been evaluated to describe the essential theories. The goal of the current work is to explore and analyse compatible and competing theories of inflation. Below, several of the theories are discussed.

"Quantity Theory of Money" (QTM)

Long periods of excessive inflation are typically brought about by lax monetary policy. When the money supply exceeds the size of an economy, a currency loses unit value, which results in a decline in purchasing power and an increase in price. One of the earliest theories in economics, the quantity theory of money, describes the connection between the size of the economy and the money supply (IMF, 2017). The importance of the QTM has always been linked to the monetary policy. David Hume proposed the first dynamic explanation for how monetary changes propagate from one sector to the next, altering relative prices and quantities in the process (1711–176). He also contributed to the "Quantity Theory of Money's" refinement, expansion, and elaboration. Such disequilibrium effects were deemed transitory and insignificant by David Ricardo from 1772 to 1823 in his long-run equilibrium analysis (Totonchi, 2011).

One of the very first theoretical foundations of economics is the "Quantity Theory of Money (QTM)". Monetary economists assert that the general level of prices for goods and services is inversely correlated with the amount of money in circulation; in other words, if money in circulation doubles, prices will also double**.** From this perspective, it's straightforward to conclude

that "variations in the quantity of money in circulation are primarily influenced by changes in the level of general prices of goods and services." In 1517, Polish mathematician Nicolaus Copernicus (Volckart, Oliver) was the first to propose this hypothesis. At the request of King Poland, he surveyed the fundamentals of a healthy currency. On the observation of four years, Copernicus gave evidence before the Prussian diet in 1522 that "Money always devalues when it becomes too abundant." According to the historian of economic thought (Hillinger, Claude, and Süssmuth, 2008), this crucial statement became the first brief genesis of the QTM.

When opposed to the statement "Money normally depreciates when it becomes too abundant," his work is new because no one can deny that the "earth moves around the sun." And it's because of this that QTM has gained popularity rather than opposition. Throughout the history of economics, opinions on its validity have varied, and no solid agreement has evolved. With the emergence of classical economics, the QTM was used as a "veil" that managed the overall level of prices while keeping relative prices unchanged. Researchers such as Jean Bodin, David Hume, John Locke and economists Milton Friedman later supported it. While Keynesian economics attacked the theory.

Keynesian Economics

This school of thought contends that numerous macroeconomic theories are linked to the belief that aggregate demand drives economic output. According to Keynes, aggregate demand does not necessarily match productive capacity in the economy. Multiple things, however, have an impact on it. According to him, the productive potential of an economy can acts in a variety of ways, affecting production, employment, and inflation depending on the economic situation.

Monetarism

This school's perspective emphasises the government's responsibility in monitoring and managing the quantity of money in circulation. According to the monetarist theory of money, all changes to the money supply have significant short-and long-term effects on the price level and output.

Monetary Theory of Money

This theory was first proposed by M. Friedman (Szenberg, 2008). "Only money matters," he claims since monetary policy is a more effective economic stabilisation tool than fiscal policy. According to monetarists, the short-term output and price levels as well as the long-term price levels are "dominant, but not exclusively" influenced by the money supply. In the long run, the money supply barely affects output. In Milton Friedman's Modern Quantity Theory (MQT), which claims that "inflation is always and everywhere a monetary phenomenon" and that "inflation is the outcome of a quicker expansion in the amount of money than in total production," monetarists emphasise the importance of money. It was first thought to be responsible for the development of the basic

"Quantity Theory of Money." The monetarists used Fisher's well-known identity of exchange equation, which is stated in the equation below. According to monetarists, the best way to accomplish monetary policy objectives is to target the growth rate of the money supply rather than use discretionary monetary policy. So, "Money supply and general price levels are functioning in direct proportion to one another." When the money supply fluctuates, so does the price level (inflation), and vice versa. This philosophy is based on the well-known equation of exchange, MV=PT, which was developed by neo-classical economists such as Arthur Cecil Pigou from 1877 to 1959 (PlOOU, 1959) of Cambridge. By managing an exogenously determined stock of high-power money, these authors suggested that monetary control might be attained in a fractional reserve banking system. Later, this equation was completely supported and developed, and it became famous as a MV equation, also known as Fisher's equations.

