

Chapter 12

Aggregate Demand and Aggregate Supply

Abstract

Aggregate demand (AD) curve shows the real output (real GDP), which a consumer mutually wants to buy at every given price level. While, graph of aggregate supply (AS) curve shows the real GDP that firms produce at given price. Finally, equilibrium takes place where demand for real output equal to its supply. In an economy, equilibrium price and equilibrium output is acquired at a point where both curves cut each other. So, AD and AS mutually launches the price level, and level of real production. In this chapter, AD and AS and their equilibrium are explained.

Keywords: Aggregate demand, aggregate supply, GDP, Equilibrium, output

12.1. Aggregate Demand (AD)

This curve determines the amount of real output that buyers wants to buy at every possible price level (P). As, demand curve is negatively sloped curve, which shows an inverse association between P and real GDP. It means when price rise amount of real GDP declines and when the 'P' comes down, amount of real GDP rises.

12.1.1. AD Curve

The opposite relationship among the P and real GDP is shown in Figure 12.1, Where AD curve downward sloped, just like an individual demand curve. Why the slope of AD curve is negative? The reason is not alike as in case of the individual demand curve. It focuses on the income effect and the substitution effect. When the price of a commodity declines, consumer purchase more of product (the income effect). As price declines, consumer's purchasing power rises and product is cheaper as compare to other products (the substitution effect).

But, it is not suitable explanation for aggregates. In the Figure 12.1, when AD of economy decline, it moves to a lower general P level. Circular flow model expresses that when prices of commodities come down, than nominal income flows to input also declines. So, it is clear that a decline in the P does not mean that there will be rise in the nominal income, generally. So, low prices do not causes income effect always, where more goods are sold as low P level leave customers with high real income.

Similarly, in Figure 12.1, prices are falling along the AD curve, this variation can be attributed to substitution effect (when there are more sales P level of other goods will come down) is not valid. There is no substitution effect (SE) among locally manufactured products when the P decline. If the conventional substitution and income effects do not describe the rationale for the descending of AD curve, than what does? Than these can be attributed to following three effects.

12.1.1.1. Real Balances Effect

A variation in P causes a real balances effect. A rise in P decreases the purchasing power of the public savings. Specifically, it brings down the worth of assets and money overtime, like, savings accounts or bonds (Dwivedi 2010). As the P increases overtime, it decreases the purchasing powers and public become poor in real terms, and ultimately, they have to reduce their spending in response to increase in P.

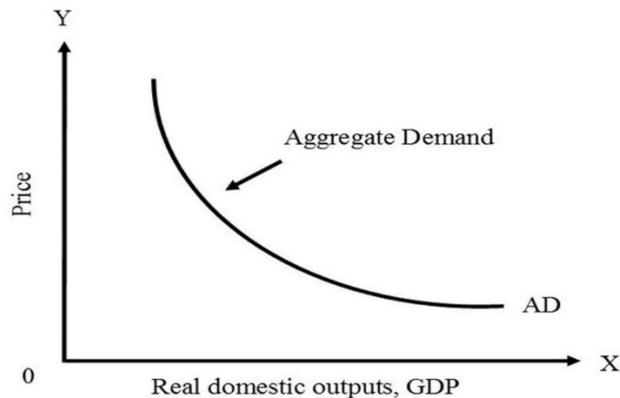
12.1.1.2. Interest Rate Effect

Effect of interest rate is also a major reason for variation in slope of AD curve. We assume that money supply remains constant, while drawing the AD curve. As price level rises, buyers require more money for purchasing and it raises the demand for money. At a given level of Ms, rise in Md will boost the price paid for its use.

12.1.1.3. Foreign Purchases Effect

Another reason for downward sloping of AD curve is foreign purchases. When Pakistan price level increase with respect to foreign Ps (and exchange rates do not vary in response to these variations), foreigners buys few Pakistani goods and more of foreign products. It is why Pakistani exports are greater than imports which is due to rise in P.

Fig. 12.1 The aggregate demand curve



The downward sloping AD curve shows a negative association between the P and the quantity of real output purchased.

12.2. Changes in AD

By taking the *ceteris paribus* assumption, a variation in P will alter the amount of aggregate expenditure, and it is why, it will vary the quantity of real GDP demanded overtime. Movements along a constant AD schedule shows that there are variations in real GDP. Any factor that change the demand curve completely is called determinant or shifter of AD. Variation in the demand curve can be due to two reasons; i.e first due to variation in any variable of AD that directly varies the amount of real output demanded, second, multiplier effect that cause a variation in AD and initiate the variation in spending.

In Figure 12.2, variation in AD curve from AD_1 to AD_2 indicate a rise in AD, it is distributed into two parts. The horizontal space between AD_1 and the broken curve to its right shows an initial rise in spending, Rs. 5 billion of new investment. If the economy's marginal propensity to consume (MPC) is 0.75, then the simple multiplier would be 4. MPC is the rise in personal consumer spending that happens with a rise in disposable income. So, the AD curve moves above, from AD_1 to AD_2 that is four times distance between AD_1 and the dashed line. The multiplier procedure increases the starting variation in expenditure into successive rounds of new C expenditure. After this change of Rs. 20 billion (=Rs. 5 X 4) of additional real goods and services are demanded at each P .

