Recall the following from the earlier lectures.

(a). The consumption function:

\[ C = a + b \times YD \]

where \( a > 0 \), and \( 0 < B < 1 \).

Where \( \alpha = (a - bT + b \tau) \), and \( B = b(1-t) \)

(b). The planned aggregate expenditure function:

\[ AE = C + I + G + (X - M) \]

\[ = \alpha + BY + I + G + X - mY \]

\[ = A + (B - m)Y, \]

Where, \( A = \alpha + I + G + X \)

We can think of \( A \) as autonomous planned expenditure, and \((B - m)Y\) as expenditure planned out of the real income of households (i.e., RGDP).

(See Fig. 10.5, Parkin, page 236)

**The Demand Side of the Economy**

*Recall:* The price level is fixed in this economy.

Given fixed prices,

- We have managed to find a relationship between the planned aggregate expenditure in the economy & RGDP.
- But planned aggregate expenditure is nothing but the aggregate amount of goods & services that agents in the economy plan on buying, i.e. their demand for goods & services.
- So we can basically look upon the \( AE \) function as a relationship between the demand level for goods & services in the economy and the RGDP of the economy (i.e. it shows the amount of goods & services that *would be demanded* by households, firms, government, & ROW in this economy for *VARIOUS* levels of RGDP).
- So the \( AE \) function gives us what we shall call the **Aggregate Demand Side** of this economy.
The Supply Side of the Economy

- The **aggregate supply** in the economy is the real value of goods & services produced in the economy, i.e. the real value of output in the economy.

- But the real value of output produced in the economy is given by the RGDP level of the economy.

- Let the level of RGDP produced in the economy be given by $Y^*$. 

Macroeconomic Equilibrium

As we have seen thus far, in order to have equilibrium we need to have:

*Aggregate Output Demanded = Aggregate Supply of Output*

So in equilibrium:

$$AE = Y^*$$

Now we notice something: $AE = A + (B - m)Y$

But in equilibrium, the $Y$ seen in the $AE$ function should equal $Y^*$!!

So in equilibrium:

$$Y^* = AE$$

$$Y^* = A + (B - m)Y^*$$

We can solve for equilibrium $Y^*$ from the above equation:

$$Y^* = \frac{A}{1 - B + m}$$

$$= \frac{\alpha + I + G + X}{1 - b(1-t) + m}$$

$$= \frac{a - bT + \tau + I + G + X}{1 - b(1-t) + m}$$

$$= \frac{Autonomous planned expenditure}{1 - MPC(1 - MPT) + MPI}$$

$$= \frac{Autonomous planned expenditure}{1 - MPC+ MPC. MPT + MPI}$$

Think: How does a change in each component of $A$ and $B$ change $Y^*$? What happens when MPI changes? Which economic agent(s) control(s) these various components?

Also think about how changes in these various components affect the demand side of the economy.

*The Keynesian Cross Diagram*

(Figure 10.6, Parkin Ch. 10, page 238): Understanding this diagram is essential.

Think: Why does the 45-degree line always cut the AE curve? What guarantees this?

Note: Only at the equilibrium level of RGDP is output demanded (planned expenditure) equal to output supplied in this diagram. At all other points this condition is not satisfied.