$$M*V= P*T$$

Where,

M = Money supply

V = Velocity of money

P = Price level

T = volume of the transactions

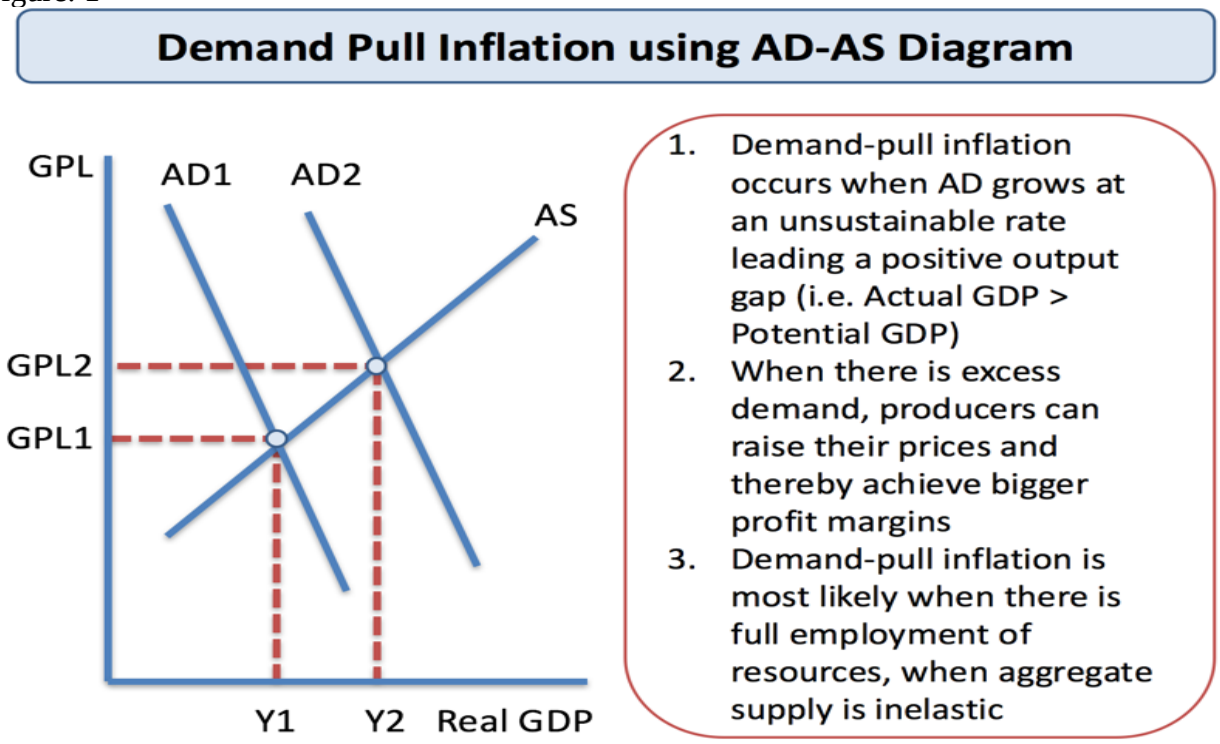
The theory has, however, drawn criticism from a number of Keynesian and monetarist economists who claim that it runs into trouble in the short run when prices are sticky. Furthermore, it has been discovered that the velocity of money in the economy changes over time. Despite this situation, this theory is generally accepted and used in the market, and it is well-equipped with tools for controlling inflation.

Demand Pull Inflation Theory

The demand-pull inflation hypothesis is well-known and extensively used as a component of inflation categorization. The demand-pull theory is sub-divided into the Keynesian views and monetarist views (Ndidi, 2013). The theory of demand-pull inflation is described as "inflation occurring when a country's aggregate demand grows or when the economy's growth accelerates above its long-run growth rate." A rise in any of the components in the theoretical equation, consumption, investment, and government spending C+I+G+NX, is responsible for this. The sooner the economy suffers from a large imbalance between aggregate demand (AD) and aggregate supply (AS), which manifests as excessive demand, the faster demand-pull inflation emerges. This situation favours the companies. As stated by Keynes and his followers in "General Theory of Employment, Interest, and Money," the economy's demand pressure can be successfully reduced by reducing each component of the demand theory. through increasing government taxes,

which reduces and controls the size of money alone or jointly (Lin, 1967). See figure (1) for further detail

Figure: 1



Source: www.google .com

Main Causes of Demand- Pull Inflation

Currency Depreciation

Currency depreciation is the term used to describe the decrease in the value of a currency. When the exchange rate declines, import prices increase and export prices decrease globally. There may be a multiplier effect on demand and production if consumers buy fewer imports while exports increase.

