Classical Macroeconomics

In this chapter we shall introduce the main elements of classical macroeconomics. In particular, we shall discuss the following aspects:

Basic postulates of classical macroeconomics Classical quantity theory of money

Classical theory of saving and investment

# BASIC POSTULATES OF CLASSICAL MACROECONOMICS

The classical macroeconomic structure is built upon the writings of famous classical economists like Adam Smith, David Ricardo, J.B. Say, T.R. Malthus,

A.C. Pigou, Irving Fisher to mention the greatest few. Their scattered writings, when put together, produce a systematic and coherent macroeconomic framework. To understand this framework, one needs to bear in mind the basic postulates/ assumptions that classical economists built around their macroeconomic conclusions. These are, broadly, as under.

# Full Employment

Classicals believed that there will always be full employment (or, near full employment) in the economy – full employment not only of labour but also of other major resources such as land, capital and other factors of production. In case of labour, for instance, they held the view that all labour will normally find employment in a free enterprise capitalist economy with ‘flexible labour market’ (explained below). However, such full employment does not mean that temporary unemployment (i.e., unemployment for a temporarily short period) will not exist. But unemployment of relatively longer period or what Keynes later termed ‘involuntary unemployment’ is totally ruled out by the classicals. For instance, temporary unemployment may occur due to maladjustment between demand and supply of resources in a capitalist economy or frictions in the economy – workers changing jobs, locations, etc. – or change in the structure of the economy such

**24** *A Textbook of Modern Macroeconomics*

as old industries shutting down and new ones coming up or unemployment that occurs during business cycles (recessions or depression).

Full employment will, then, occur only in the **long run**. So, long run perspective is implicit in all these postulates. The classicals generally ignore short run problems however serious they may be. In the long run, total demand for labour will always be equal to total supply of labour and total output (of goods and services) will be at its full potential level.

Lapses from full employment, classicals suggest, may be corrected by appropriate wage cut given sufficient flexibility in the wage system. Thus, classical economists viewed unemployment as a passing phase in the development of capitalist economy while full employment being a normal phenomenon.

# Wage-Price Flexibility

Classical economists postulated that in the capitalist system, wages as also prices (including interest rates) are flexible and not rigid. This means that these rates are capable of moving upward and downward under normal pressures of demand and supply in their respective markets. In other words, the demand and supply curves are fairly responsive to prices and wages – or, to say the same thing, demand and supply curves are price-elastic (as also wage-elastic).

In the case of wage rate flexibility, it is argued that, this is always in the interest of both the employers and workers. Employers gain from wage rate reduction because this reduces their wage cost and hence increases their profit margin. They will, therefore, be tempted to employ more workers and thereby increase output. Workers will gain in terms of increased employment of labour force (though not in terms of wage rate or wage per worker). Wage rate rise, similarly, works in opposite direction. On the other hand, workers will respond by increasing their supply when wage rate is higher and decrease their supply when wage rate is lower. These outcomes are, in fact, based on explanations, at the micro level from both employer’s and worker’s normal decision behaviour. The implication is that in case of any deviations from equilibrium occurring anywhere in the economic system, wage price flexibility will ensure that such deviations will soon disappear and the economy will eventually return to the equilibrium position.

Two other implications need clarification in this context.

Wage rate here means “real wage rate” and not money wage rate. Any change in money wage rate is suitably adjusted by change in price level so that the impact of price level change on real wage rate is neutralized. To state it differently, money wage and price level move in the same direction and to the same extent to leave the real wages unaffected. In case both do not move in the same direction or to the same extent, this would mean real wage rate is either rising or falling.

*Classical Macroeconomics* **27**

sector is known as absolute price level or nominal price level or simply ‘level of prices’. On the other hand, the price level determined in the real sector is known as relative price level (price of one product in terms of other product). For understanding the underlying meaning of this classical dichotomy, we take an example. Let us suppose there are two goods: wheat and potato whose nominal prices are ` 10.00 per kg and ` 15.00 per kg respectively (or, their real price ratio is 1.5 units of wheat: 1 unit of potato). If, for some reason, the supply of money in the economy suddenly doubles, the prices of wheat and potato also double to ` 20 per kg and ` 30 per kg. But their relative price ratio remains the same, i.e., 1.5 units of wheat : 1 unit of potato. This is because the relative price level is something determined by factors such as, relative factor supplies of goods services and technology of production which are independent of the factors affecting the monetary sector.

Surprisingly, however, the reverse causation is not true, so that changes in the real sector do influence the monetary sector.

