Investment

- Investment (I): Refers to ‘addition to the existing capital stock’ (ΔK), such as, buildings, inventories, plant and equipment, etc.
- It is the most volatile components of aggregate demand.
- It is a flow concept.

- $I_t = \Delta K_t = K_t - K_{t-1}$. Inv. Adds to the productive capacity of the economy.

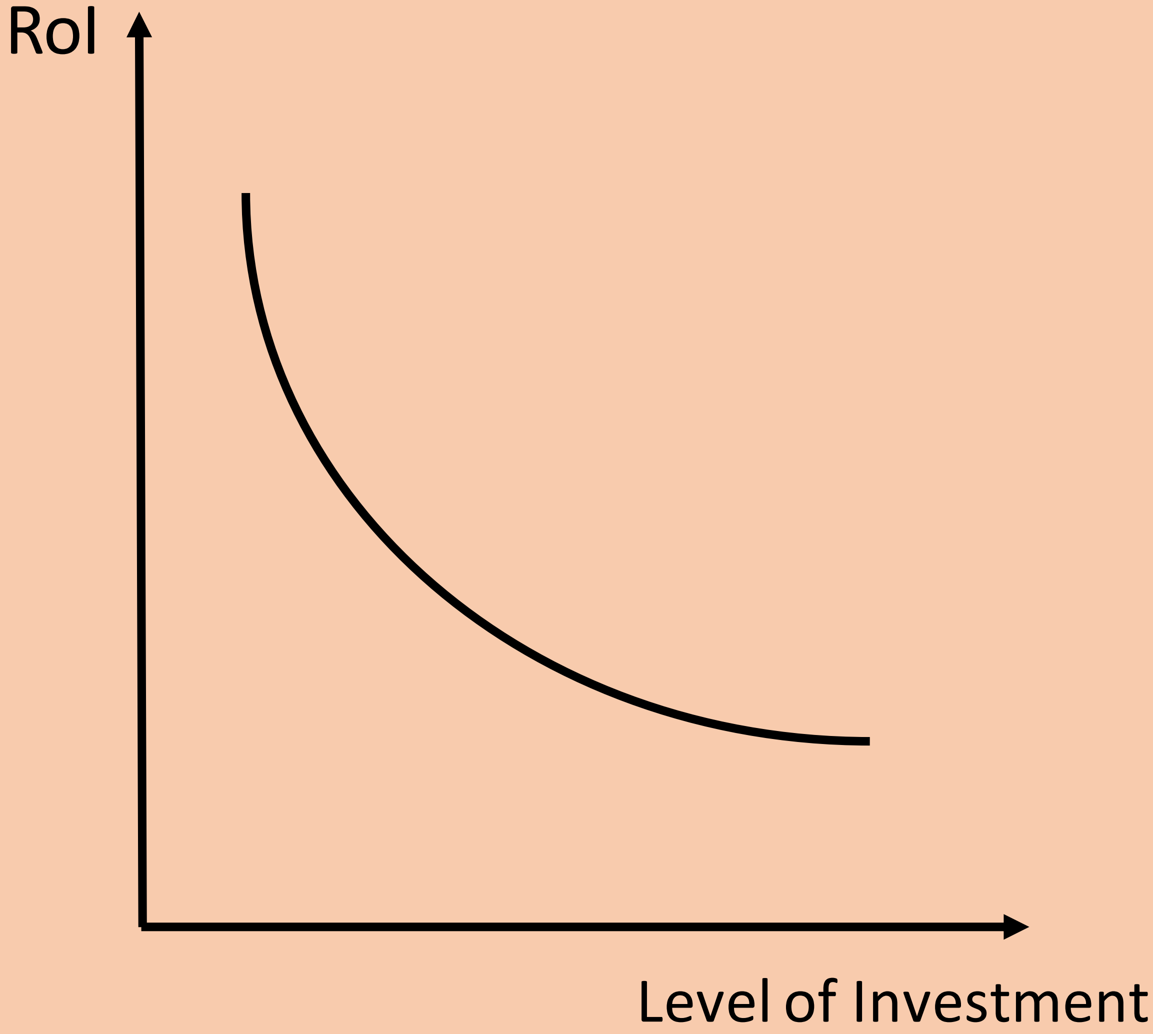
Determinants of Investment:

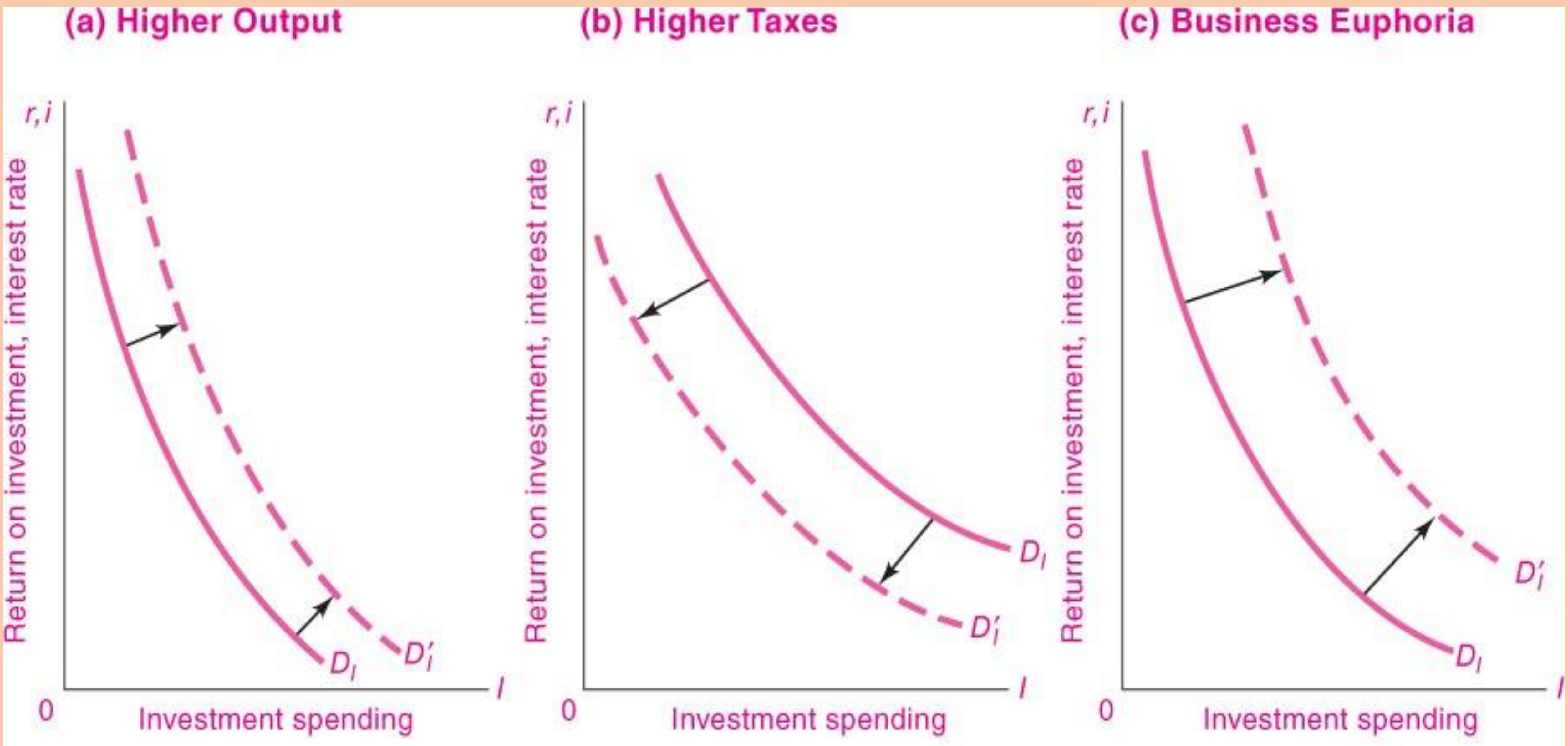
1. Cost of borrowing or interest rate: A higher interest rate can dampen investment, other things remaining the same or a lower interest rate can promote investment, other things remaining the same.
2. Economic activity: A higher level of income can generate more investment than a lower level of income. Thus, investment can be induced by income. This is known as accelerator principle. Accelerator A = $\Delta I / \Delta Y$, this is inverse of investment multiplier. The interaction of multiplier and accelerator can set a 'virtuous' circle of economic activity.
3. Expectations: Optimistic expectations boost investment and pessimistic expectations reduce investment.
4. Govt policies, such as, tax on profits of firms (corporate tax). A high tax rate reduces investment and a low tax rate boosts investment.