In the same way, a leftward movement of AD from AD_1 to AD_3 indicates a decline in the demand level, the less quantity of real output will be demanded at each P . It also includes the starting decline in C (illustrated as the horizontal space between AD_1 and the dashed line to its left), followed by multiplied decline in the expenditure, and consequently the demand decreases and curve moves to leftward.

12.3. Determinants of AD

12.3.1. Consumer Spending

When P in Pakistan does not vary, local customer could vary its purchases for the locally manufactured goods and services. Demand curve of economy shift to right side as more of the local products are consumed at every P in the market, resultantly, demand curve moves from AD_1 to AD_2 as it is shown in the Figure 12.2, and on the other extreme, if customers decide to purchase less of locally produced goods and services than less of the locally produced goods are sold and ultimately AD curve decreases from AD_1 to AD_3 . Other thing constant, only P can vary the consumer expenditure pattern and can cause the variation in AD.

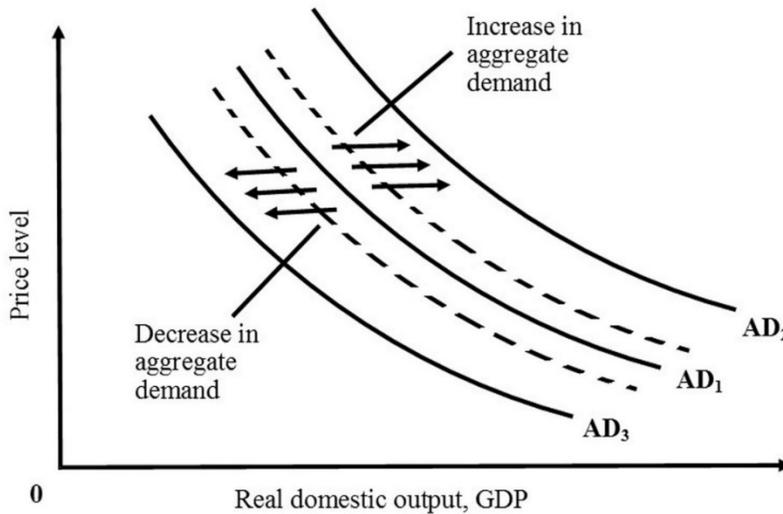


Fig. 12.2 Changes in aggregate demand

A variation in one or more than one variable of AD will vary the AD schedule. Upward movement of this schedule from AD_1 to AD_2 shows a rise in the demand level and conversely, downward or leftward movement of demand curve indicates the decline in AD. The vertical space between AD_1 and the dashed lines shows the starting variation in the spending patterns. This spending come into economy through the multiplier effect.

12.3.1.1. Consumer Wealth

It is comprised of both type of assets, i.e., financial and physical. Financial assets contain stocks and bonds, and physical assets are comprised of instance houses and land. Immediate increase in the real worth of the wealth of consumer (like, due to increase in the stocks), aids customer to save few and make further purchasing. Consequently, rise in consumer expenditure is called the wealth effect, and will vary the AD curve upward.

12.3.1.2. Consumer Expectations

Consumer pending can also changes due to change in customer outlooks. When it is expected that real income is going to rise in the near future than people increase their expenditures from their current incomes. Due to rise in current spending, AD shift towards right side. Likewise, if it is expected that there would be inflation in the near future then there will be an increase in the AD.

12.3.1.3. Household Debt

An existing AD line assumes a constant level of household debt. Increase in household debt enable the consumers to rise their consumption spending, which

causes demand curve to shift rightward. Alternatively, when consumers reduce their household debt, both consumption spending and AD decline.

12.3.1.4. Personal Taxes

Reduction in tax moves the D curve to upward. Conversely, rise in taxes causes a decline in the spending, and demand curve moves left ward.

12.3.2. Investment Spending (I)

It is basically purchase of capital items and it is one the main indicator that can impact the AD level. Decline in I move the AD curve to backward and it move the curve toward right side. Another indirect variable that can impact demand level is the interest rate. *Ceteris paribus*, an increase in interest rate causes a decline in I and this decline in investment cause decline of demand, resultantly. A rise in M_s causes a fall in interest rate and raise in investments and AD (Gopal et al. 2007). And, a fall in money supply causes a rise in the rate of interest, and it declines investments as well as AD.

12.3.2.1. Expected Returns

AD curve shifts rightward due to expected future returns. Because, higher future expected returns cause a raise in the demand of capital products. On the other hand, decline in expected returns causes a decline in the investments, and demand curve shifts towards right. Predicted profits are impacted by number of factors,

- Expectations about Future Business Conditions

If it is expected that there will be better firm conditions in the future, then they will earn more profits from their current investments, and they will invest more in to enjoy more revenues. If the entrepreneur is expecting bad future, then he will be reluctant to invest in the markets and there will be low profits.