# 2.1.3 Absence of Money Illusion

According to this postulate, there is complete absence of money illusion in the economy. All groups of people in the economy – the workers, employers, savers, investors, etc., are completely free from money illusion. For instance, if workers are influenced by the money value (or, nominal value) of their wage rate and not by their real value (or real wage rate), we say workers are guided by the money illusion. If, instead, workers are only guided by real wage rate, they are said to be free from money illusion. Accordingly, if workers are willing to supply more working hours/days at higher real wages and not high money wages, we say there is no money illusion in the labour market. Similarly, if savers are guided by the real rate of interest (money rate of interest minus the rate of inflation) they are said to be not suffering from any money illusion. Also, another related assumption is that *money is neutral* – it does not affect any other price like interest rate. Needless to say that this particular assumption of the classicals also holds a key position and frees them from many complications which the later- day economists notably Keynes and his followers incorporated in their analytical framework.

1 The constant velocity characteristic will further be discussed in the Theory of Demand for Money by Milton Friedman in Chapter 6.

**30** *A Textbook of Modern Macroeconomics*

# WAGE-PRICE RELATIONSHIP AND FULL EMPLOYMENT

In this section, we examine the relationship between wages and prices in the classical system that would ensure full employment. We refer to Fig. 2.2(b), given below, which shows the equilibrium condition in the labour market in terms of total demand for labour being equal to the total supply of labour. The real wage rate *W*/*P*, in this situation, is (*W*/*P*)0. In other words, the labour market clears only at (*W*/*P*)0 real wage rate; hence this is the full employment equilibrium. This is because employers optimize their resources in order to maximize their profits at the output level of *Yp*- the potential output and at (*W*/*P*)0 wage rate. According to classical, this situation is easily attainable the capitalist system given sufficient flexibility of wages and prices.

It should be mentioned here that this presupposes the existence of full competition in the labour market which means that the employers compete among themselves for hiring labour.

Assuming for the time being that all labourers are homogeneous and wages paid to them are standardized wages paid in terms of money, i.e., money wages (*w*). This is because, normally all employers pay their workers in terms of money wages. But how do they get at the real wages then? In other words, what is the relevant price level to be chosen? Since workers generally consider the average price level (taking all important items that enter their cost of living, may be, including the price of the product of the firm in which they are presently employed), the real wage rate is evaluated as money wage rate divided by the average price level. Alternatively, money wage rate can be taken, for simplicity, the economy-wide money wages since we are assuming homogeneized labour force. Now we suppose there is unemployment in the labour market so that there is excess supply of labour over the total demand for labour and the real wage rate is well above the equilibrium wage rate (*W*/*P*)0. The actual output is also below the potential level of *Yp*. Now, if there is flexibility of wage rate, the employers will be induced to hire more labourers only when (*W*/*P*) falls from the present level. Also, the unemployed labourers are prepared to accept lower wage rate rather than remaining unemployed. This would, most likely, happen given the type of competition we have assumed in the labour market. However, falling (*W*/*P*) implies any of the following possibilities:

**36** *A Textbook of Modern Macroeconomics*

*DL* curve is decreasing throughout. The supply of labour curve, *SL*, is rising from left to right reflecting the labour supply behaviour – more and more labour hours are offered at higher and higher real wage rates. This is consistent with the normal behaviour of the labour at microeconomic level. Given such behaviour of the labour market, the total available labour supply, No, is equal to its total demand at the real wage rate equal to (*W*/*P*)0.

Panel (c) shows the demand for money for different levels of national income (*PY*). The straight line *mPY* from the origin shows that given the value of *m* – the proportion of *PY* demanded in the form of money – there are different combinations of money supply (= demand) and national income. For instances, for *M*0 money supply, the corresponding national income is (*PY*)0 and for *M*1

money supply, national income is (*PY*)1. The slope of the line *mPY* is 1/*m* since,

*P*0*Y*/*Md* = 1/*m*. (if for instance, *m* = 0.4, 1/*m* = 2.5; if *m* = 0.5, 1/*m* = 2 and so higher the value of *m*, lower the value of the slope and lower the value of *m*, higher the value of the slope). Interpreted otherwise, it shows that (*PY*)0 level of national income can be sustained by *M*0 money supply and (*PY*)1 level of national income can, similarly, be sustained by *M*1 money supply. But since *Y* is constant at *Y*0, an increased money supply will simply push up the price level

from *P*0 to *P*1. Therefore, (*PY*) level of national income will be equal to the

original level of national income (*Y*0) measured at increased price level (*P*1); that is (*PY*)1 = *P*1*Y*0.

Finally, we can determine the level of money wage rate for different price levels such as *P*0 and *P*1 as shown in panel (d). The straight line *W*/*P* indicates the real wage rate for different values of *W* and *P*, provided they change by equal proportions. Thus, if *M*0 level of money supply generates *P*0 price level, the corresponding money wage rate will be *W*0. Similarly, if *M*1 money supply results in *P*1 price level, the corresponding money wage rate will be *W*1 and so on, although the real wage rate, *W*/*P* is the same.

Thus, the diagrammatic representation of the classical macroeconomic structure also tries to demonstrate the following results:

Real sector (labour and commodity) is independent of the monetary sector. Employment and output and real wage rates are determined in the real sector.

Monetary sector determines the price level which, in turn, determines the money wage rate.