Increased Demand as a Consequence of Fiscal Stimulus

Lowering direct and indirect tax rates, as well as increasing government spending, are examples of what it means. Consumers will have more disposable income if direct taxes are cut, which will increase demand. Extra demand in the circular flow is created by higher government expenditure and borrowing.

Monetary Stimulus to the Economy

An overflow of demand, such as higher loan demand or property prices, may result from a reduction in interest rates. Monetarist economists believe that "too much money chasing too few goods" causes inflation, and that governments can lose control over inflation if they allow the financial system to quickly grow the money supply.

Rapid Growth in other Countries

It is evident, for example, that the United Kingdom's exports to other nations need to be increased. In the UK circular flow, exports provide an extra source of revenue and spending. As a result, what happens in other countries' economic cycles has a direct influence on the UK. Figure (2) demonstrates demand-pull inflation. Demand-pulling factors, in addition to monetary reasons, were responsible for the rise in inflation.

Pros & Cons of Demand-Pull Inflation

Inflation driven by demand can aid the economy by fuelling it and implying that the general public is working. However, it raises borrowing rates and causes price hikes. Let's look at the main advantages and disadvantages of demand-pull inflation. Jeff White (2022) (https://seekingalpha.com).

Demand-Pull Inflation's Advantages

The economy can benefit from demand-pull inflation in the following ways.

- **Wage Modifications:** Demand-pull inflation may cause review pay for positions at the lower end of the pay scale to increase in order to keep pace with what many people perceive to be a "living wage."
- **More Jobs:** More demand leads to more jobs and higher incomes in the short run. However, if client demand declines as a result of the higher pricing structure, this may be temporary.
- **Stimulates the Economy**: Fear of price increases can boost the economy in the short term by encouraging buyers to purchase now.

The Drawbacks of Demand-Pull Inflation

The following are some of the disadvantages of demand-pull inflation on the economy:

- **More Prices:** As people try to buy things with their money, higher demand may lead to higher prices and a reduction in purchasing power. When demand is higher than what is

deemed normal, too many dollars chase too few goods, creating demand-pull inflationary pressures like rising interest rates and a depreciating dollar.

- **Increased Inflationary Pressures:** Whereas demand-pull inflation may at first boost employment possibilities, it will eventually give rise to demand-pull inflationary pressures like higher interest rates or a declining value of the currency. This has the ability to ruin an economy if left unchecked.

- **Distorts the Value of the Dollar:** It's impossible to figure out how much the dollar is worth to customers, banks, and lenders because prices fluctuate so much during this time. Although this is normally a short-term effect, it has the ability to affect other prices, such as the cost of borrowing money.

Cost Push Inflation Theory

This method of analysis posits that the prices of things are mostly determined by their costs, whereas money supplies are sensitive to demand. In these situations, rising costs may lead to inflationary pressure that persists due to the "price-wage spiral's" action. Simply stated, firms counter the growing expenses by raising the prices of inputs in order to defend their marginal expenditures, or in other words, to protect their margins. The term is given as "cost push inflation," which refers to an upsurge in the cost of additional output. It occurs primarily when any of the responsible components causes a rise in cost and leads to an increase in the aggregate supply, such as trade union bargaining for higher wages or employer pursuit of higher profit levels, either due to both factors, as higher salaries and higher firm production costs. As a result of this scenario, prices go up, resulting in significant cost inflation. Many researchers consider this to be the primary driver of inflation. During the 1970s shocks, it was also studied and given a name: "New Inflation," also known as administered-price inflation or price-push inflation (Totonchi, 2011).

Main causes of Cost –Push Inflation:

There are many reasons for cost-push Inflation. Some of them are given below.

Component Costs

Prices rise sharply in this scenario, resulting in significant cost inflation. Many researchers consider this to be the primary driver of inflation. During the 1970s shocks, it was also studied and given a name: "New Inflation," also known as administered-price inflation or price-push inflation (Totonchi, 2011).