- Technology

Modernized and innovative technologies causes a better return on investment in the firm and thus rise AD. For example, due to current technological improvements, pharmaceutical companies have developed new labs for getting better returns.

- Degree of Excess Capacity

An increase of unused inputs will decline the profits on new investment and ultimately causes a reduction in AD. *Ceteris paribus*, firms working at less than optimal level can benefit this situation.

- Business Taxes

Raise in these taxes will decline and will cause a change in profits from investment due to less expected profits. So, investment and AD will reduces and vice versa.

12.3.3. Government Spending (G)

This is also one of the important determinant of AD, and curve will move upward, if G raises, until T and i remain same. On the other hand, a decline in G will change the curve left side.

Box 12.1 Pakistan Government Spending



“Government Spending in Pakistan rose to 2,475,567 PKR Million in 2013 from 2,102,526 PKR Million in 2012. Government Spending in Pakistan is reported by the State Bank of Pakistan. Pakistan Government Spending averaged 568938.42 PKR Million from 1982 until 2013, reaching an all-time high of 2475567 PKR Million in June of 2013 and a record low of 335222 PKR Million in June of 1982”.

Source: GOP (2013)

12.3.4. Net Export Spending (NE)

Other things being constant, greater Pakistani exports shows that foreign demand regarding Pakistani products will rise, a use in net exports shift the AD curve to rightward. In contrast, a decline in NE moves the AD curve left side (Rios et al. 2013). These variations in NE are not caused by a variation in the P levels of Pakistan, rather these are attributed to foreign purchases. There are two indicators which yield a variation in the NE other than the P, and these are given below,

12.3.4.1. Notional Income Abroad

Rising NI out of the country inspires foreigners to purchase more goods, some of which are in the Pakistan. As a result, net exports rise and AD shift upward, and declines in NI causes the opposite results (Colander 2005). This can decline country's net exports and can shift AD curve to the left.

12.3.4.2. Exchange Rates

Fluctuations in exchange rates can affect the exports of Pakistan and ultimately AD will be impacted. Assume the Rupee depreciates in terms of the other foreign currency. The new, relatively lower value of Rs. and higher value of foreign currency enables customers at abroad to attain more Rs. with each unit of their currency. It is why, Pakistani goods are now less expensive, it takes fewer unit of foreign currency to obtain them.

12.4. Aggregate Supply

AS curve indicates the level of real GDP that firm would manufacture at fixed P . Firms decide their level of production based on the P prevailing in the economy, and the future expected prices. These decisions vary in the long as P level varies in the long run (LR), and it is the time period in which nominal wages are tied up with the P variations. On the other extreme, there is short run (SR), it is a time during which nominal wages and prices of other inputs do not vary with the P variations. So, LR and SR change by degree of wage adjustment, not by a set length of time.

12.4.1. AS in the Long Run

In the LR, the AS curve is vertical to x-axis at the full employment GDP level of economy, as it is shown by LRAS curve in the Figure 12.3. When variations in wages respond entirely to alterations in P , and in response GDP productions remains same in the long run.

In the LR, wages and cost of other capital increase or decline to absorb the variations of P levels. Alteration in P thus do not alter the real rate of return and GDP. In the given figure, LRAS curve is vertical at full-employment output level.

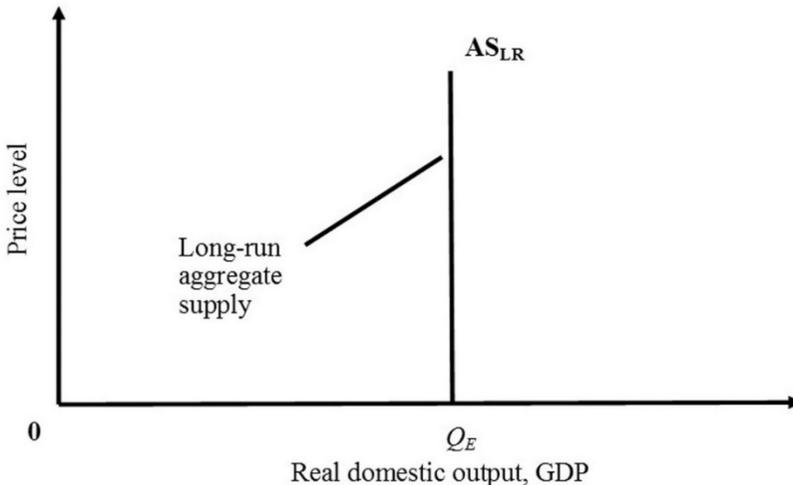


Fig. 12.3 Aggregate supply in the long run

LRAS is vertical at full employment of real productions (Q_e) as in the LR wages and other factors prices increase and decline to balance the variations in P . So, this variation does not impact firm's returns and they cause no benefits for them to vary production.

12.4.2. AS in the Short Run

Nominal wages do not instantly absorb variations in P , and complete modification may take some months or even year(s). Again, consider the single firm economy, in the short run, P and real GDP have direct relationship among each other (Ricardo 1965). SRAS curve slopes upward, as it is given in the Figure 12.4. A rise in P increase the real GDP, and a decline in the P declines it. Per-unit output costs underlie the AS curve.

