pressures in the economy. If the government is utilizing the budget surplus for the retirement of debts owned by the central bank or for the repayment of external debt, the policy of generating a budget surplus turns out to be non-inflationary.

Reduction in government expenditure or increasing the taxes restricts the spending ability of the people in the economy. Thus a restrictive fiscal policy can reduce the level of aggregate demand and control demand pull inflation. But if the inflationary pressures are caused by cost-push inflation, then fiscal policy is not very effective. This is due to the fact that supply side inflation is the result of an increase in wages, profits and costs of production or due to other bottlenecks in production. The adoption of fiscal measures to reduce the level of demand will lead to a reduction in income and rising unemployment. Thus to control supply side inflation, the government will have to use measures other than taxes and public expenditure.

WAGE- PRICE SPIRAL

The term wage price spiral is used to explain the dynamic nature of the inflationary process. The underlying idea is that wages affect prices and that prices, in turn, affect wages. The interdependence of wages and prices generates a series of adjustments, which reinforce each other leading to a sustained rise in prices and wages resulting in inflation.

The process of wage-price spiral is based on the assumption that an increase in prices will induce an increase in money wage demands. Price increase will affect labourer's cost of living. Labour unions will demand higher wages to meet the increases in cost of living. Higher money wages given to the labourers will induce a further increase in the price level. These rounds of adjustments continue through time, inducing a continual rise in money wages and the price level.

DEFLATION

Deflation is a continuing decrease in the general price level. It is associated with a contraction of bank credit and money supply. The value of money increases during deflation. Deflation is characterised by declining levels of output and increasing

unemployment.

BUSINESS CYCLE

Business cycles or trade cycles are recurrent fluctuations in economic activity that occur around the secular trend of GNP over a period of several years. Business cycle is an important feature of a capitalist economy. According to Keynes, "a trade cycle is composed of periods of good trade characterised by rising prices and low unemployment percentages, altering with periods of bad trade characterised by falling prices and high unemployment percentages".

Features

A trade cycle has certain important characteristics.

1. A trade cycle is synchronic. The economy as a whole is affected by a trade cycle because all the industries are interrelated in terms of inputs and outputs.
2. A trade cycle exhibits a wave-like movement and different trade cycles resemble one another.
3. Though all industries are affected by these cyclical movements, yet the extent to which they are affected differs from industry to industry.
4. A trade cycle is international in character. The businesses of all countries are interlinked through the mechanism of international trade and foreign exchange. It is through them that booms and depressions in one country spread to others in due course of time.
5. Profits fluctuate by a much larger percentage than other types of income.
6. Prices and production generally rise or fall together.
7. Large changes in total output, employment and the price level are accompanied by large changes in currency, credit and money supply in the same direction.

PHASES OF A BUSINESS CYCLE

A business cycle is composed of four phases. They are 1) Prosperity or expansion or upswing 2) Recession 3) Depression or contraction or downswing and 4) Recovery or revival. Peaks (Booms) are upper turning points where the cycle reaches the top of its expansion. Troughs are the lower turning points where the cycle reaches the bottom of its contraction. The middle of these two is Recession

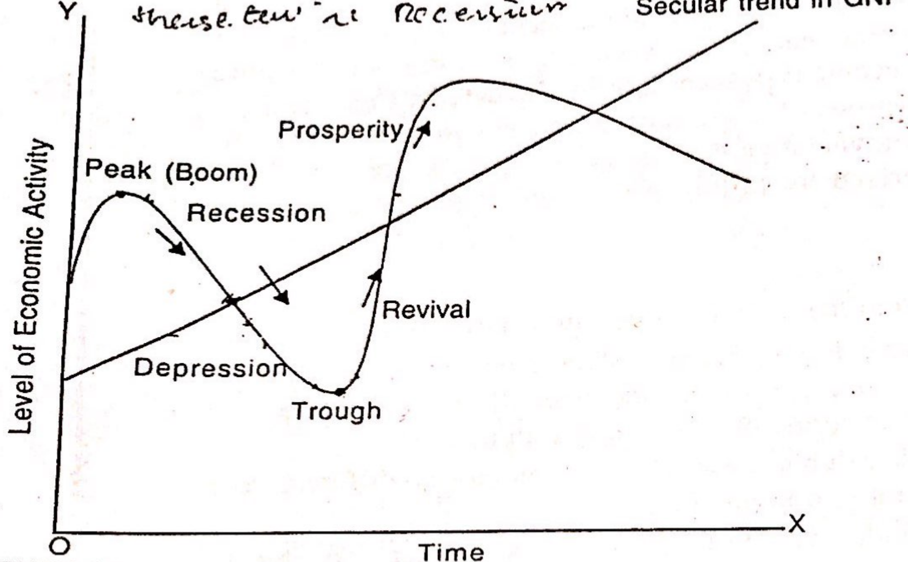

FIGURE 6.2

Prosperity In the prosperity phase the economy's level of output, income and employment are at a high level. Demand increases leading to an increase in the price level and profit margins. The level of investment in the economy will also increase.

Recession (Recession is characterised by a decline in output and employment. The economy is descending from the peak. Levels of income, expenditure, demand, price and profit decline. Investment in the economy will decrease.)

Depression During the depression, the economy's level of output, income and employment are at an extremely low level. Demand declines leading to a decrease in the price level. Profit margins disappear. The worst affected is the workers because of unemployment. Depression is thus a period of great suffering because of high unemployment and low income.

Recovery Recovery is characterised by the revival of economic

activity. The demand for goods and services increases. Prices start rising. The economy's level of output and employment expand toward full employment.

Stabilisation Policy

Government policy aimed at reducing business cycle fluctuations is known as stabilisation policy. The objective of the government is to keep output, employment and prices on steady trend paths. Fiscal and monetary policies are the stabilisation policies used by the government to reduce the fluctuations in these variables. During the boom phase of a business cycle, the government could reduce demand by raising taxes or by reducing government expenditure. The government could avoid a recession by increasing government expenditure or by reducing tax rates. Thus a contractionary fiscal policy is adopted during inflation and an expansionary fiscal policy is followed during deflation. Counter-cyclical monetary policy is in the form of reducing the money supply and increasing the interest rate during the boom phase and increasing the money supply and reducing the interest rate during a recession. Thus the central bank adopts a contractionary monetary policy during inflation and an expansionary monetary policy during deflation.

HAWTREY'S MONETARY THEORY

In the opinion of Hawtrey 'trade cycle is a purely monetary phenomenon'. Hawtrey's theory of trade cycle rest upon changes in the flow of currency (bank credit). It is changes in the flow of monetary demand on the part of businessmen that lead to prosperity and depression in the economy. In reality, cyclical fluctuations are caused by expansion and contraction of bank credit. Credit is expanded or reduced by the banking system by lowering or raising the rate of interest. This increases or decreases the flow of money in the economy and thus brings about prosperity or depression.