Rising Labour Costs

Simply put, increased labour costs lead to higher labour pay, which is bigger than productivity gains. When unemployment is low, wage costs often rise as qualified people become scarce, causing pay levels to climb. When consumers predict increased inflation, they may demand higher wages in response to protect their actual incomes. While trade unions may bargain to seek and obtain higher salaries, which could lead to cost-push inflation.

Expected Inflation

As a result, how inflation manifests itself in the real world is greatly influenced by expectations. People worry about how inflation will affect their real standard of living when they see prices for essential things rising. One risk of rising inflation, according to the Bank of England, is the "second effect round," in which an initial price increase sparks a wave of higher pay claims as workers try to defend their standard of living. The "wage-price impact" is another term for this.

Higher Indirect Taxes

Higher indirect taxes imply an increase in the levy on alcohol, petrol, and cigarettes, as well as an increase in VAT (Value Added Tax). Based on the price elasticity of demand and supply for their products, suppliers may choose to pass on the tax burden to customers.

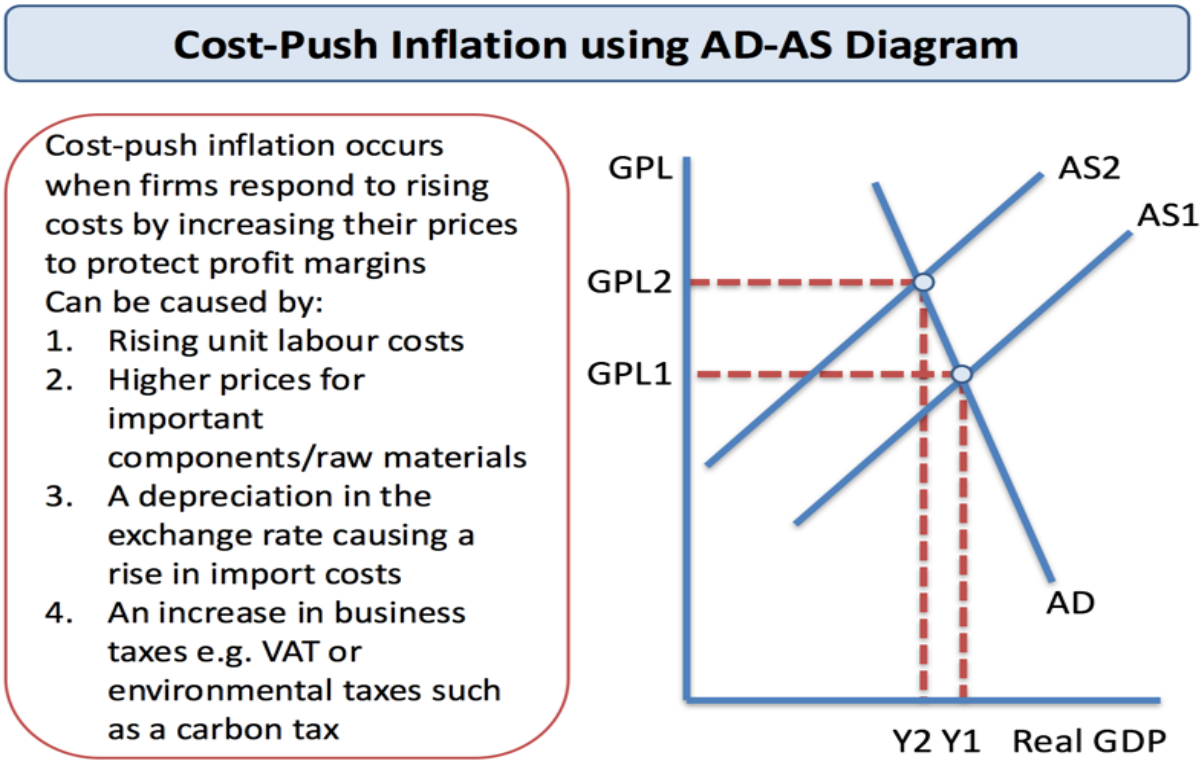
A fall in the exchange Rate

Cost-push inflation may be exacerbated by imported items, which may have higher costs for essential raw materials, components, and finished goods.