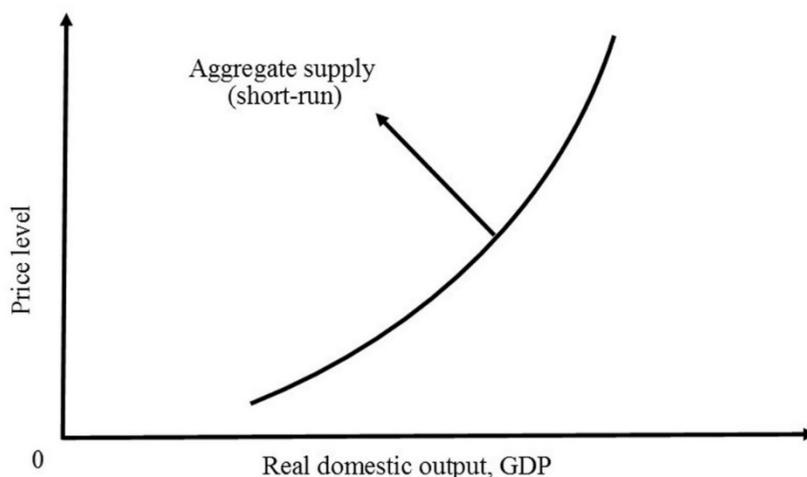


Fig. 12.4 The aggregate supply curve (short run)

AS has positive slope and it shows the direct relationship among the P and real GDP. This curve is proportionately flatter and it is not at optimal employment output. There are still unused inputs and it permits business to answer to P rises with large rises in the production. It is not flatter, rather it is steeper and it crosses the optimal employment output input unavailability, and constraints of capacity causes hurdles in enhancement of GDP as P is rising.

It is the cost of production (COP) that basically decided the price level at a given level of production. As economy expands in SR, per unit COP oftenly rises due to decline in efficiency. But the level of this rise relies on the current status of the economy. With respect to its capability. The AS curve in Figure 12.4 is proportionately flat at the production under the optimal level Q_e and proportionately steep at production above it.

When the economy is working below the optimal level, it has big accumulation of capital and labor force. Companies could put these unused inputs in the process of production with small upward pressure on costs. And, as output increase, scanty of factors will rise per unit COP. In these circumstances, addition of more labor in the production process, while holding capital same, like machinery, will cause congestion in the workplace and declines the per unit production of labour (Ricardo 1965). By adding additional capital at a fixed available worker, leave the machines free and declines the efficiency of capital. Adding more land will also a cause to decline efficiency of land inputs. In these circumstances, TC rises sharply than the productions, and consequently, per unit COP also increases.

12.4.3. Changes in AS

An existing AS curve ascertains the relationship among the P and real GDP in ceteris paribus. But, as any factor of “other things” varies, AS also varies. The rightward movement of demand indicate a rise in the AS from AS_1 to AS_2 , as shown in the Figure 12.5. A firm at existing P will make more productions. Shift of AD curve towards left side from AS_1 to AS_3 shows a decline in AS. At any P, firm producing lesser output than he already has.

Figure 12.5 lists the other factors, causing a move of AS curve, these are the determinants of AS or shifters of AS, these can change the position of AS curve. Variations in these factors, rise or decline per unit COP at given P. These variations in per-unit COP upset the profit thereby causing business to vary quantity of production they want to manufacture at given P levels. Changes that declines per unit COP changes the AS to rightward, from AS_1 to AS_2 that rises per-unit COP, supply moves from AS_1 to AS_3 . When per unit COP changes, the AS curve shifts also.

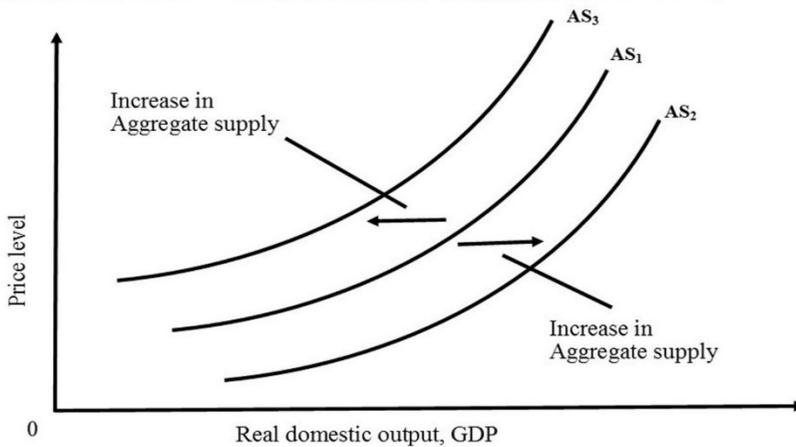


Fig. 12.5 Changes in aggregate supply

AS curve, may also changes due to change in the other factors. The rightward shifting of the AS curve from AS_1 to AS_2 indicates a rise in AS, and, downward shift of the curve from AS_1 to AS_3 causes a decline in AS.