Let us use mathematical equations for the graphical relations stated above.

**Example 1** Let us suppose our aggregate production function is

*Y* = 10*N* – 0.1 *N*2 (1)

(since the total outputs *Y* is a non-linear function of labour input with *dY*/*dN* > 0 and *d*2*Y*/*dN*2 < 0)

**38** *A Textbook of Modern Macroeconomics*

ﬁ *P* = 225/75 = 3.00

So, *P* increases from 2.667 to 3.00, i.e., by 12.5%.

Thus, an increase in money supply raises price level by the same extent. Therefore, the relationship between money supply and price level is direct and proportionate. Let us examine if this change has any impact on money wage rate.

The real wage rate, *W*/*P* is now *W*/3 = 5; giving *W* = 15. But, *W*/*P* = 15/3 = 5.

W has now increased from 13.335 to 15.00, i.e., by 12.4859% or, 12.5%. Thus, money wage rate has also increased by the same extent as the price-level and money wage rate has changed by the same extent and in the same direction but real wage rate remains the same.

1. Secondly, we can analyse the impact of change in real sector variables on the monetary sector in the following manner:

Let the supply curve of labour change from

15 + 2*W*/*P* to 20 + 2 *W*/*P* (a shift of the supply curve to the right) The labour market equilibrium will now be solved by equating the demand curve with the new supply curve of labour:

50 – 5*W*/*P* = 20 + 2*W*/*P* which gives *W*/*P* = 4.2857.

The corresponding demand and supply of labour will be 28.5714. Substituting this value in eqn. (1) we obtain,

*Y* = 10 × 28.574 – 0.1 (28.5714)2

= 285.714 – 81.6325 = 204.0815

Thus output increases from 187.5 to 204.08, i.e., by 8.84 per cent. The employment of labour increases from 25 to 28.57, i.e., by 3.57 units or, by 14.28 per cent.

Now money supply remaining the same, i.e., 200 = 0.4 *PY*,

and Y being higher now at 204.0815, by substituting we obtain, 200 = 0.4*P* (204.0815)

ﬁ 200 = 81.6325 *P*

giving the value of *P* = 2.45.

Thus, price level is now lower as compared to 2.667 earlier. In percentage terms, *P* has fallen by 8.14 per cent.

However, we have seen earlier that the real wage rate has already fallen to 4.2857. Hence, money wage rate now is solved as 4.2857 = *W*/2.45

= 10.4999.

*Classical Macroeconomics* **39**

Thus, *W* has decreased from 13.335 to 10.4999, i.e., by 21.26 per cent which is larger percentage fall than fall the price level.

Thus, the shift in the supply curve of labour to the right results in:

* 1. Increase in output, (b) increase in employment, (c) fall in real wage rate, (d) fall in price level and (e) fall in money wage rate.

In the similar vein, we can analyze the effect of change in technology (shift in production function) on the real sector as well as monetary sector variables (shift in production function upward means better and improved technology)1

# Critical Evaluation

In spite of many shortcomings and simplistic assumptions of the classical macroeconomic system and Keynesian revolution in the post-1930s, the 1970s and period thereafter has witnessed a kind of revival of classical system. The new classical macroeconomics has focussed on further refinements of the basic classical tenets and popularization of policy tools based on these tenets. The rise of supply side economics with its root is Say’s law, market fundamentalism of the capitalist economy with minimum government intervention in the functioning of the economic system and rising importance of monetary policy vis-a-vis fiscal policy are some of the recent developments in the macroeconomics field with their application in most of the western capitalist economies and gradual policy changes in emerging economies of the world. The most important drawback of the classical/new classical economic policies being pursued in most of western capitalist world based on free enterprise and market economy rules is the failure of predicting correctly the occurrence of ‘crises’. Business cycles do occur in spite of tall claims by the authors belonging to this group which virtually jeopardize the functioning of the capitalist system.

# SUMMARY

* + - * Classical macroeconomics is based on a set of postulates/assumptions such as long period, Say’s law of market, full employment, flexibility of wages and prices, neutrality of money, absence of money illusion and dichotomy between real and monetary sectors. If these postulates are accepted, classical macroeconomics produces a neat systematic and logical theory to explain the working of the economy.
			* Long period is the key assumption which allow economic agents to sufficiently adjust and revise their decisions and attain the new level of equilibrium. Even though they do consider changes occurring during short period, but such changes are not important for the classicals.

1 In this case the production function might be: *Y* = 16*N* – 0.1*N*2 or any higher value of the intercept.

*Classical Macroeconomics* **41**

* + - * R.L. Crouch, Macroeconomics, Harcourt Brace Jovanovich, 1972.
			* Joseph A Schumpeter, History of Economic Analysis, Oxford University Press, 1954.
			* William J. Baumol, Economic Theory and Operations Analysis, Prentice- Hall of India, 1966.
			* Edward Shapiro (ed.), Macroeconomics: Selected Readings, Harcourt Brace Jovanovich, 1970.