The expansion phase of the trade cycle starts when banks increase credit facilities. A reduced rate of interest than the natural rate of interest encourages borrowings by merchants and producers. More factors of production are employed to meet the increased demand. Money incomes for the owners of the factors of production increase thereby increasing the expenditure on goods. The increased demand for goods leads to

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CHAPTER 23

Business Cycle Theories and Global Recession

INTRODUCTION

The economic history of the world economy is essentially the history of business cycles—economic ups and downs, booms and slumps, prosperity and depression. In fact, business cycles have characterised the free enterprise industrial world over the past one and a half centuries. However, the Great Depression of 1930s had not repeated itself until 2008-09, i.e., over a period of 80 years—the longest period considered in the trade cycle classifications. The economists tempted to infer that 'business cycle is obsolete'. However, the global depression of 2008-09 has proved this point of view wrong. It means that there may be a long gap but business cycle is bound to repeat itself. It may be added here that even growth theories indicate that there is always a possibility of instability in the economy, if the critical balance between the various growth variables (viz., saving, investment, capital/output ratio, rate of increase in labour force, rate of money supply, etc.) could not be maintained.

Besides, if frequent and violent fluctuations are not taking place in the world economies, it is mainly because of government's interference with the economic system and using stabilisation policy measures. Yet, the worldwide inflation of 1970s, on the one hand, and great depression-like conditions during 2008-12, on the other, are strong warnings against the complacency towards the dangers of economic crises. The economists have warned against the complacency towards the business cycles. To quote Burns, "...men who wish to serve democracy faithfully must recognise that the roots of business cycles go deep in our economic organization, that the ability of government to control depressions adequately is not yet assured, that our power of forecasting is limited, and that true foresight requires policies for coping with numerous contingencies".[1] Burn's view on the predictability and controllability of business cycles has been proved to be an empirical fact. For example, the great global depression of 2008-09 could not be predicted even by the greatest of the great economists of the world, nor could the governments—even governments of the highly advanced countries, e.g., US, England, France Germany and Japan—could formulate economic policies to combat the downturn in their own economies. Whatever monetary and fiscal policies

[1] Quoted from R.A. Gordon, *Business fluctuations*, (Harper and Brothers Publishers, New York, 1952), p.4

were adopted by the various governments to control the trade cycle proved to be ineffective. This means that the working system of the economy is such that business cycles are bound to occur time and again, though time gap may be different. For this reason, it is important for the individual households, firms and the government to understand the nature and causes of business cycles so that the adverse effects of recession could be minimized if not prevented.

This chapter presents a brief discussion on (i) what is a business cycle, (ii) different phases of business cycles and their features, (iii) theories of business cycles—what causes business cycles and how, and (iv) measures to control business cycles suggested by the economists and the effectiveness of the control measures with empirical proofs.

23.1 WHAT IS BUSINESS CYCLE?

The economists have defined business cycles in different ways and have tried to capture what happens at its different phases[2]. However, Samuelson and Nordhaus gives a fairly good definition: "A business cycle is a swing in total national output, income, and employment, usually lasting for a period of 2 to 10 years, marked by a widespread expansion or contraction in most sectors of the economy"[3]. Briefly speaking, business cycle refers to a period of high growth and prosperity in the economy followed by a period of sharp economic slowdown and depression. During the period of prosperity, there is a high growth rate of national output above the ***potential growth rate***,[4] in per capita income, in investment and employment along with a reasonably high inflation rate. On the contrary, during the period of recession and depression, growth rate of national output and per capita income, investment and employment declines sharply and turns out to be negative. During the period of depression, growth rate of national income turns to be negative; business activities decline sharply; not only the rate of employment declines, there is rise in unemployment; and price level goes down resulting in deflation. A regular periodic recurrence of growth and recession makes the business cycle.

23.2 PHASES OF BUSINESS CYCLES

Business cycles, the periodic booms and slumps, in the economic activities, are generally compared to 'ebb and flow' in economic activities. As mentioned above, the ups and downs in an economy are reflected by the fluctuations in aggregate economic variables, such as, production, investment, employment, prices, wages, bank credits, etc. The upward and downward movements in economy show different phases of a business cycle. Basically, there are only two phases in a cycle, viz., *prosperity* and *depression*. But considering the intermediate stages between prosperity and depression, the various phases of business cycle are listed below in the order they appear in reality.

2. For a detailed discussion on business cycles, see Maurice W. Lee, *Economic Fluctuations* (Richard D. Irwin Inc., Illinois, 1955), Ch. 3; D. Hamberg, *Business Cycles* (The Macmillan Company, New York, 1951), Ch. 1; and R. A. Gordon, *Business Fluctuation* (Harper and Brothers Publishers, NY, 1952), Ch. 8.
3. Paul A Samuelson and William D. Nordhaus, *Economics: International Edition* (McGraw-Hill, In., 1995), 551. Some other empirical proof put the period at 2 to 4 years.
4. *Potential growth rate* is the rate of growth which can be achieved from the full and efficient utilization of the available resources (labour, capital and technology) of the economy.

(i) Expansion
(ii) Peak
(iii) Recession
(iv) Trough
(v) Recovery and Expansion.

The five phases of a business cycle are presented in Fig. 23.1. The ***steady growth line*** shows the potential growth of the economy with increase in national resources and no economic fluctuations. The various phases of business cycles are shown by the *line of cycle* which moves up and own the ***steady growth line***. The line of cycle moving above the steady growth line marks the beginning of the period of 'expansion' or 'prosperity' in the economy. The phase of expansion is characterised by increase in output, employment, investment, aggregate demand, sales, profits, bank credits, wholesale and retail prices, per capita output and rise in standard of living. The growth rate eventually slows down and reaches the ***peak***. The *peak* phase is generally characterised by slackening in the expansion rate, the highest level of prosperity, and downward slide in the economic activities from the *peak*. The phase of ***recession*** begins when the downward trend in the growth rate becomes rapid and steady. Output, employment, prices, etc., register a rapid decline, though the realised growth rate may still remain above the steady growth line. So long as the actual growth rate exceeds or is equal to the expected steady growth rate, the economy enjoys the period of prosperity—high and low.