12.5. Determinants of AS

Determinants of AS are mentioned as below,

12.5.1. Input Prices

These are different from the output prices and significant part of per-unit COP as well as AS, and these inputs can either be domestic or imported.

12.5.1.1. Domestic Resource Pries

These are main part of firm costs and seventy five percent of total cost. Ceteris paribus, a decline in the wage causes a decline of COP and AS move to rightward, and vice versa. Some of the example for better understanding are, labor supply rises due to increase in immigrations. Wages and COP decline and these shift the AS curve to the rightward. Labor supply declines as pension income and early retirements rises. Wage rates and COP increase, shifts the AS to the downward direction.

Likewise, AS curve moves when the land and capital related inputs changes,

The cost of equipment is also dependent on the P of steel and electronic components. As COP reduces and the AS curve moves upward. Land inputs enlarge with the invention of mineral deposits, irrigation of land or technical revolutions that transform “non-resources” into valued inputs. As land’s price declines, per unit COP also comes down and AS moves towards right side.

12.5.1.2. Prices of Imported Inputs

Just as demand for Pakistan’s products pays to Pakistani demand, products trade in from out of the country (such as oil, and copper) contributes to Pakistani AS, also. Products either domestic or imported classically bring down per unit COP. A reduction in P of foreign goods rises Pakistani AS, while a rise in their price declines Pakistani AS.

12.5.1.3. Market Power

A variation in the degree of market power established by producers of main inputs could impact prices and AS. Like, in the market, power held by the OPEC. The rise in the price of oil that OPEC achieved during the 1970s drove up per unit COP and jolted the AS curve of Pakistan leftward. Then a steep reduction in market power by this cartel during the mid-1980s caused a sudden decline in the oil prices and a rightward movement of AS curve.

12.5.2. Productivity

It is another factor that determine the relationship among country's level of output and inputs employed for production of this product. It is basically mean real GDP or real GDP / unit of input,

$$\text{Productivity} = \text{Total Output} / \text{Total Inputs} \quad (12.1)$$

A rise in production assists the economy to get higher output, given level of inputs. It does this by falling the per-unit COP. Suppose, real GDP is 10 units, 5 units of input are needed to manufacture that amount and P of each input unit is Rs. 2.

$$\text{Productivity} = \text{Total Output} / \text{Total Inputs} = 10/5 = 2$$

$$\text{Per unit COP} = \text{Total Input Cost} / \text{Total Output} = \text{Rs. } (2 \times 5) / 10 = \text{Rs. } 1$$

12.5.3. Legal Institutional Environment

Variation in the legal institutional setting, where firm function is the ultimate parameter of AS. These fluctuations change the COP and vary the AS. These variations are,

- (i) Variations in T and subsidies
- (ii) Variations in the extent of regulation

12.5.3.1. Business Taxes and Subsidies

Taxes like, sales and payroll, rise COP and decline short run AS, as wage increase these costs. Such upsurge in taxes paid by firms will increase COP and AS shifts towards left. In the same way, a business subsidy (a payment or tax break by state to producers) bring down the COP and rises short-run AS.

12.5.3.2. Government Regulation

It is typically expensive for firms to meet the terms with state rules. These rules thus rise COP and moves S curve to leftward. "Supply-side" supporters of deregulation of the economy have argued forcefully that, by rising efficiency and decreasing the paperwork along with complex rules. Breaching these rules would decline COP and shift the AS curve to the rightward. Deregulation that causes in monopoly and market imperfections is likely to move the AS to decrease rather than to the increase.

12.6. AD and AS

In the Figure 12.6, all the available arrangement of P and real level output, which arrangement will the economy opt, at least in the SR, are shown. Table 12.1 supports the figure by values. Equilibrium takes place where demand and supply of real output equates each other. The joining of AD curve with AS curve establish the equilibrium price and output of the economy. So, AD and AS jointly give the P and GDP.

Equilibrium P and real output are 100 and Rs. 510 billion, respectively (Figure 12.6). In order to explain it, suppose, P is 92 rather than 100. We can see from the Table

12.1; lesser P will inspire firms to manufacture real output of Rs. 502 billion. This is shown by point *a* on the AS but as it is given in the table, at point *b* on the AD, consumers will buy Rs. 514 billion of output at price level of Rs. 92. Competition among buyers to purchase the small available real output of Rs. 502 billion will eliminate the Rs. 12 billion (= Rs. 514 billion — Rs. 502 billion) deficiency and pull 'P' to 100.

Rise in the P from 92 to 100 motivates manufacturers to raise their production from Rs. 502 to Rs. 510 billion and consumers cut back their spending from Rs. 514 billion to Rs. 510 billion. Now, let's apply the AD-AS model, which could confront the economy.