- 1, movement factor 2, 3, 4 Shift factors in investment demand schedule.

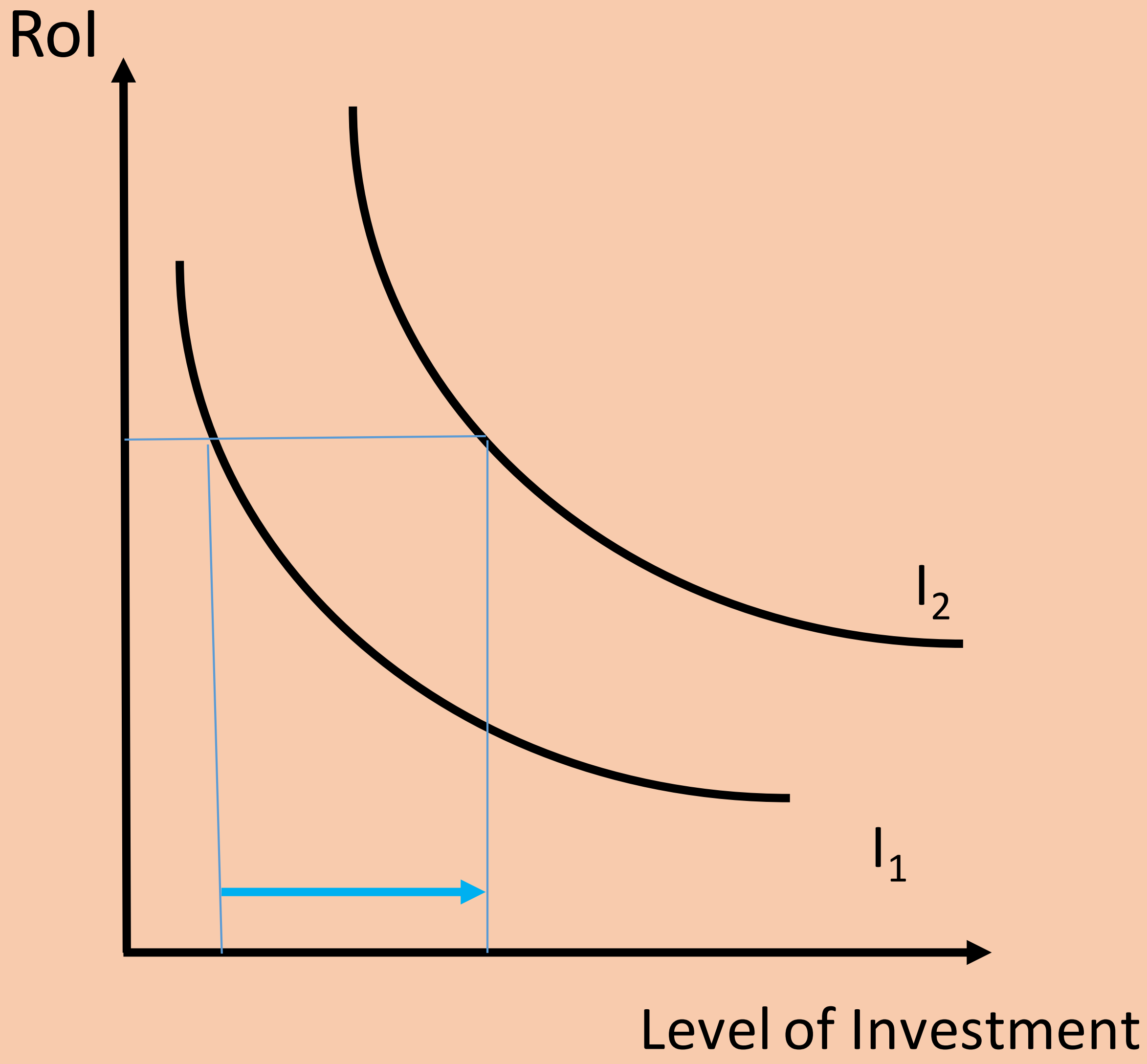
Relationship between Investment and RoI

- For a given level of rate of return on capital, the **level of investment** will be low at a higher **rate of interest (RoI)** than at a lower rate of interest.
- Firms will borrow and invest more at a lower rate of interest for a given level of rate of return on capital.
- Hence the level of investment (I) will be inversely related to the rate of interest.
- Alternatively, if there are different rates of return on various projects, some projects will not be profitable if interest rate is increased.