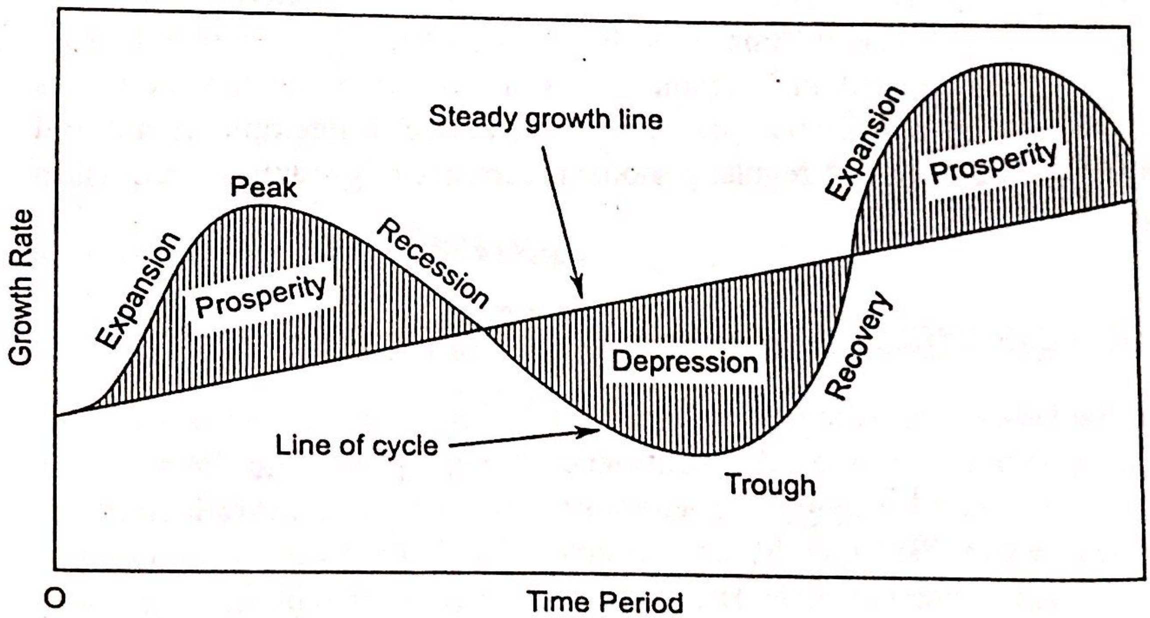

Fig. 23.1 Phases of Business Cycle

When growth rate falls below the steady growth rate, it marks the beginning of ***depression*** in the economy. The span of depression spreads over the period growth rate stays below the steady growth rate. The growth rate may decline to zero or even to less than zero, as many *DCs* experienced a decline in their *GDP* during the global recession of 2008–09. ***Trough*** is a phase of depression during which the down-trend in the economy slows down and eventually stops, and the economic activities once again register an upward movement. ***Trough*** is the period of most severe strain on the economy.

When the economy tends to show a continuous and rapid upward trend in output, employment, etc. it enters the phase of *recovery* though the growth rate may still remain below the steady growth rate. And, when the recovery continues and growth rate exceeds steady growth rate, the economy once again enters the phase of *expansion* and *prosperity*. What goes up must come down. The down turn marks the beginning of the recession. If economic fluctuations are not controlled by the government, the business cycle continues to recur over time.

23.3 THEORIES OF BUSINESS CYCLE

A number of theories have been developed by the economists to explain the business cycle. Most important contributions to the theory of business cycle were made in the first-half of the twentieth century, though business cycles took place throughout the nineteenth century. The classical economists—Adam Smith, Mill, Malthus and Ricardo—had devoted little attention to the causes of business cycles. This school of thought believed that the 'invisible hands' (i.e., market forces), if allowed to operate freely, would by themselves maintain stability in the economy.

Between 1890 and World War I, however, a number of important contributions were made to the trade cycle theory.[5] The important contributors were M. Tugan Baranowsky of Russia, Aurthor Spiethoff and J.A Schumpeter of Germany, Knut Wicksell of Sweden, D.H. Robertson and R.G. Hawtrey of England, Albert Aftalion and Jean Rescure of France, Thorstein Veblen and W.C. Mitchell of the United States.[6]

Although many important contributions were made to the theory of business cycle prior to the Great Depression, the study of business cycle still remained outside the general economic theory. It was Keynes,[7] who provided a general theoretical framework in which the theory of business cycle could be interwoven. In his *General Theory*, he provided a standard model for analysing the economic fluctuations, though he himself had said little about the causes of cyclical fluctuations. Hicks[8] has remarked that Keynesian economics has done all for our understanding of business fluctuation but has left out the analysis of business cycle itself. In the post-Keynesian era, the main contributors[9] to the cycle theory include Metzlere, Harrod, Kalecki, Samuelson, Kaldor, Hicks, Goodwin and Duesenberry. Over a dozen of business cycle theories[10] were formulated in the post-Keynesian era.

5. The only important contribution prior to this period was made by a non–economist, Clement Juglar in 1860.
6. R.A. Gordon, *op. cit.*, p. 306.
7. In his *The General Theory of Employment, Interest and Money*, 1936.
8. In his book *A Contribution to the Theory of Trade Cycle* (Oxford University Press, London, 1950), p. 1.
9. See also J.J. Clark and M. Cohen (eds.), *Business Fluctuations, Growth and Economic Stabilization* (Random House, 1963), Bibliography.
10. The trade cycle theories built during the post-Keynesian period are generally classified under the following categories: (1) The Pure Monetary Theory, (2) The Monetary Overinvestment Theory, (3) The Non-monetary Overinvestment Theory, (4) Innovation Theory, (5) Acceleration Principle of Trade Cycle, (6) Psychological Theory, (7) Under-consumption Theories, (8) Exogenous Forces Theories, (9) Mitchell's Theory of Cycle, (10) Theories of Keynesian System, (11) Modern Theories of Trade Cycle Based on Interaction of the Multiplier and the Accelerator, and (12) Hicksian Theory of Trade Cycle.

A somewhat better understanding of the relevance of the business cycle theories can be had by looking at the origin and deepening of economic recession in the US causing global recession.

Some Advances in Business Cycle Theory[16]

As noted above, Hicksian theory of business cycle formulated in 1950 is still regarded as theoretically 'most sound' trade cycle theory. However, the economists have realized over time that no trade cycle theory is sound enough to stand the empirical test and to predict the course of fluctuation in the economy. The economists of later generation, however, have continued their efforts to find a more sound way to predict short-run fluctuations in output and employment and have formulated some new theories of business cycle. During the post-Hicksian era, economists turned back to neo-classical and Keynesian approaches to business cycle. There has been a prolonged debate between the neo-classical economists and Keynesians on the merits, deficiencies and reliability of these approaches to explain the business cycle. Although the debate remained inclusive, the so-called new classical economists and Keynesians expounded their own theories of business cycle. The two new business cycle theories that came into existence are following.

1. The Theory of Real Business Cycle expounded by neo-classical economists, and
2. The New Keynesian Economics on business cycle expounded by the Keynesians

These theories of business cycle fallout of the scope of this book.

23.5 THE GLOBAL RECESSION OF 2008-09: A RECENT CASE OF BUSINESS CYCLE

The purpose of presenting a discussion on the global recession of 2008–2009 is just to show how business cycle begins and how recession in an economy affects other economies and takes the form of a global recession.

As mentioned earlier, since business cycles of great magnitude did not recur over a long period of time after the Great Depression, some economists held the view that business cycles were the things of past. However, the global recession of 2008-09 proved them wrong. The global recession has proved the point beyond any doubt that business cycles continue to remain a dormant threat to the individual as well as the world economy. In this section, we describe briefly the origin of the recent global recession, its impact on the world economy, and the gradual revival of the recession-hit economies.

23.5.1 The Origin of the Global Recession

The global recession originated in the US—the richest and the strongest economy of the world—in the later half of 2008 and spread to almost all major economies of the world. Although the US economy had suffered a strong economic downturn during the 1980s, the economic recession of 2008-09 was the worst economic recession in the US after the Great Depression of 1930s. The US economic crisis caused ultimately a global economic recession, which continued to remain the biggest concern over a period of five years for the economies suffering from the global recession.

16. For a brief explanation of the advances in business cycle theory, see N Gregory Mankiw (*Macroeconomics, op. cit.*, Ch. 19) deals with these theories in his text book as 'Advances in Business Cycle Theory', and Dornbusch, *et. al.*, (*Macroeconomics, op. cit.*, Ch. 20) treat this topic as 'Advanced Topics'.