Monopoly Employer/ Profit-Push Inflation

A monopoly is a common market behavior that is seen as a powerful market determinant. It has the ability to raise prices much above the cost of production (whatever the level of demand is). Figure (3.3) elaborates on the cost-push inflation theory.

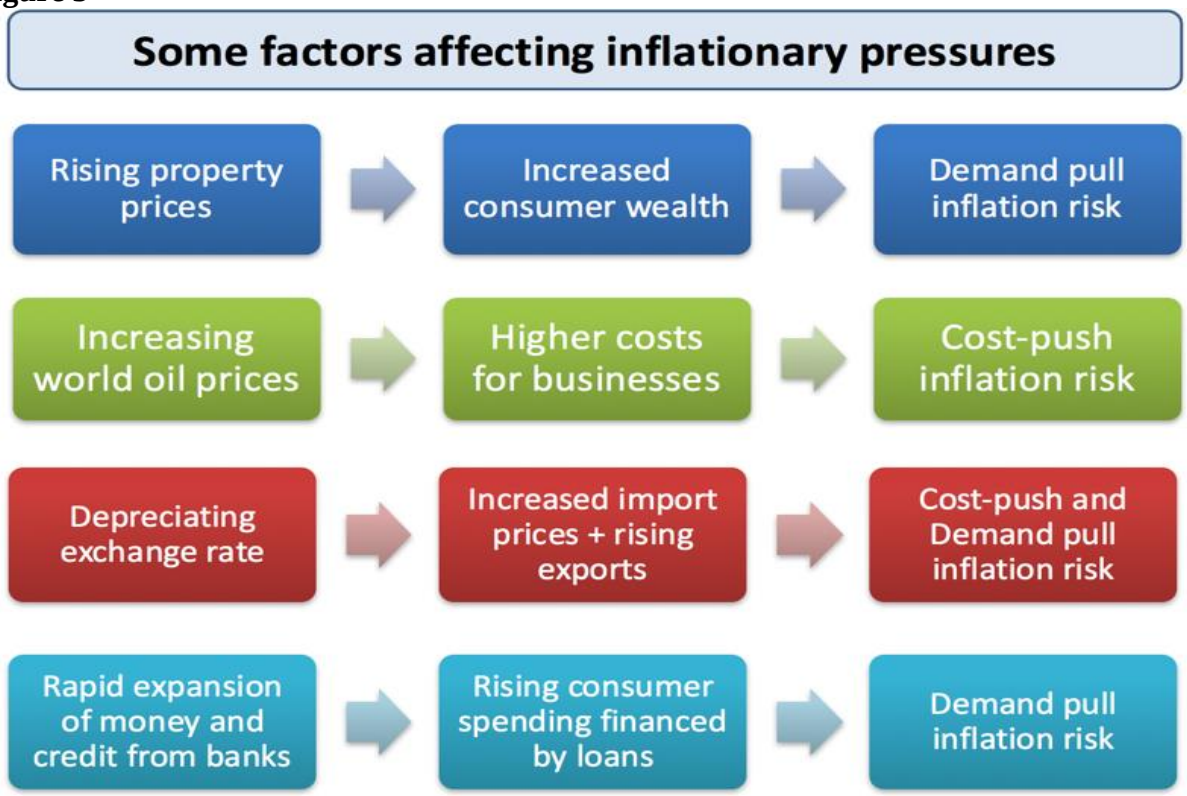
Figure : 2 Cost Push Inflation



Source: www.google.com

Furthermore, profit-push inflation occurs when oligopolistic and monopolistic enterprises increase the price of output to compensate for increases in wages earned by labour and other costs of production activities in order to earn a normal profit. The cost-push factor, which economists believe is the root cause of inflation, is a fiction (Batten, 1980). Because enterprises may only face a downward demand curve, raising the price requires the monopolist to reduce production, resulting in fewer earnings and no motivation to produce more. Individuals wish to retain greater money balances in response to this price increase, but if the money growth is held constant, they will counteract this rise by reducing their quantity demand for commodities until prices return to their original position. The defenders of this viewpoint point out that the money supply remained constant during the event. As a result, this logic does not rule out the possibility that inflation is always a cost-push event (Moazam & Ali Kemal, 2016). Figure (3) depicts the overall primary contributing elements from both the demand and supply sides.

