

Kaldor and Goodwin's Models of Business Cycles

Kaldor's theory of the trade cycle appeared in 1940 just four years after the publication of the General Theory in 1936. It is a comparatively simple and very neat theory built directly on Keynes' saving- investment analysis. Although Keynes did devote a lot in the General Theory 'Notes on the Trade Cycle' and laid the basis for further discussion on the subject yet he did not develop a systematic theory of the trade cycle as such.

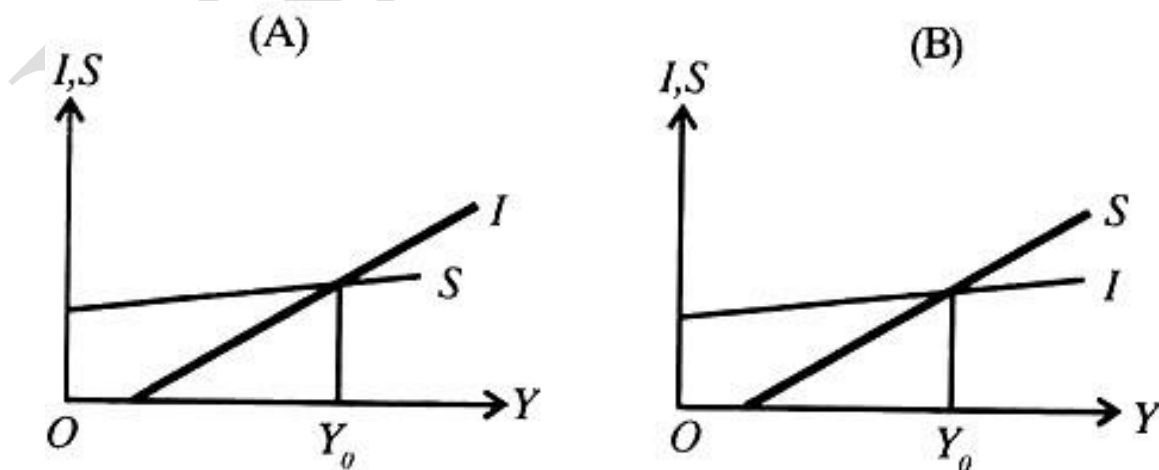
His theory of the determination of the level of income did not take into consideration the theory of the fluctuations of income, which received at his end a passing and scant attention.

Nicholas Kaldor built a model of the trade cycle based on the Keynesian terminology of saving and investment. He showed that the cycle is the result of pressures that push the economy toward the equality of ex-ante (anticipated, expected or planned) saving and investment. In fact, it is the difference between ex-ante saving and investment that leads to a cycle.

Assumptions:

1. Saving and investment are taken as non-linear function.
2. Theory introduced another important variable i.e. capital stock (K) that plays a major role in cyclical changes in S and I.
3. Saving is the direct function of the capital stock and investment is an inverse function of the capital stock. It means that at any level of income if the stock is large savings will be higher, on the other hand, for any level of income, greater the stock of capital smaller will be the amount of investment.

Explanation:



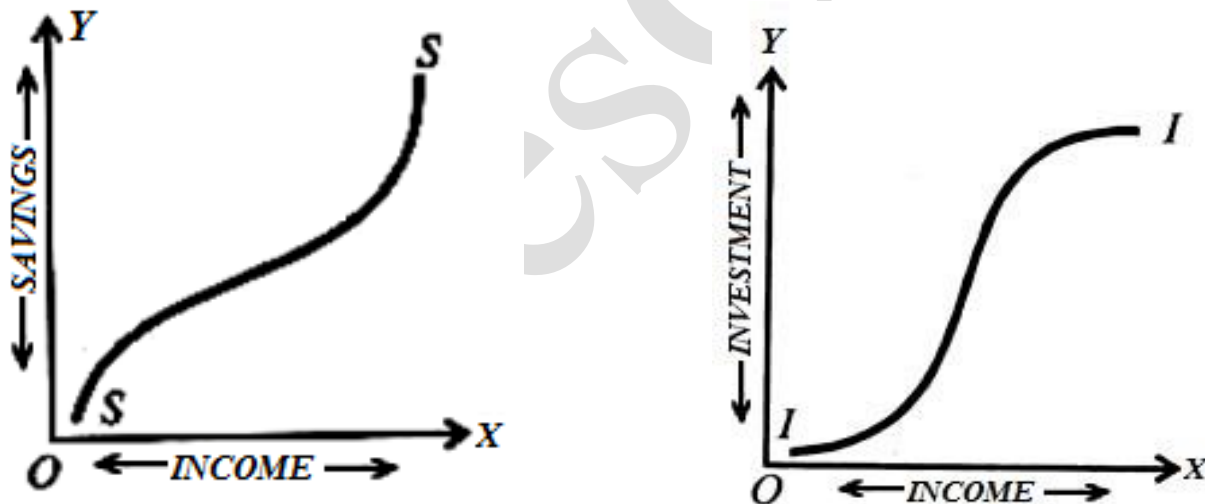
In figure A; Y_0 is equilibrium where $I = K$ such a position reflects that after point Y_0 , $I > K$ which means:

- There is stable equilibrium.
- Such a position leads to limitless expansion.
- Hyper inflation (which is not good).