The economic recession in the US was caused by a *financial crisis,* widely known as ***sub-prime crisis.*** The *financial crisis* in the US was caused by the burst of the housing boom. What had happened, in fact, was that the housing sector of the US had a booming growth during 1997-2002. The most important factor behind the housing boom was the excessive housing loans granted by the banks and their subsidiaries and also by the other financial companies to the *sub-prime borrowers*. The category of sub-prime borrowers includes the poor and young sections of the society with low creditworthiness and a poor track record of repaying loans. Although banks were generally reluctant to grant loans to the sub-prime borrowers, they made excessive loans to them during the period of housing boom because (i) banks and financial firms had excess liquidity due to simultaneous booming stock market, and (ii) the US government had encouraged banks to lend money to help the poor and young to have their own house. Besides, the banks had offered a newly invented facility, i.e., to pay only the interest portion of EMI in the first two years and the prime loan after two years. These factors had encouraged the sub-prime borrowers to borrow excessively by mortgaging their property. Besides, during the housing boom, the real estate prices had more than doubled. This had created a favourable condition for the sub-prime borrowers to borrow heavily by mortgaging their 'junk houses', often with manipulated inflated values. The total housing loans to sub-prime borrowers exceeded \$ 1.4 trillion.

What led to the sub-prime crisis? The sub-prime crisis was caused by the burst of the housing boom. The housing boom had collapsed because housing supply far exceeded the demand. It caused a sharp decline in housing prices. The housing boom had started petering out in 2007. Due to the sharp decline in housing prices, house-owners started selling their houses to minimize their loss and financing firms their collaterals to recover their loans as much as they could. The result of the number of house sellers far exceeded the number of buyers. This created a vicious circle of increasing supply with falling demand causing further fall in realty prices. As a result, housing prices had declined by over 50% in 2008 from their peak in 2006.

Due to the sharp decline in housing prices, the sub-prime borrowers suffered heavy losses and hence they defaulted in repaying their loans in a big way. The default in repayment of loans was aggravated also because the *interest rate* on sub-prime loans was 2% higher than that on the prime loans. The default in loan repayments by the sub-prime borrowers was unprecedented. Consequently, banks and financing companies failed to recover their loans from their collaterals because of collapse in housing prices. This resulted into massive financial losses to the banks and other financial companies. As a result, banks started failing in 2007 and most leading banks of the US failed[17] by 2008. The financial condition of the US had turned worst with the bankruptcy of

17. For instance, two banks Freddie Mac and Fannie Mae, known for their prudent practice, had guaranteed more than half of approximately \$ 12 trillion loan in housing mortgage. The two banks together suffered a loss of \$ 14 billion in three quarters of 2008. By the end the year, the global banks and mortgage companies had to write off \$ 512 billion as sub-prime losses. The largest hit was Citigroup (\$ 55.2 billion) followed by Merrill Lynch (\$52.2. million). At the aggregate level, a little more than half of these losses (\$260 billion) were suffered by the US banks and investment firms; \$ 227 billion by European firms; and a relatively modest loss (\$24 billion) by the Asian firms. As a result, banks in the US started collapsing despite the bailout help by the Federal Reserves. Bear Stern, one of the largest investment banks and security trading firms, collapsed due to its losses; Lehman Brothers, the 4th largest investment bank in the US, turned bankrupt; Merrill Lynch was bought by Bank of America; and Freddie Mac and Fannie Mae were nationalized. So devastating was the effect of the financial crisis in the US that it led to a global crisis.

Lehman Brothers in September 2008. The closure of the leading banks led to the financial crisis in the US, called ***sub-prime crisis*** or ***sub-prime mortgage crisis.*** The sub-prime crisis generated a *financial crisis* which marked the beginning of the downtrend in the US economy.

The Sub-prime Crisis Caused Economic Recession in the US Economy

The sub-prime crisis resulted in a deep economic recession in the US in 2008. Since major banks had turned bankrupt, availability of finance to manufacturing firms declined sharply causing a sharp decline in manufacturing output. According to a panel of American economists, the US manufacturing output had declined in November 2007 at the fastest pace in 26 years and the US faced recession first in December 2007. The recession in the world's largest economy deepened further in the 4th Qtr of 2008. Income and therefore consumer demand declined sharply. According to the estimates made by the Commerce Department of the US, *GDP* contracted by 0.2%—more than 0.1% fall in October and consumer spending contracted by 0.6% in November though less than a steeper fall by 1% in October 2008. The Commerce Department had estimated a 6.3% decline in the US economy in Q4 2008 on year-to-year basis. This was the most sever meltdown in the US economy since 1982.

With declining production, income and the overall demand, unemployment had increased heavily. The number of persons claiming unemployment benefits had jumped by 30,000 in the last week of November 2008, which was the highest in the past 26 years. According to the Labour Department of the US, almost 2 million workers had lost jobs in 2008 driving the unemployment rate to 6.7%. Private sector wage and salary disbursements had fallen by \$8.7 billion in November 2008 compared to \$1.5 billion in October. Total loss of jobs in 2008 was 1,000,000.

The situation continued to worsen in 2009. In January 2009—just in one month – 80,000 jobs were cut down in a single day. Over 400,000 jobs were lost in the 1st two months of 2009 – 5 jobs terminated every minute this year as a cost-cutting measure by the companies. The unemployment was expected to increase further as many manufacturing companies, including General Motors (GM), a large employer, suffered a heavy loss and turned bankrupt[18] in June 2009.

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18. Initially, GM anticipating economic recession to continue, had planned to cut more and more jobs over a period of time for its survival. For example, GM had a plan to axe 31,500 more jobs in the US as it confronted a sever slump. In fact, it had planned to reduce its US employment from 96,537 employees to 65,000-75,000 by 2012. Also, it had planned to reduce number of plants from 47 to 38. The reason was the largest decline in sales in 26 years and the company reached the stage of bankruptcy in early 2009.

    The GM had filed for bankruptcy on June 1, 2009. This was the 4th largest bankruptcy case in US history and the largest for an industrial company. The company had fallen deeply in debt as its assets of \$ 82.29 billion had fallen far short of their debts of \$ 172.82 billion—a deficit of \$ 90.53 billion. Incidentally, Lehman Brothers (with an asset of \$ 691 billion) filing bankruptcy in September 2007 was the nation's largest ever, the second being the Washington Mutual with an asset of \$ 327 billion and the third was the WorldCom with an asset of \$ 107 billion.

23.5.2 The US Economic Recession and the World Economy

The US recession had its impact on the global economy causing a global recession.[19] The impact of the US economic recession spread to the global economy because of heavy decline in (i) the international flows of goods and services—the foreign trade, (ii) the international flows of capital, and (iii) the international flow of labour. As regards the impact of the global recession on the world economy, since the US economic recession continued till mid-2009, it was premature to measure its overall impact on the global economy. However, the international organizations like IMF and World Bank (WB) and the UN bodies have given their estimates of impact of the US economic recession in terms of the *decline in global growth rate, loss of jobs,* and *decline in the world trade.*

Decline in Global Growth Rate The WB predicted a decline in global economic growth to 0.9% in 2009 from 2.5% growth in 2008. According to the then MD of the IMF, Dominique Straus-Kahn, the global economic growth could dip *below zero* for the first time in 2009, "the worst performance in our lifetime". The decline in the world *GDP* growth rate is mainly due to most advanced economies facing severe recession. The UN Department of Economic and Social Affairs (UN-DESA) has forecast the world economy to shrink by 2.6% in 2009, revising its earlier estimate of only 0.5% decline. The DESA attributed this global crisis to the global financial crisis, affecting poor countries more that the rich countries.