Figure 3



Source: www.google.com

Structural Inflation Theory

The structural inflation theory explains the connection between variations in relative prices and rises in overall prices. Relative prices fluctuate as a result of economic structural changes (Canavese, 1982). Given specific linearity assumptions and the notion that each economic structure corresponds to a distinct vector of relative prices, Davis (1966) claimed that "there exists a one-to-one relationship between economic operations and economic structures." Around 40 years ago, during the inflation discussion, this idea gained traction. This type of inflation is connected to the impact of structural changes on inflation. Structural analysis attempts to comprehend how economic patterns work and to pinpoint the cause of chronic illness and harm, such as inflation, by looking at the legal connections between the phenomena. The economy's structural features cause supply to increase in response to demand-push even when the production aspect of abundant unemployment is difficult or delayed. As a result, less developed nations' thinking must compromise with occasional high inflation unless they are effective in altering in the form of falling behind structure or refusing to undertake immediate self-economic growth. This inflation, which provides structural betterment, is actually a price paid for immediate economic progress.

Even those who believe that changing the current policy framework for eradicating inflation is not necessary, structuralists believe that inflation can be controlled by government interference in market structure. Furthermore, there is no hostility to implementing clear measures for a justly divided inflation pressure and these arrangements are actually emphasized. However, from their perspective, common anti-inflation policies, particularly contractionary monetary and fiscal policies, are nothing more than a prescription for halting non-developing countries' economic growth. This might be accomplished by experts limiting their investments to developed countries and international organizations under their control, or by recognizing how less developed economies are hampered. Another inflationary aspect that is stressed by rapid structuralism is faster service sector growth, which is linked to growth in population size and immigration. In addition to all of these structuralisms, the residual distribution network structure, exclusive quasi- and structure in some developed industries, obstacle structure, high labour costs, and a host of other minor and major issues are all disregarded from the standpoint of inflationary social policy structure. It should be highlighted that the level of competitiveness and the variety of social crusts for a significant share of national revenue are some of the major drivers of hidden inflation in developed investment countries. This kind of structuralism works well in the situation of hyperinflation in less developed countries.

In times of rapid economic expansion and increased social mobility, competition has become even greater. New social groups gain access to political and economic activities, and attempts are made to enhance authority and shift wealth distribution by resorting to inflation. In this view, inflation is a symptom of economic change, and society is chosen as a result of the economy's quick dynamic expansion, explained in "Inflation: Theory and Evidence" by McCallum (1987).

New Neo-classical Synthesis (NNS) Theory

The Neoclassical Synthesis was popularised by Paul Samuelson (Blanchard, 1987), who advocated it as an analytical engine that combined a Keynesian perspective on national income—business cycle deriving from wage and price stickiness—with neoclassical principles to drive microeconomic analysis (Robert E. Lucas, 1973). Research on monetary policy has centred on the so-called New Neoclassical Synthesis, which is developing into a framework that may end up being used as the standard model in macroeconomics literature. According to conventional knowledge, the current dominant business cycle models used for policy research make profit obsolete. The New Keynesian (or New Neoclassical Synthesis-NNS) model with sticky prices has been the go-to tool to analyse monetary policy for at least the past fifteen years (Woodford, 2003; Lopez-Salido, 2004). In the last quarter-century, monetary policy theory has advanced significantly. Both the classical and Keynesian schools of thought advanced their theories. Intertemporal optimization and rational expectations were highlighted by New Classical economists. Researchers looking into the real business cycle (RBC) examined the implications of

productivity shocks in models where monetary policy has little impact on employment and production. (1983; Barro & Gordon).

The emphasis on the underlying causes of business cycles and price movements among new Keynesian and new classical economists has notably increased since the early 1990s. They also disprove the idea that prolonged government deficits, as a driver of inflation, may be substantially or entirely indigenous by taking into consideration the impact of the political process and related lobbying on government finances and subsequently on inflation. The current generation of quantitative models of economic volatility, according to their proponents, has two key characteristics: (1) dynamic macroeconomic models with imperfect competition and short-run price adjustment become expensive; and (2) systematised application firms and households with inter-temporal optimization and rational expectations (Hansen & Sargent, 1980).

