

2019 FEBRUARY

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: Sem - IV :

Ref: Ghosh and Ghosh

January 2019

: NEW CLASSICAL THEORY :

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The advent of the new classical theory can be traced to Friedman (1968). The discomfiture (a feeling of unease or embarrassment, awkwardness) of the theorists with classical beliefs can be well understood, since the classical theory is inconsistent not only with the short-run cyclical fluctuation in GDP but also with the Phillips Curve, which shows that the rate of unemployment can assume a larger number of values, while classical theory predicts only zero rate of unemployment in market economies. The challenge before them who were opposed to the Keynesian ideas was to modify the classical theory to explain cyclical fluctuation and Phillips curve retaining the key classical assumptions of perfectly competitive markets and market clearing prices. It was Friedman who took up the challenge and sought to meet it in a dubious way. He claimed that without any evidence that the relationship discovered by Phillips is only partial and incomplete. He posited that the rate of wage inflation depends not only on the rate of unemployment but also on economic agents' expected rate of inflation. The problem with this assertion is that expected rate of inflation cannot be perceived. Hence the hypothesis cannot be empirically verified. The other problem is that Phillips considered a fairly long period of time, almost a century, during which

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both the rate of unemployment and the rate of wage inflation varied widely. If the rate of inflation depended on other factor (in addition to the rate of unemployment), this other factor was unlikely to have remained unchanged over such a long time in the face of such wide variation in the rate of unemployment and the rate of wage inflation. The expected rate of inflation was particularly likely to respond to such large variations in both the rates of unemployment and wage inflation. Hence, we would have found evidences of marked shifts in the relationship between the rate of wage inflation and the rate of unemployment and these shifts might even have obscured the clear inverse relationship between the rate of wage inflation and unemployment. However, in the data cited by Phillips, we do not find any evidence of any marked shift in the Phillips relation. The relationship seems very stable. There was no room for the suspicion that there might be another variable impinging on the relationship between the rate of wage inflation and the rate of unemployment. There was also no basis for Friedman's claim that the period covered by Phillips was a period of stable rate of inflation, as the rate of wage inflation varied considerably. Despite all these evidences, Friedman went on to

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rewrite the equation of the Phillips curve to make the rate of wage inflation depend ~~on~~ not only on the rate of unemployment but also on the expected rate of inflation.

New Classical Theory and Rational Expectations:

Friedman's descendants were not content with Friedman's proposition that a market economy fails to keep aggregate output and employment in their respective natural rates in the short run. Friedman was of the view that following autonomous demand shocks, a market economy takes two to five ^{Saturday} years to achieve the new short-run equilibrium position and about twenty years to restore GDP and unemployment rate to their respective natural levels. Thus, following an adverse demand shock, for example, the economy will enter into a recession and the recessionary forces take about two to five years to play themselves out fully and then the recovery will begin and finally, unemployment will be restored to its natural rate after about a couple of decades. Robert Lucas (Jr) and his associates, who carried on from where Friedman had left off, were not prepared to accept that a market economy takes so long to fully correct the aberrations.

produced by autonomous shocks. They were of the view that a market economy contains strong stabilizing mechanisms that tends to keep aggregate output and employment at their natural rates even in the short run. They attributed cyclical fluctuations of GDP around its natural rate to unforeseen or unpredictable random disturbances, which they regard as transient phenomena. They also mentioned that the average of these deviations of GDP from its natural rate tend to zero over time. They believed strongly the efficiency of market economy and regarded government interventions to stabilize the economy as being completely unnecessary and irrelevant. To establish

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these propositions they incorporated in the framework of Friedman the assumption of rational expectations. This means that economic agents, when they form their expectations, take into account all the possible information including economists' knowledge of the mechanism that determines the variables whose values economic agents seek to predict.

Let us examine the implications of rational expectations in the context of AD-AS model.