Decline in World Trade The world trade was projected to decline by 2.1% due to fall in demand and non-availability of credit – for the first time since 1982. The trade growth in South East Asia declined from 8.4% in 2007 and 6.3% in 2008 to 5.4% in 2009 – the decline in export growth rate being the highest in India and Pakistan. In East Asia and Pacific region (including China), the trade growth was projected to decline from 8.5 in 2008 to 6.7% in 2009 and China's trade growth rate to drop from 9.4% in 2008 to 7.5% in 2009. In its revised report, WB predicted that the global economy and the world trade would shrink in 2009 for the first time since the World War-II. It added that the crisis that began with 'junk mortgages' in US was causing havoc in poor countries which have nothing to do with this problem. Most affected countries include those from Latin America, Africa, and East Asia.

The Global Loss of Jobs

According to the ILO, the global loss of jobs might reach 51 million in 2009 due to global recession. The ILO estimated that the global unemployment rate might reach 6.1% in 2009. More realistically, if financial turmoil persists, the loss of jobs would be 30 million in 2009, putting the global unemployment rate 7.1%. The earlier estimate of ILO for unemployment in 2009 was 20 million. The ILO estimates of the loss of jobs in different economic regions are as follows.

19. However, the WB had a different opinion. In its Report, *Global Economic Prospects – 2009,* the WB observed that the global recession was caused by an unprecedented increase in commodity prices over a long period of 5 years – between 2003 and 2008. Oil prices had increased by 320% and food prices by 130%. According to WB, 130 to 150 million people were pushed into poverty by zooming prices of food items between 2005 and 2008. The global inflationary pressure might be a factor responsible for loss of purchasing power and fall in global demand. But inflation was not the main factor causing global recession. It is widely accepted that US economic recession was the main cause of the global recession.

- Developing nations, mainly Sub-Saharan Africa and South Asia, would be biggest suffers of the job losses.
- North Africa and Middle East had the highest unemployment rate – 10.3% and 9.4%, respectively.
- Unemployment rate in 2008 in Central and South Eastern Europe and former Soviet States was 8.8%; Sub-Saharan Africa – 7.9%; and Latin America – 7.3%.

The ILO Director General, Juan Somavia, observed in the Global Wage Repot – 2008/09, "For the world's 1.5 billion wage earners, difficult times lie ahead. Slow or negative economic growth combined with highly volatile food and energy prices will erode the real wages of many workers". The Report noted that 'wage growth had lagged behind overall economic growth during upswing and slowed down more rapidly during economic downswing. Between 1995 and 2007, for each 1% decline in *GDP*, per capita wages fell by 1.55%'. "If this pattern were to be in the rapidly spreading global downturn, it will deepen the recession and delay the recovery". Mr. Somavia suggested that countries should adopt the minimum wage law to keep the consumer demand alive and the economy to revive. The ILO suggested job creation through construction and rehabilitation projects including roads, bridges, schools, hospitals, public buildings.

23.5.3 Countries Affected Most by the Global Recession

The impact of global recession on different economies has been different. Here, we give a summary view of the country-wise impact of the global recession. According to the IMF, advanced economies were projected to have a dip of 2% in their *GDP* growth; the US – the origin of the global crisis – would have a *negative* growth of 1.6%. The ***negative growth rates*** in other major counties are projected by the IMF for 2009 as UK 2.8%; Japan 2.6%; Germany 2.5%; and Euro Area 2%.

The case of **Japan,** the second largest economy of the world, was hit most by the global recession because it depends heavily on exports. The Japanese economy slid into recession in November 2008 for the first time since 2001. According to a Government Report issued in February 2009, due to the collapse in global export demand, Japan's economy shrank at its fastest in past 35 years since the oil shock in 1974 and there was no sign of recovery. The Japanese economy contracted at an annual rate of 12.7% in the 4th Qtr of 2009. Business investment declined by 1.7% in 2008 due mainly to a dramatic fall in foreign demand for consumer goods, especially Japanese autos[20] and electronic gadgets. Japan's *GDP* declined by 15.2% in January-March 2009 – the highest decline since 1955 due to decline in exports caused by global recession.

Global recession has spread also to the **Gulf Countries**. The recession in the gulf countries led the loss of jobs in Gulf.nations due mainly to decline in construction and realty boom followed by the decline in crude oil price. Of the 5 million labour working abroad, 90% are working in Gulf countries and the South-East Asia. The Gulf countries were affected because **crude oil price** declined to $48 p/b, the lowest in three years in New York due to the recession in the US, the world's largest energy consumer. Oil prices had tumbled 68% in the fist week of December 2008

20. The auto sales of Toyota, Japan's No.1 automobile company, plunged 21.8% in November 2008 – the biggest drop in 8 years. The company made the operating loss for the first time in 2008 in 70 years.

since reaching a record of $147.27 on July 11, 2008. The decline in oil prices was mainly due to simultaneous recession in the US, Europe and in Japan—the worst after the World War II.

23.5.4 The Two Least Affected Economies: China and India

The two economies which are deemed to be much less affected by the global recession are China and India – called 'fast developing economies'. According to the IMF forecast on January 28, 2009, while the world economy is projected to grow at 0.5% in 2009, China and India – the only two sizable economies – are likely to record growth rate over 5% and will prevent the world from recording negative growth in 2009. According to a study jointly conducted by India's FICCI and American Ernst & Young, the growing economic links between the US and India has benefited the former during the economic downturn as thousands of Americans could save their jobs when Indian corporates made major acquisition of US companies. During the last two years, Indian companies[21] acquired 143 US firms across various sectors – 94 companies in 2007-08 and 50 companies in 2008. Indian companies could acquire US companies because of their high financial status and the liberal policies adopted by the GOI and the RBI.

These facts should not, however, lead to the conclusion that these economies are not affected at all by global recession. These countries too had suffered substantially mainly due to (i) financial crisis, and (ii) huge decline in their exports, during the period of global recession.

Looking at **India's** problems, India's financial markets – equity markets, money markets, forex markets and credit markets – had come under pressure due to (i) global liquidity squeeze, reversal of capital flows causing forex problem.[22] Besides, due to global slump in demand, *India's exports* had declined by 33.3% in March and by 33.2 in April 2009 compared to exports in the respective months in 2008. This was worst performance of India's export sector in the last 14 years. Imports had declined by 36.6% in April 2009 compared to exports in April 2008. According to the RBI projections, the economic slowdown in India might continue till 2010, in spite of intensive use of monetary policy measures, reason being the low business confidence, decline in consumer spending and rise in unemployment rate. However, the Indian economy showed its strong resilience against the effects of global recession. According to an official estimate, Indian economy registered a growth of 6.7% in 2008-09, the year of the global recession, which was substantially higher than 5-6% projected by the individual economists and analysts.