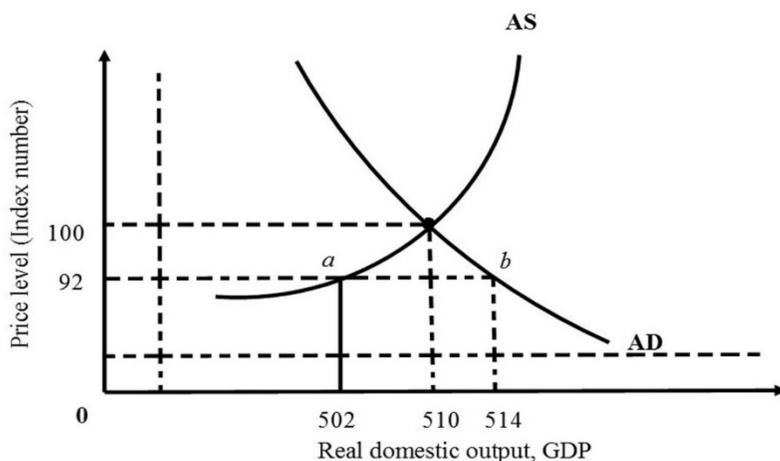


Fig. 12.6 The equilibrium price level and equilibrium real GDP

Equilibrium P of the economy is determined through the cross section of AD and AS curve. At the equilibrium price level of 100, the Rs. 510 billion of real production demanded matches the Rs. 510 billions of real output supplied. So, the equilibrium would take place at Rs. 510 billion.

Table 12.1 Real output demanded and supplied

Real Output Demanded (Billions)	P (Index Number)	Real Output Supplied (Billions)
506	108	513
508	104	512
510	100	510
512	96	507
514	92	502

12.6.1. Rises in AD: Demand-Pull Inflation

Consider, a nation is working with its optimal level and firms and state decide to raise their expenditure (activities that move the AD to the upward). Factors of AD provide numerous reasons of this shift. Firms enhance their I as they are expecting higher profit soon. Those profits are expected on purchase of new machinery and services. And, perhaps state increases expenditure to boost up national defense.

Increase in the price levels (P) from P_1 to P_2 , rise in AD after the optimal employment level of production causes inflation (Figure 12.7). That is demand-pull inflation, because the 'P' is being pulled up by the rise in AD. Also, observe the increase in demand, enlarges the real production from Q_E to Q_1 . Space between Q_1 and Q_E is positive GDP gap. Real GDP surpasses potential GDP. A cautious examination of Figure 12.7 reveals interesting point, concerning the multiplier effect. Rise in AD from AD_1 to AD_2 rises real output only to Q_1 not to Q_2 because part of rise in AD is absorbed as inflation as the 'P' rises from P_1 to P_2 . Had the P remained at P_1 the shift of AD from AD_1 to AD_2 would have risen real output?

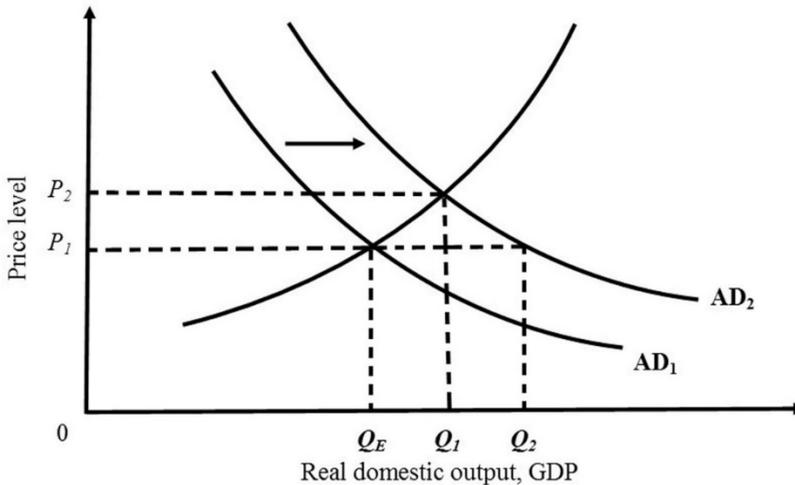


Fig. 12.7 An increase in aggregate demand that causes demand pull inflation

The rise of AD from AD_1 to AD_2 causes demand-pull inflation, due to rise in the P from P_1 to P_2 . It causes a positive GDP gap of Q_1 minus Q_e . The rise of the P decreases the volume of multiplier effect. If the P is consistent at P_1 then the rise in AD from AD_1 to AD_2 would enhance output from Q_E to Q_2 and the multiplier would be at full strength. But, because of the rise in the P , real output rises only from Q_E to Q_1 and the multiplier effect is reduced.

12.6.2. Declines in AD: Recession and Cyclical Unemployment

Fall in AD shows the other extreme of business cycle, recession and cyclical unemployment rather than beyond optimal level of production. In Figure 12.8, decline in AD as a backward shift from AD_1 to AD_2 .