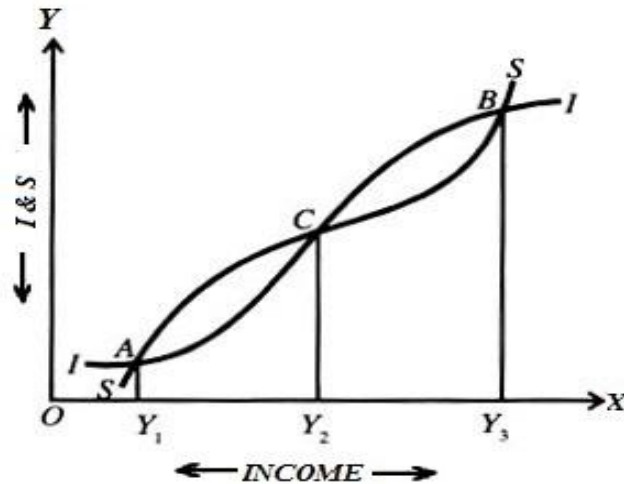
In figure B; after point Y_0 $S > I$ which means:

- Downward movement of the left of Y_0 which will lead to
 - zero output
 - collapse of economy

Kaldor discards S and I function because they fail to produce a trade cycle. He adopts non-linear saving and investment functions. For this he introduced two diagrams:



The cycle is visible when the non-linear saving and investment curves are brought together:



The figure shows multiple equilibrium positions A, B and C. A and B are stable positions only in short run. Between C and B and below C is an unstable point which shows $I > S$ means it will lead to rise in income level. Between A and C; $S > I$, it will lead to fall in income.

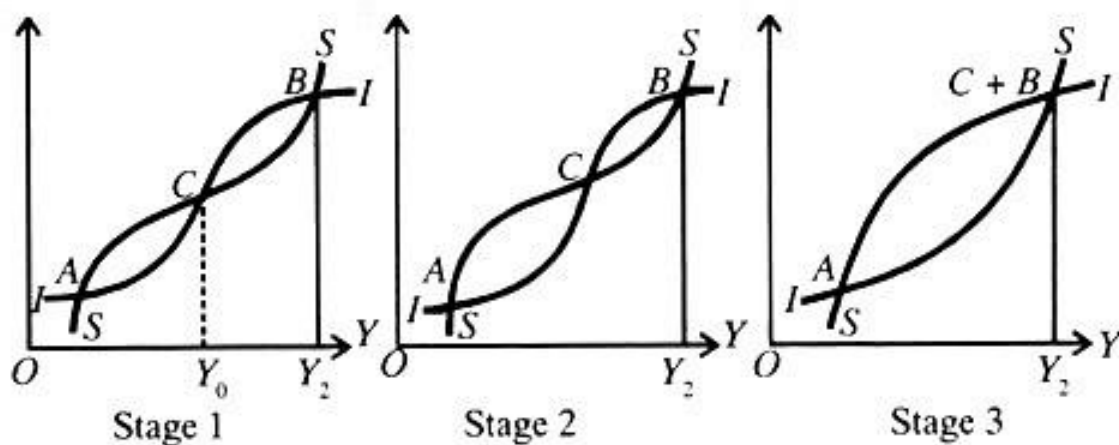
But A and B are stable positions only in short run. It is unstable in long run. For this Kaldor introduced capital stock which affect both the relationship between saving and investment. He takes S and I as function of income and capital stock.

$$S = f(Y, K)$$

$$I = f(Y, K)$$

There are two phases' expansion and contraction in this model.

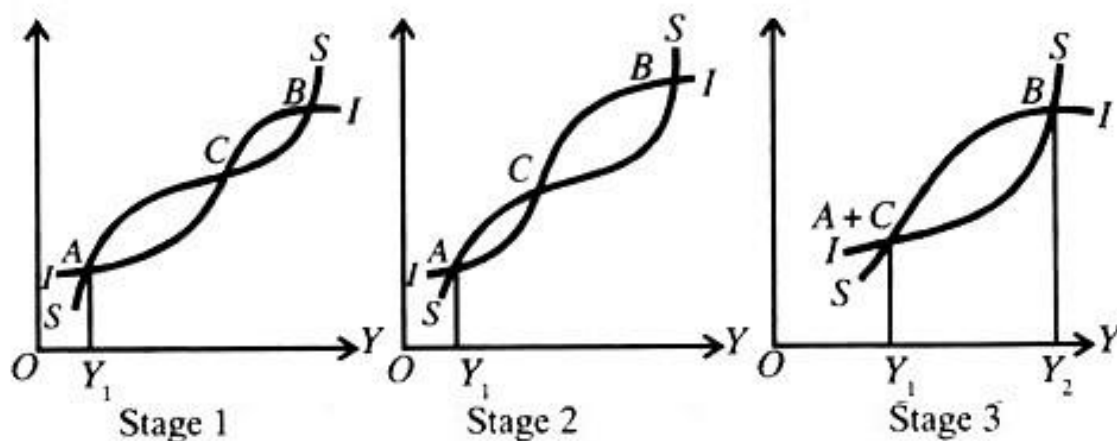
Expansion Phase:



When $I > S$, expansion path rate of investment increases leads to rise in capital stock. But as the capital stock increases, MEC declines and investment curves slopes downward. At same point/level capital stock increases it raises income therefore saving rises. Thus, saving curve shifts or rise.

So downward shift of I and upward shift of S continues till C and B coincide. At this point, $S > I$. This is equilibrium positions in both directions so it will lead to downward movement of the economy till point A is reached.

Contraction Phase:



In contraction we start from point C (downward). It is point where there is low level of income. But over the long run at such low level of income, the capital stock decreases due to excess capacity and I curve shifts upward simultaneously saving falls which will shift curve downwards which helps in bringing point C nearer to A .