China's exports had declined by 27.7% due global downturn, causing a sharp decline its growth rate from 9% in 2008 to 6.5% in 2009. According the official figure, the sharp decline in China's exports, as many as 2452 manufacturing companies in Guangdong province – the heart of the China's economic miracle – were shut down by January 2009. However, according to the industry sources, the situation was much grim as 20,000 out of over 70,000 companies in Guangdong had trimmed their operation to 30-40% and many of them were on the verge of closing down because of decline in exports. This created a grim situation of unemployment. According to an official survey, 20 million (2 crore) agricultural workers had lost their jobs due to global recession.

21. The main acquiring companies were Tata Chemicals, Wipro, Reliance Communications, and First Source Solutions.
22. D. Subbarao, "Impact of the Global Financial Crisis on India: Collateral Damage and Response", in RBI Bulletin, March 2009, p. 387.

Nevertheless, the positive growth in China and India built optimism for the revival of the global economy. Although growth rates in India and China had declined due to global recession, a much lower fall in their growth rates had created an optimistic outlook for the work economy. In its latest Report,[23] the WB projected that the developing nations, including China and India, would grow at 1.2% in 2009. But, with these countries excluded, the developing nations would shrink at 1.6%. According to the WB, the positive high growth in China and India would make the developing countries grow at 4.4% in 2010 and at 5.7% in 2011 and global growth will rebound to 2% in 2010 and to 3.2% in 2011.

23.5.5 Revival of the Global Economy

Most developed and developing economies affected by the global recession have adopted economic stimulus schemes, including monetary and fiscal policy packages, with the objective of controlling further deterioration in the economy. The stimulus packages aimed at (i) preventing further failure of banks and companies and reviving the financial market, (ii) creating job opportunities for jobless, and (iii) to generate additional income, with the purpose of reviving plunging demand.

The **US** Federal Reserve Chairman, Ben Bernanke, announced a bailout scheme of $ 1.8 trillion with basic purpose of bailing out the banks and financial companies from the financial crisis. The US government went for buying shares of failing companies – it bought 70% shares in GM. This was in addition to reducing the key interest rate nearly to zero with the purpose of encouraging economic activities. The US economy had shown the sign of the revival – the retail sale in the US had fallen at a much lower rate of 0.1% in February compared to a 0.5 fall in January 2009. Other countries had also adopted similar economic stimulus package for reviving their economy.

China announced economic stimulus package of $ 587 billion for labour-intensive infrastructure projects. This was followed by other stimulus schemes aimed at creating new job opportunities by constructing houses for 12 million families and creating health facilities. In addition, China slashed bank rate by more than 1% on the 26th November 2008, in an attempt to revive the economy hit by global recession and the consequent joblessness in the industries. This was the highest interest cut by the People's Bank of China since the Asian financial crisis in 1999. China reduced also the reserve rate. The cuts aimed "at ensuring ample liquidity in the banking system and promoting stable credit growth to make the monetary policy play an active role in supporting economic growth".

Japan, then the second largest economy and the worst affected economy, announced a similar stimulus package to fights its 'unprecedented economic crisis'. Japan had announced an additional public spending of $ 122 billion in April 2009 with the objective of preventing the economic shrinking further, creating employment, and to create public facilities.

India also had adopted stimulatory monetary and fiscal policies. The monetary policy package included (i) a substantial reduction in the interest rates, (ii) liberalized financing of exports, (iii) rupee-dollar swap facility provided to banks. The fiscal package amounting 3% of *GDP* included such measures as additional public spending, grant of funds for infrastructure, cuts in indirect taxes, and financial support to exporters. With a liberal monetary policy, the industrial sector, spe-

23. Global Development Finance—2009: Charting a Global Recovery.

cially the core sector industries, started picking up. The core infrastructure industries – crude oil, refinery products, electricity, coal and cement, having a combined weightage of 26% in Index of Industrial Production – registered a growth of 2.2% in February 2009. This was taken as the sign of recovery. The sector-wise growth in February 2009 was coal 6%; cement 8.3%; electricity 0.3%; and steel 3.6%, though crude oil declined by 6.2% and petroleum refinery by 0.5%.

Most **other countries** affected severely by the global recession adopted economic stimulus packages to prevent the aggravation of the economic crisis. In addition, WB announced a $ 50 billion trade liquidity fund on March 31, 2009. These revival schemes created favourable conditions for the revival of the world economy. And, in fact, the world economy started reviving by mid-2009. A survey of economists' opinion by National Association of Business Economics revealed that 90% economists predicted that the recession would end by 2009 though it may be bumpy.

In mid-2009, most international bodies including UNO, WB, IMF, and also economic research organizations expressed hopes for revival of the global economy in 2009-10. The global recovery was projected in 2010 with global *GDP* growth of 3% – China 8%; India 6.5%; US 1.6% 5; Euro area, UK and Japan 0.6%. The Fed Res Chairman predicted US recession to end in 2009 and 2010 will be year of recovery.

23.5.6 What Business Cycle Theory Applies to Global Recession?

A question that arises now is: What business cycle theory applies to the global recession of 2008-09? A reasonable answer to this question can be found only by conducting an extensive and intensive research on the problem. However, the over-investment theory, on the face of it, appears to be closely applicable to the global recession. As the facts stand, the global recession was caused by the ***collapse of the housing boom*** in the US. The collapse of the hosing boom was caused by supply of houses in excess of demand. The excess supply of houses was the result of ***over-investment in the housing sector***. The supply of housing in excess of demand caused a 50% decline in the housing prices. This caused tremendous financial loss to the sub-prime house mortgagers. Therefore, they could not pay their debt to the banks and financers. This is what caused the sub-prime crisis. Due to the ***sub-prime crisis,*** the banks suffered unprecedented losses. As a result, banks turned bankrupt and pulled down their shutters. The result was a ***big financial crisis*** in the US, leading to fall in investment and downturn in the US economy. The US financial crisis affected the financial sector of all the related economies, on the one hand, and decline in consumer demand resulted in fall in imports, on the other, which affected exports of the exporting countries. This was the basic cause of the global recession. Thus, over-investment theory of business cycle appears to offer a reasonable explanation to the global crisis.

23.6 NEED FOR CONTROLLING BUSINESS CYCLES

We have so far discussed the prominent theories of business cycles and also the sources and effects of the current global recession. In this section, we discuss briefly the policy measures suggested by the economists to control business cycle and the measures which are generally adopted by the governments to revive the economy during the period of economic recession. Let us first see when and why it became a necessity to control business cycles, especially when the economy shows strong signs of economic downturn.

Business cycles create devastating conditions for the economy. A fast growth leads to overheating of the economy, which ultimately ends in a rapid downturn in the economy. If not controlled, it turns into economic depression causing unemployment and poverty and all sorts of economic misery, including national security. For instance, as mentioned above, the global recession of 2008-09 caused a sharp decline in growth rate and *GDP*, decline in consumer demand and high rise in unemployment, in almost all highly rich nations of the world. As a result, most countries announced fiscal packaged and monetary measures to control the further deterioration in the economy.

Although, as world's economic history shows, many countries had suffered from business cycles in the past, no sincere efforts were made by the governments to control business cycles whenever they took place. In fact, until the Great Depression of 1930s, there prevailed an orthodox economic belief – known the classical thought – that the working of economy should be left to the market forces and 'invisible hands' would automatically maintain the balance in the economy and would prevent the occurrence of business cycles. However, the Great Depression proved this thought to be baseless and inapplicable under the modern conditions. Besides, there emerged a new economic thought that if working of the economy is left to market forces, business cycles are bound to take place and a free economy is always open to risk of business cycles.