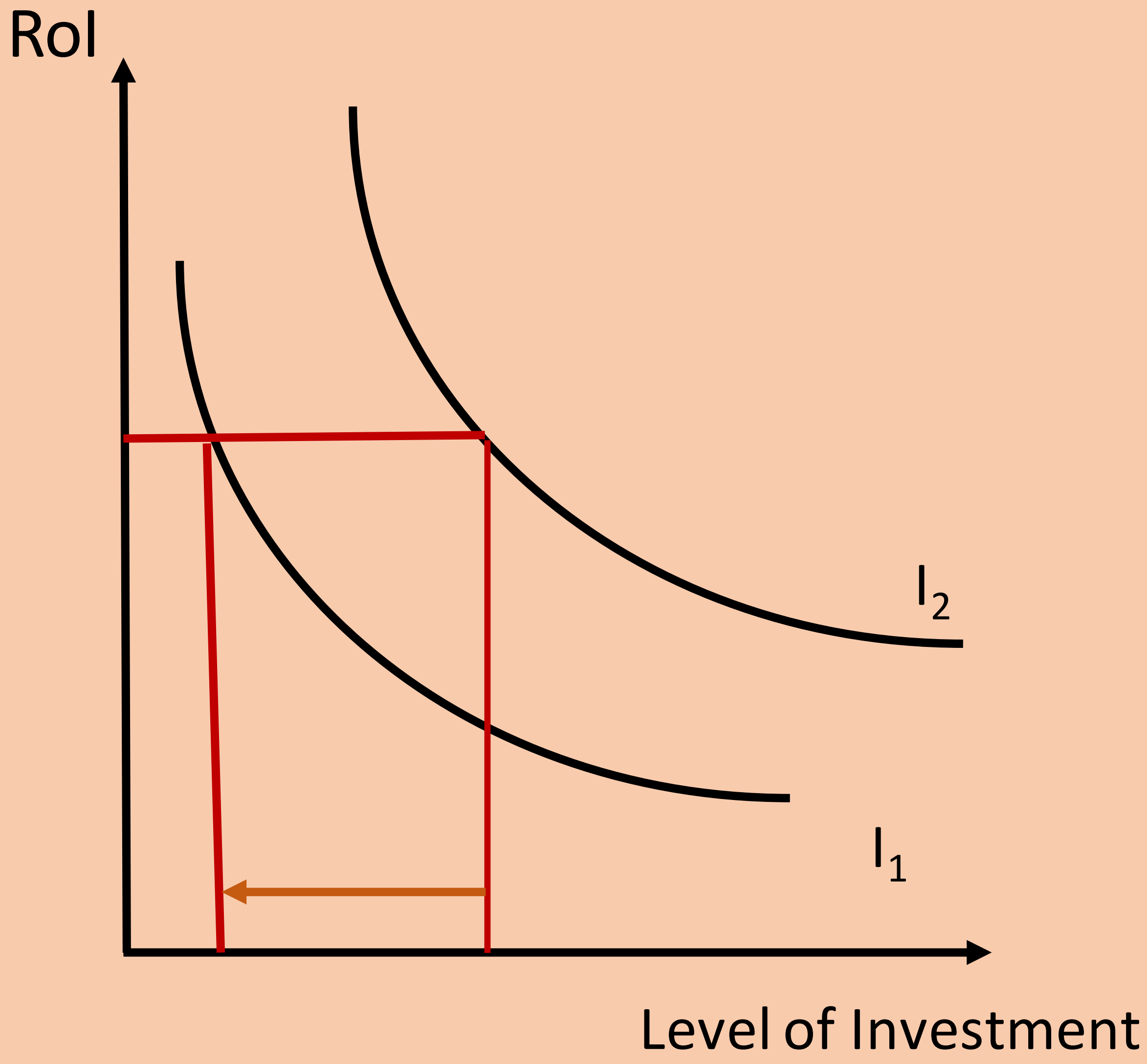

(a) Higher Output
(b) Higher Taxes
(c) Business Euphoria
r, i
Return on investment, interest rate
D_I
D'_I
0
I
Investment spending