If it is perceived in some other way, if P goes up as these does not always decline oftenly. Deflation a fall in P happen but not oftenly in an economy. Consider, there is an economy (Figure 12.8), and it shifts from a to b , rather than moving from a to c , resultantly, there is decline of production from Q_E to Q_1 while holding price same. Here, AS curve is horizontal at P_1 to the leftward of Q_1 as denoted by the dashed line (Figure 12.8). This decline of real output from Q_E to Q_1 set up a recession and then less labour is needed to produce less output and thus cyclical unemployment arises. The space between Q_1 and Q_E is a negative GDP gap, the quantity by which actual production declines. Figure 12.8 also depicts that without a decrease in the 'P', the multiplier is at strength. With the 'P' stuck at P_1 , real GDP declines by $Q_E - Q_1$ it is like full leftward shift of the AD curve.

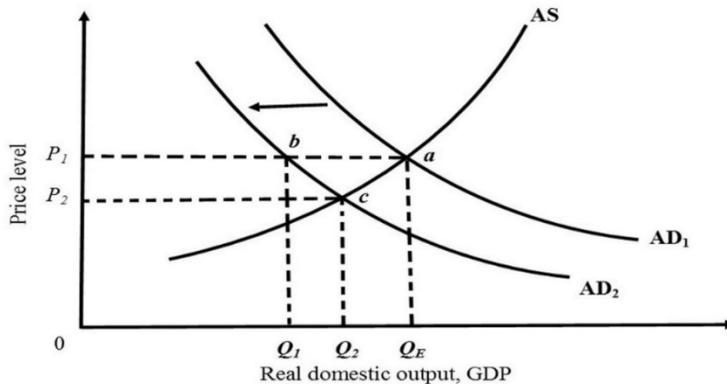


Fig. 12.8 A decrease in aggregate demand that causes a recession

If the P is moving downward and fixed at P_1 then decline of AD from AD_1 to AD_2 will shift the economy back from a to b along the horizontal dashed line and reduce real production from Q_E to Q_1 . Ultimately, there would be unused inputs, cyclical unemployment and a negative GDP gap in the economy. If the P is flexible and downward, the decrease in AD will move the economy, as it is depicted in the figure, from a to c point.

12.6.3. Declines in AS: Cost-Push Inflation

Consider, there is a serious terrorist attack on oil refineries and oil supply is seriously disrupted, and oil prices rises 3 times. Due to elevated oil price, general price level in the whole economy will go up and AS curve of Pakistan would decrease, say from AS_1 to AS_2 as shown in the Figure 12.9. This rise in the P would be cost-push inflation. The impact of decline in AS are not good. When AS moves from AS_1 to AS_2 the economy shifts from a to b . The P increases from P_1 to P_2 and productions

decreases from Q_f to Q_1 . In this way, along with the cost push inflation, a recession happens.

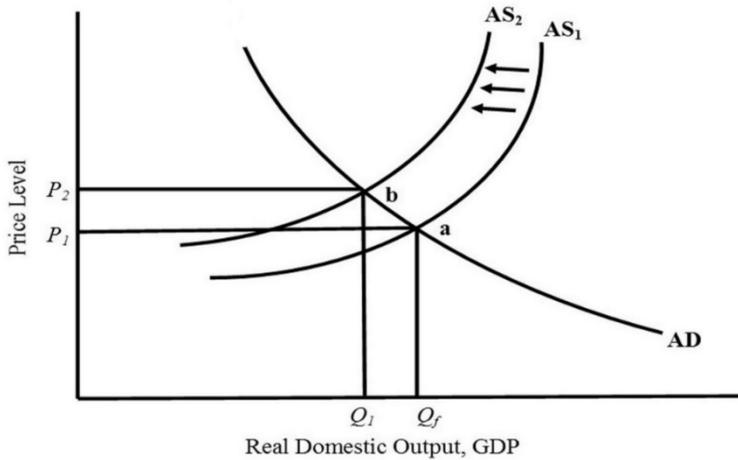


Fig. 12.9 A decrease in aggregate supply that causes cost-push inflation

A leftward movement of AS from AS_1 to AS_2 rises the P from P_1 to P_2 and causes the cost push inflation. Production declines and a negative GDP gap happens.

12.6.4. Rises in AS: Full Employment with Price-Level Stability

Normally, rise in AD from AD_1 to AD_2 would move the economy from along AS_1 . Real output would expand to Q_f and inflation would result (P_1 to P_3). But if rises in productivity, shift the AS curve as from AS_1 to AS_2 . It will experience strong economic growth (Q_1 to Q_3), full employment and small inflation (P_1 to P_2).