It was only after the Great Depression that John Maynard Keynes created a revolution in economic thoughts that emphasized the need for controlling and regulating the economy with the purpose of preventing business cycles and maintaining a stable growth in the economy. But the Keynesian thought did not gain prominence until the Second World War. After the War-II, however, a considerable attention was devoted by the economists to the analysis of business cycles and formulating economic policies to control the sever fluctuations in the economy. Thus, "... by an evolutionary process, economic thought has progressed from a strong conviction that the economy should be left to run on its own course to a general and non-partisan acceptance of the need for a stabilizing policy which would prevent excessive fluctuations in the private economy".[24] It is now a widely accepted rule that when the economy shows the signs of overheating or of downturn, the authorities must use appropriate policy measures to stabilize the economy.

23.7 POLICY MEASURES TO CONTROL BUSINESS CYCLE

The basic objective of controlling business cycle is to eliminate the forces and the factors that cause economic fluctuations with the purpose of achieving economic stability without affecting the growth factors adversely. Before we proceed, let us look at the meaning and purpose of economic stabilization.

Economic Stabilization: Meaning and Objective

Stabilization does not mean creating conditions for economic stagnation. Stabilization broadly means preventing the extremes of ups and downs or booms and depression in the economy without preventing the factors of economic growth to play their role. It also implies preventing over and under-employment. Stabilization does not mean rigidities: it should permit a reasonable degree of flexibility for 'self-adjusting forces of the economy'.

24. W.W. Lee *op. cit.*, p. 422.

The major objective of stabilization policies of free-enterprise economies are following.

(i) Preventing excessive economic fluctuations and, at the same time, making allowance for fluctuations necessary for a long-term, sustained economic growth;
(ii) Efficient utilization of labour and other productive resources as far as possible;
(iii) Encouraging competitive enterprise with minimum interference with the functioning of the market economy; and
(iv) Avoiding, as far as possible, the conflict between the internal and external factors.

The Policy Measures

The two most important and widely used economic policies to control business cycle and to achieve economic stability are following.

(i) Fiscal policy; and
(ii) Monetary policy.

In case of dire economic necessity, especially when fiscal and monetary measures prove to be inefficient or inadequate, the government may adopt *direct controls* to supplement fiscal and monetary measures to ensure economic stability. Fiscal and monetary policy measures[25] which are generally adopted by the government to control the business cycles are briefly described below.

23.7.1 Fiscal Policy Measures

What is Fiscal Policy? The term 'fiscal policy' refers to the planned changes made in taxation and public expenditure by the government to achieve certain predetermined objectives. *Taxation* is a measure of transferring funds from the private purses to the public coffers. It amounts to withdrawal of funds from the private use. *Public expenditure* is the flow of public funds into the private economy. Thus, taxation reduces private disposable income and thereby the private expenditure. Public expenditure, on the other hand, increases private incomes and thereby the private expenditure. Since tax revenue and public expenditure form the two sides of the government budget, the taxation and public expenditure policies are also jointly called 'budgetary policy.'

Fiscal or budgetary policy is regarded as a powerful instrument of controlling business cycle with the objective of ensuring economic stabilization. The importance of fiscal policy as an instrument of economic stabilization rests on the fact that government plays a very important role in modern economies and government taxation and expenditure account for a considerable proportion of *GDP*, ranging from 10 to 25 per cent. Therefore, the government may influence the private economic activities to the same extent through variations in taxation and public expenditure.

Counter-Cyclical Fiscal Policy A section of economists, called "fiscalists", consider fiscal policy to be more effective than monetary policy because fiscal policy affects directly the private decisions while public expenditure does so indirectly. If fiscal policy of the government

25. Monetary and fiscal policies, their broad objectives, their theoretical functioning and their limitations have been discussed ahead—Monetary Policy in Ch. 31 and Fiscal Policy in Ch. 32. Here, we give only a brief description of how these policies can be used to control business cycles.

is so formulated that it generates additional purchasing power during depression and reduces it during the period of expansion it is known as **counter–cyclical fiscal policy.**

Before we proceed to discuss what kinds of fiscal measures are used to control business cycle, let us have a glance at how the counter-cyclical fiscal policy is formulated. The counter-cyclical fiscal policy is formulated on the basis the nature of relationship of public expenditure and taxes to the national income, the *GDP*. The relationship between public expenditure and *GDP*, and between tax and *GDP* may be expressed in the form of the following propositions.

(a) ***Public Expenditure and GDP*** An increase in public expenditure raises the level of *GDP*. *The size of increase in the GDP as a result of additional public expenditure is determined by the rate of public expenditure multiplier.* Public expenditure in the form of purchase of goods and services increases the income of the households in the form of wages, rent and business profit which, in turn, increases governments' tax revenue.[26] Marginal *propensity* to consume being greater than zero, *households* spend a part of additional income on consumption, and so do the people who earn any income due to additional consumption expenditure at the first instance. The process continues and *GDP* increases by the rate of multiplier.[27]

(b) ***Taxation and GDP*** All taxes are considered to have a deflationary impact on the economy to a large or small extent. *Increase in taxation, by way of increasing the rate of existing taxes and imposing new taxes, reduces disposable income, household spending and hence GDP. The size of decrease in GDP as a result of increase in* taxation depends on the tax multiplier. The multiplier works in reverse direction in case of taxation. For, taxation reduces disposable income and hence consumption expenditure cumulatively. It should be noted here that the tax–multiplier is 1 less than public expenditure multiplier even if *mpc* is the same in both the cases. The implication of this difference between the two multipliers is that public expenditure of a certain amount would more than neutralise the taxation effect of an equal amount. Therefore, an equal amount of taxation and public expenditure, i.e., a balanced budget policy, will have an expansionary effect on the economy equal to the amount of public expenditure.

(c) ***Counter-cyclical Fiscal Policy: Automatic and Discretionary Changes*** It may be inferred from the relationship between public expenditure and *GDP* and between taxation and *GDP*, that a counter–cyclical fiscal policy would require increase in public expenditure and reduction in taxation to fight depression, and reduction in public expenditure and increase in taxation to control inflation. In other words, fighting depression would require a *deficit budgeting* and controlling inflation requires surplus *budgeting*.

A counter-cyclical fiscal policy may be of two types: (i) relying on *automatic adjustment* process to control business cycle, and (ii) making discretionary changes in taxation and expenditure. Let us now see how the two kinds of fiscal policies work to stabilize the economy.

(i) ***Built–in–Flexibility and Automatic Stabilization*** Automatic budgetary adjustment takes place only when fiscal policy has *built–in–flexibility*. Under the built-in-flexibility approach, budgetary changes follow automatically the change in *GDP*. Built-in-flexibility in the fis-

26. Otto Ekstein, *Public Finance* (New Jersey, Prentice-Hall Inc., 1967) 2nd Edn., pp. 102–03.
27. For detailed description of public expenditure multiplier, *see* Chapter 8.

cal policy implies that as *GDP* falls, both income and consumption decline. Consequently, the revenue from both direct and indirect taxes declines. Government establishments and committed expenditure remaining the same public expenditure exceeds its revenue and the budget automatically turns into deficit. Deficit spending automatically increases the level of *GDP*. This effect is more quick and powerful in the countries which provide unemployment allowances and other relief benefits. On the contrary, when *GDP* increases, tax base expands and tax revenue increases. Expenditure level remaining the same, the government budget runs into surplus. Surplus budget has a negative effect on the *GDP* and proves helpful in preventing unduly fast growth in the economy.