Relationship between Investment and Output



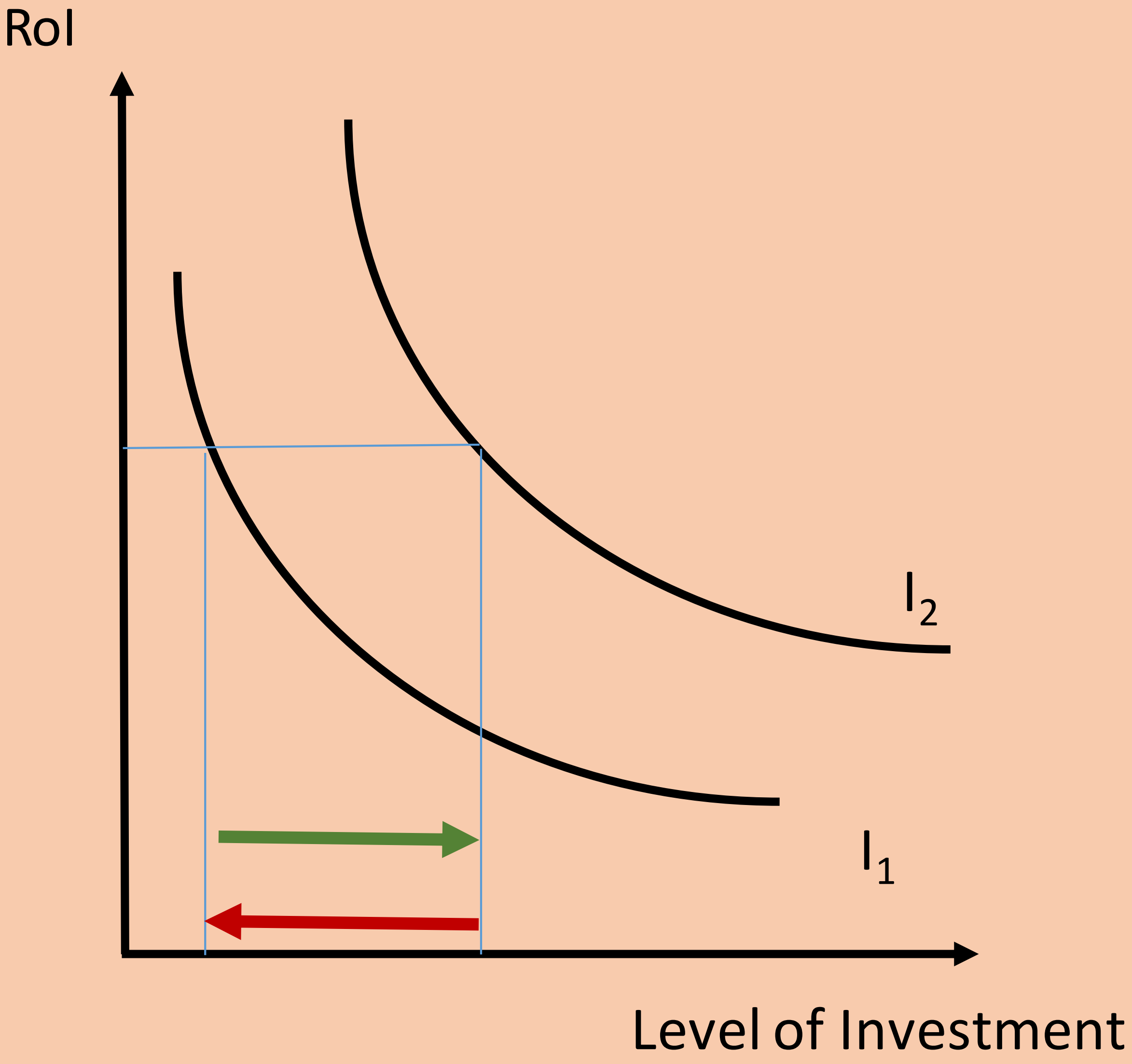
- A higher output results in shift in investment curve from I_1 to I_2, due to accelerator effect.
- Accelerator effect = $\Delta I / \Delta Y$

Relationship between level of taxes and Investment



- A higher level of taxes results in shift in investment curve from I_2 to I_1, as the return to the investor on his capital falls.

Relationship between Investment and Expectations



- Optimistic business expectations will shift the Investment curve (from I_1 to I_2) to the right, which means with the same level of interest rate, firms will invest more. As against it, when business expectations are pessimistic, the investment curve will shift to the left (from I_2 to I_1), i.e., for the same level of interest rate, firms will invest less.