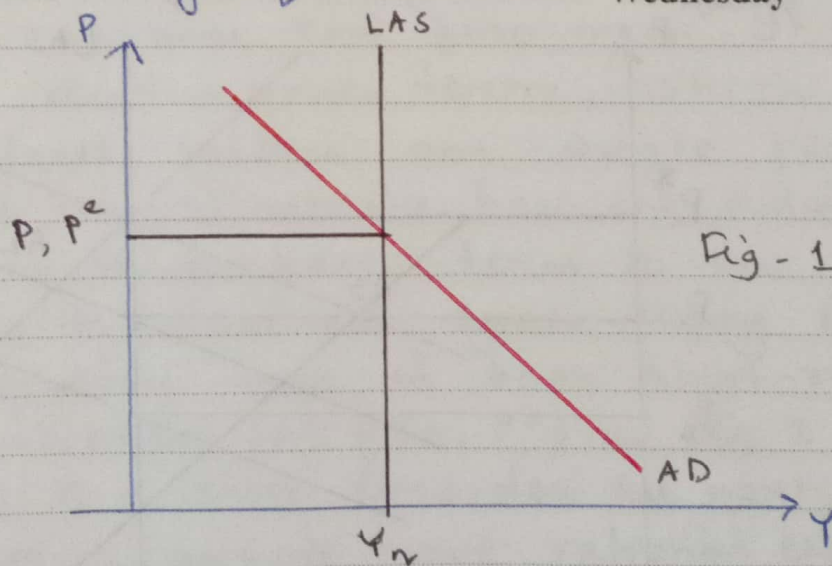
- 1) $P_t = P_t^e + b(Y_t - Y_n)$, $b > 0$ - Agg. Supply Function
- 2) $P_t = A - BY_t$ - Agg. Demand Function
- 3) $P_t^e + b(Y_t - Y_n) = A - BY_t$ → Short-run Eqⁿ
- 4) $P_t = P_t^e$ → Long-run Equilibrium

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In the given model, Suppliers base their supply decisions on the expected price level (eqⁿ 1). To derive the expected price level, the suppliers, when they have rational expectations, use the model that determines the price level. They do this to avoid errors, since expectational errors are costly. At the beginning of any given period, say period t , producers' expected price for period t will be equal to the long-run equilibrium price, $A - BY_n$. They also know from the model that in the eq^m where expected price equals actual price, the optimum level of supply is the natural rate of output, Y_n . They will, accordingly, in period t supply Y_n and charge $A - BY_n$. At the price $A - BY_n$, aggregate demand exactly equals Y_n , shown in fig below.

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Long-run Equilibrium

AD curve cuts the LAS at $A - BY_n$. So, if producers shift supply Y_n and charge $A - BY_n$, the goods market will be in equilibrium. Expectations will thus be realised. We find

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from the short-run aggregate supply function (1) with a given value of the expected price that the supply price at $Y = Y_n$ equals the expected price of the producers. Hence, if in period t , the expected price equals $A - BY_n$, the supply price yielded by equation (1) with $P_t^e = A - BY_n$ corresponding to $Y = Y_n$ will be equal to $A - BY_n$, i.e., the short-run aggregate supply schedule (SAS) of period t will cut the LAS at $A - BY_n$. Thus in the initial period, period t itself, the suppliers will expect the long-run equilibrium price, charge that price, produce the natural rate of GDP and the economy will be in both short-run and long-run equilibrium.