Due to the new Keynesian assumption that prices are sticky in the short term, monetary or demand variables play a significant role in predicting business cycles in the NNS. The NNS also acknowledges the possible significance of supply shocks in explaining actual economic activity as proposed by the new classical real business cycle theory. The new neoclassical synthesis's extremely complex model can follow somewhat different trajectories thanks to the new neoclassical synthesis. The price level is now an endogenic variable quantity in the new IS-LM-The NNS's PC type stands for investment and saving, which is the commodity market's equilibrium state. LM stands for Money Market Equilibrium, and PC stands for Philips Curve. According to the NNS, anticipations have a significant role in the inflation process but can be controlled by monetary policy guidelines.

The new IS-LM model stands out due to the fact that its key behavioural relationships may be deduced from fundamental decisions made by households and businesses, and that these relationships in turn heavily involve future expectations. The IS curve connects anticipated output growth to real interest rates and is a significant implication of the contemporary theory of consumption. The discrepancy between actual and expected output is connected to current inflation through the aggregate supply component of the model and the Phillips curve. The link can be inferred from monopolistic pricing decisions that are constrained by probabilistic opportunities for price adjustment and a uniform general price level specification.

New Political Macroeconomics of Inflation Theory

As was previously said, the main ideas emphasise the macroeconomic aspects of inflation while minimising the importance of culture, institutions, and political influence. Economic policy is actually decided by political factors rather than a social planner. Economic policy, on the other hand, is the end result of a decision-making process that weighs competing interests in an effort to reach an agreement. The research on the new political economy offers novel insights into the

relationships between election timing, policymakers' effectiveness, the veracity of their ideas, their reputations, and, most crucially, political instability within the inflation process itself. Inflation bias (deviation) in the implementation of monetary policy is the main argument for central bank independence. However, theoretical and practical research indicates that monetary constitutions should be created to grant the central bank independence and power. They fail to take into account the prospect that long-term government deficits, a potential driver of inflation, could be partially or totally indigenized by taking into account how political activity and potential lobbying activities affect public finances and inflation (Sims, 1980).

Rational Expectations Revolution Theory

The "rational expectations" revolution in macroeconomics was spearheaded in the 1970s by economists including Lucas McCallum, Sargent, and Hansen. The idea and related theory, however, were founded ten years earlier, in 1961. (2012) (Granger). The RE school of thought, also known as the first generation "new classical" macroeconomist, asserted that, contrary to what the adaptive expectations theory predicted, people do not consistently make forecasting errors due to incomplete information and constant market clearing. In contrast to adaptive or backward-looking pricing expectations, macroeconomic expectations are created "rationally" by economic agents based on all prior and current relevant information.

The approach to pricing and the economic cycle led to the creation of a vertical PC in both the short and long terms. If the monetary authorities suggest a monetary stimulus, people anticipate rising prices. Monetarists contend that in this situation, fully anticipated monetary policy is unable to have any significant effects in the near term. As a result, the central bank's capacity to produce a "price surprise" determines its power to influence real output and employment. The expectation is "forward-looking" aside from that. Their proclaimed policy will fail as a result of the modifications made by economic agents. That is, under the new classical paradigm, pricing probabilities are intrinsically associated with the legitimacy and reputation of policymakers when executing deflationary measures. According to monetarist and new classical economics, the central bank is principally responsible for financing recurrent public sector deficits, which are the main driver of the expansion of the money supply. According to Sargent and Wallace's "unpleasant monetarist paradigm," the government's budget constraint is crucial to understanding the time course of inflation (P.Beckerman, 1992).

Conclusion

In practice, it is not always simple to separate the observed inflation into its monetary, demand-pull, cost-push, and structural components. The process is dynamic, and there are a variety of price shocks. In addition, inflation itself can contribute to future inflation. Any attempt to summarise

the vast body of literature on theories of inflation in a few paragraphs' risks being shallow and lacking in depth. However, if one wants to properly arrange, comprehend, analyse, and explain the dynamics of inflation, this kind of work might be seen as a crucial first step. This study's theoretical analysis led to a six-block schematization of the causes of inflation, including monetary shocks, demand-side, supply-side, and structural and political issues (or the role of institutions). It seems that these six categories of explanatory elements' complex dynamic interconnections are what ultimately lead to inflation. In other words, inflation is a macroeconomic and institutional phenomenon that occurs everywhere and constantly.

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