The deficit and surplus resulting from fluctuation in *GDP* work as automatic stabilizers of the economy. It is however generally believed that automatic stabilizers prove to be adequate and serve useful purpose only for short–term fluctuations in the economy. Automatic stabilizers prove inadequate generally to control the economic fluctuations of larger amplitude. Under such conditions, discretionary changes in taxation and public spending becomes a necessity.[28]

(ii) ***Discretionary Fiscal Policy and Stabilization*** The discretionary changes in the budgets refer to the change made in the tax structure and in the level and pattern of public expenditure by the government on its own discretion. Discretionary changes include changes in tax–rate structure, abolition of existing taxes, increasing or decreasing the public expenditure, etc. Discretionary changes are so designed as to arrest the inflationary and deflationary trends in the economy and to mitigate the destabilizing forces such as increase or decrease in aggregate demand. For example, the government of India had cut down excise duty and import duties on certain items to control inflation in the year 2008.

Formulating a counter-cyclical fiscal policy is not a straight forward affair. It involves certain *complications* which need to be taken into account while devising the new tax and expenditure policy to stabilize the economy. Some complications have been pointed out by Eckstein[29] as follows:

1. *All expenditures do not have the same multiplier effect.* For example, some kinds of transfer payments do not create a direct demand for goods and services provided by the government. Some public expenditures (e.g., free education and hospital facilities) only replace private expenditure.
2. *Not all changes have the same multiplier effect.* For example, taxes paid by the upper income groups have lower multiplier effect than those paid by lower income groups, because of differences in their *mpc*. The multiplier effects of indirect taxes are not clearly known and not precisely predictable.
3. *Deficit financing through public borrowing may reduce private investment* which reduces the multiplier effect due to crowding–out effect.
4. There are practical difficulties in assessing the time-lags and accuracy of forecasts.

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28. Richard A. Musgrave, *The Optimal Mix of Stabilization Policies* in W.D Grump and E.T. Weiler, (eds.) *Economic Policy: Readings in Political Economy* (Illinois Richard D. Irwin, Inc).
29. Otto Eckstein op. cit pp. 109–11.

23.7.2 Monetary Policy Measures

What Is Monetary Policy?

Monetary police refers to the changes made by the central bank in the total supply of money and in demand for money to achieve certain predeterınined objectives. One of the primary objectives of monetary policy is to control economic fluctuations and to achieve economic stability. The traditional instruments through which central banks carry out the monetary policies are: *open market operations, changes in bank rate and changes in the cash reserve ratio* (CRR). Briefly speaking, **open market operation** by the central bank is the sale and purchase of government bonds, treasury bills, securities, etc. to and from the public. **Bank rate** is the rate at which central banks discounts the commercial banks' bills of exchange or first class bill and lends money to banks. **Repo rate** is the rate at which central bank gives short-term loans to the commercial banks. The **cash reserve ratio** is the *proportion* of commercial banks' time and demand deposits which they are required to deposit with the central bank or keep cash-in-vault. All these instruments when operated by the central bank reduce (or enhance) directly and indirectly the credit creation capacity of the commercial banks and thereby reduce (or increase) the flow of funds from the banks to the public. The working of the monetary instruments are explained here briefly assuming an inflationary situation and need for controlling inflation.

(i) ***Open Market Operations*** During the period of inflationary expansion, the central bank sells the government bonds and securities to the public. The sale of securities depresses their price, on the one hand, and results in transfer of money from the public to the government treasury, on the other. To the extent the government securities are purchased through the transfer of bank deposits to the central bank account, it reduces the credit creation capacity of the commercial banks. The open market operation result in monetary contraction if (a) government securities are popular; (b) people have a good deal of banking habit, and (c) banking system is fairly developed. During the period of depression the central bank buys the government securities. Its impact on money supply with the public is just reverse to the sale of securities.

(ii) ***The Bank Rate and Repo Rate*** With the objective of controlling inflation, the central bank raises the bank rate or the repo rate. It increases the cost of borrowing from the central bank. Following the increase in bank rate, commercial banks raise their own discount rates for the public. The increase in cost of borrowing discourages the borrowings from the commercial banks. Thus the flow of money towards the private economy is restrained. But this method is effective only when commercial banks do not possess excess reserves. During depression the banks rate is lowered with a view to facilitating and encouraging private borrowing which leads to monetary expansion and work against the forces of depression.

(iii) ***The Cash Reserve Ratio (CRR)*** When the central bank wants to reduce the credit creation capacity of the commercial banks, it increases the *CRR*, i.e., the ratio of their demand and time deposits to be held as reserve with the central bank, and *vice versa*. Therefore, the anti-inflationary monetary policy requires raising of variable reserve ratios, and anti-deflationary policy requires lowering the reserve ratio. When the central bank changes the reserve ratio, the deposits which form the basis of credit creation are affected and it affects the banks' capacity to create credit. To control inflation, the central bank increases cash reserve ratio and to control deflation, it decreases the cash reserve ratio.

Of the three instruments of monetary control, the **open market operation is considered to be the most effective** tool available to the central bank, especially in the less developed countries having underdeveloped money market. The open market operation is flexible and easily adjustable to the changing conditions. The other two instruments are effective only when (i) commercial banks do not possess excess cash reserves: and (ii) in case of bank rate, borrowers are not highly optimistic about future business prospects.

In addition to these instruments, central banks use various **selective credit control measures and moral suasion.** The selective credit controls are intended to control the credit flows to particular sectors without affecting the total credit and also to change the composition of credit from undesirable to desirable pattern. *Moral suasion* is a persuasive method to convince the commercial banks to behave in accordance with the demand of the time and in the interest of the nation.

The fiscal and monetary policies may be alternatively used to control business cycles in the economy, though monetary policy is considered to be more effective to control inflation than to control depression. It is however, always desirable to adopt a proper mix of fiscal and monetary policies to check the business cycles. It is also essential because both policies have their own limitations. Therefore, an appropriate mix of fiscal and monetary policies would always prove more effective than a single policy. A proper mix of the two policies is essential also because (i) it would avoid the possible conflict between them, and (ii) a proper fiscal policy depends on the current monetary policy. It is, therefore, always desirable to formulate a counter-cyclical policy with a proper coordination of fiscal and monetary policies.

Suggested Reading

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Questions for Review

1. What is meant by business cycle? What factors create conditions for business cycle?
2. What are the different phases of business cycles? What are the economic features of different phases of business cycle?
3. In a free market economy, business cycle is self-adjusting. Explain the process of recession when prosperity reaches its peak and the forces of uptrend when depression reaches its bottom.
4. Explain the pure monetary theory of business cycle. How does monetary expansion lead to growth in output, employment and price level and how does it lead to recession? What are the shortcomings of the monetary theory of trade cycle?