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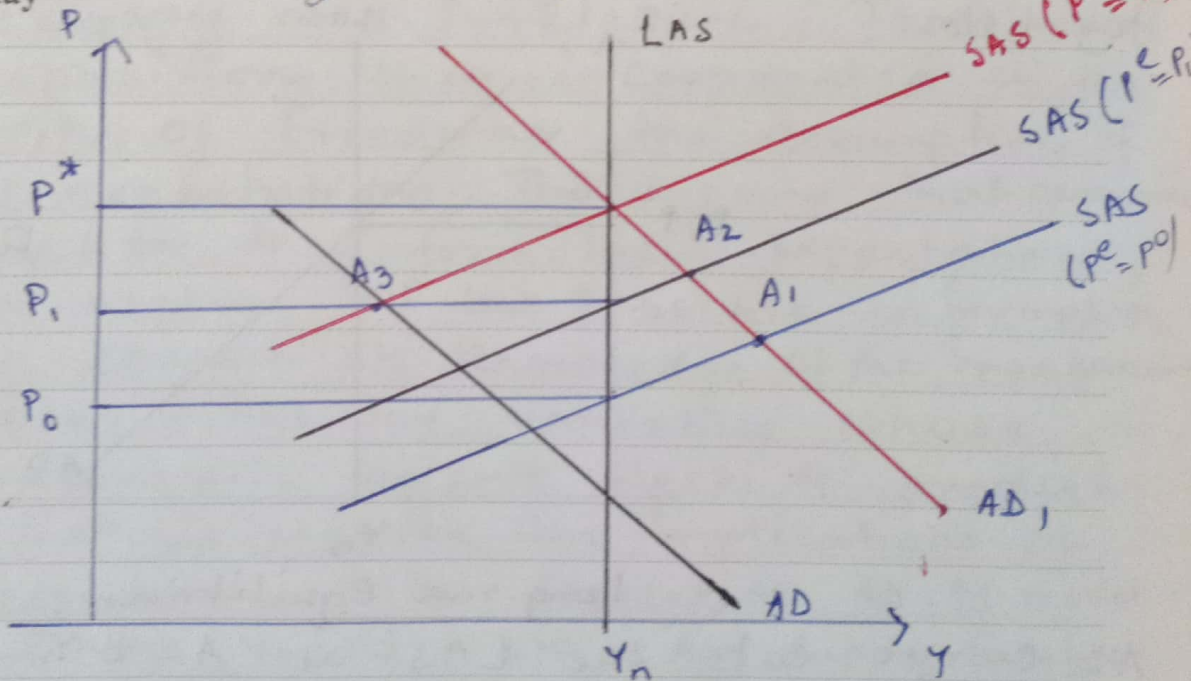


Fig 2

It follows that, when economic agents have rational expectations and the economy behaves in accordance with the model

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presented above, the economy will always be in full employment with the suppliers supplying the natural rate of output and having their expectations realised. How do new classical theorists explain business cycles then? They do so in terms of random shocks to demand and supply. They incorporate these shocks by adding random disturbance terms to the AD and AS functions. To illustrate how these random disturbance terms lead to business cycles, we add a random disturbance term to the aggregate demand function and rewrite it as $A - BP_t + \epsilon_t$, where ϵ_t is the random disturbance term. It is assumed to be a random variable

with a given variance and zero mean. It is a one-period disturbance term, which dissipates itself within one single period.

Let us illustrate how the addition of the random disturbance term to the AD function leads to business cycle using Fig 2. Suppose the economy was in both short-run and long-run equilibrium at (Y_n, P^*) in Fig 2 in the initial period 0. Now consider the next period 1. Suppose economic agents have rational expectations and they know the AD and AS function in period 1 except for the random disturbance term. Suppose, for simplicity, the parameters are the same as of period 0. Economic agents in Period 1 will therefore plan to

Supply Y_n and charge P^* , as they expect P^* to prevail in eq^m. In other words, in period 1 they estimated all curves (AD₁, LAS and SAS) remain same. However, suppose in period 1 there takes place a random adverse demand shock, which leads to a leftward shift in the demand schedule from AD₁ to AD. Since the shock is random, it catches economic agents unaware and hence they cannot revise their expectations. So the SAS remains unchanged at SAS ($P^e = P^*$) in fig 2. In period 1, therefore, as producers supply Y_n and charge P^* , they will emerge unexpectedly excess supply in the goods market. Price will therefore start falling and this will

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induce producers to cut down supply. Thus in period 1, Y and P will move down along SAS ($P^e = P^*$) to A_3 . In the period 1, the economy undergoes a recession and achieves short-run eq^m at A_3 . However, once the economy reaches A_3 , economic agents must know and identify the source of disturbance as a random shock, which they know, dissipates itself within the period in which the disturbance occurs. Hence, in the next period, Period 2, they will leave their expectation unchanged at P^* and revert to their initial supply Y_n , restoring the economy at once to both short-run and long-run equilibrium provided there does not occur any random shock in period 2. The economy will in this

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MARCH

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position until there occurs another random shock. This is how new classical economists explain business cycles.

It is clear from the analysis that under rational expectations a market economy adjusts much faster to random disturbances compared to the situation considered by Friedman where workers do not have rational expectations. It also follows that, when economic agents have rational expectations, government intervention to stabilise the economy (following random demand or supply shock) becomes unnecessary.

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