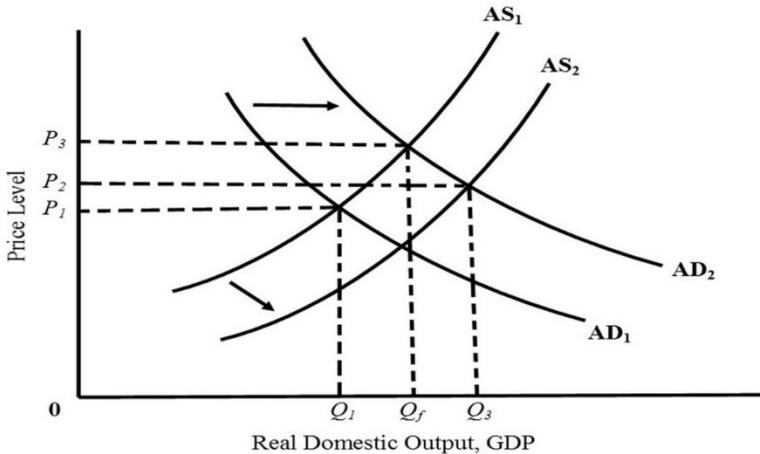


Fig. 12.10 Growth, full employment, and relative price stability

12.7. Business Cycle

It shows the stages of growth and declines in an economy and called trade cycle. The trade always not remain in steady stage. In the economies, there are continuous peaks and troughs due to different economic activities. This cyclical movement both upwards and downwards is oftenly regarded as the trade cycle. This is comprised of time periods of good trade featured by increasing P and high rate of employment, varying with time periods of bad trade featured by declining P and high unemployment rate. On the other hand, it is an oscillation of the economy featured by time of welfare followed by periods of depression.

12.7.1. Stages of the Business Cycle

There are four stages that explain this cycle. At any time period economy is in one of them,

12.7.1.1. Prosperity Stage

When there are high production, income, employment, prices and profits, there is increase in living condition of in the society. Some of the properties of this stage are described in the below,

- 1) Increase in income and trade
- 2) Increase in effective demand
- 3) Increase in income and employment
- 4) Rise in interest rates
- 5) Inflation
- 6) Increase in expansion of bank credit
- 7) Overall business optimism
- 8) Increase in marginal efficiency of capital and investment.

Due to optimal production, there is rise in GNP. Due to more economic activities in the economy P goes up. Economic activities touch their boom conditions in this period.

12.7.1.2. Recession Stage

This is opposite to the stage discussed prior and in phase economic activities have low speed. When demand starts decreasing nation should give up its long-term plans like overproduction and future investment. There is a continuous decrease in the yields income, employment, prices and profits. The traders lose confidence and become pessimistic and they investment less in the business. Both, banks and the people attempts to attain more liquidity and in this way credit start contracting. Expansion of trade stops and stock market star failing. There comes problem of unemployment as well. The rise in unemployment results a quick decline in the income and AD. But this condition prevails for a short period.

12.7.1.3. Depression Phase

When there is a consistent decline of production, income, employment, prices and profits, there is a decline in the living standards of people. The characteristics of depression are,

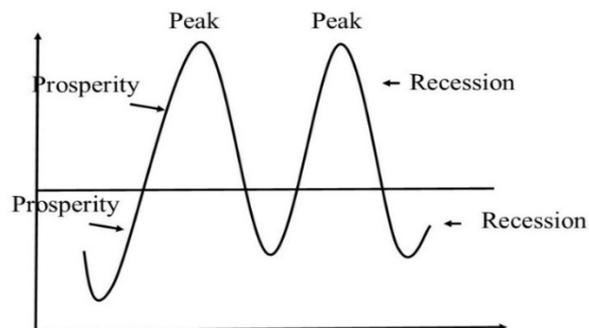
- 1) Decrease in volume of output and trade.
- 2) Decrease in income and rise in unemployment.
- 3) Decrease in consumption (C) and demand.
- 4) Dec in interest rate.
- 5) Deflation
- 6) Contraction of bank credit.
- 7) Business pessimism.
- 8) Fall in marginal efficiency of capital and investment.

In depression, factors of productions are not optimally employed and GNP is at low level. The generally economic functions are at low level, and these result a decrease in P and profits up to the economy reaches its trough.

12.7.1.4. Recovery Phase

It is basically a turning point from the depression to expansion and it is also called as revival phase. During this stage, there are extensions and increase in economic functions. When demand starts increasing, production increase and this results in rise of I . There is a consistent increase in the output, income, employment, prices and profits. The traders and carporators again gain confidence and become optimistic toward economy. They start investing in the business and economic activities start again. The inspiration of increase in I brings about recovery of the economy. The banks start increasing their credit, business expansion takes place and stock markets are functional. There is decrease in rate of unemployment, increase in output and income, ultimately; AD, prices and profits increase overtime. Revival happens slowly into the economy, and the business cycle is repeated. So, during the expansionary phase, there is inflation and during the contraction, there is a deflation.

Fig. 12.11 Four stages of the business cycle



12.7.2. Characteristics of Business Cycle

Cyclical oscillations are wave like shifts. Variations are recurring in nature. They are abrupt these do not occur repeatedly. They transpire in such total variables as productions and profits. These indicators move in same time and in same directions but with different rate of change. Some industries observe a lot of changes in production and employment but relatively less variation in prices. On the other hand, commodities of perishable goods observe a lot of changes in their output prices but relatively small change in production and employment. Business cycles have no seasonal variations like rise in retail trade during festive seasons. There are both upward and downward movement. Therefore, cycles are recurring fluctuations in total employment, earnings, productivity and P levels.

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