

Review Notes – National Income

- What determines total output in the economy?
 - The resources available – assume $L = \bar{L}$ and $K = \bar{K}$.
 - The production function
 - What is that?
 - $Y = f(L, K)$
 - $Y = \text{nominal GDP}$
 - How does technology affect production?
 - $Y = f(\bar{L}, \bar{K}) = \bar{Y}$ - What does this mean?
-
- How is Y distributed to the factors of production?
 - Assuming competition and fixed supply of inputs ($L = \bar{L}$ and $K = \bar{K}$).
 - $P \cdot MP = MFC$ for both inputs
 - How are these results similar to the isoquant/isocost approach we used in the micro section?
 - $\pi = Y - MP_L \cdot L - MP_K \cdot K$ or $Y = \pi + MP_L \cdot L + MP_K \cdot K$. What is the interpretation of these equations?
 - Euler's Theorem – with constant returns to scale (what does that mean?) then: $f(K, L) = MP_L \cdot L + MP_K \cdot K$.
 - What is the implication of Euler's Theorem? (Hint: what happens to profit?)
 - What is economic $\pi = ?$
 - What is accounting $\pi = ?$
 - How does the plague example from the book support this interpretation?
-
- What is Aggregate Demand for goods and services?
 - $GDP = C + I + G + NX$
 - Assume a closed economy $\Rightarrow NX = 0$
 - Consumption
 - $Y_d = Y - T$
 - $C = C(Y - T)$ or $C = C(Y_d)$.
 - What is the marginal propensity to consume?
 - $C = C_A + b \cdot Y_d$
 - $C_A = \text{autonomous consumption (intercept of consumption function)}$
 - $b = \text{MPC (slope of consumption function)}$
 - Investment
 - Why does investment depend on the interest rate?
 - Which interest rate, nominal or real, does investment depend on? Why?

- How does r affect investment?
 - Government Spending
 - What are the three types of government spending (hint: focus on types of governments)?
 - Which government spending is included in G and which is not?
 - Budgets
 - When is the government budget balanced, in deficit or in surplus?
 - G and T are assumed to be exogenous – why? What does that mean?
 - $G = \bar{G}$ and $T = \bar{T}$.
-

- Equilibrium in the Macro Economy
 - What do we know from the demand side?
 - $Y = C + I + G$
 - $C = C(Y - T)$
 - $I = I(r)$
 - $G = \bar{G}$
 - $T = \bar{T}$
 - What do we know from the supply side?
 - $Y = f(\bar{L}, \bar{K}) = \bar{Y}$
 - Combine Demand and Supply equations to get
 - (1) $\bar{Y} = C(\bar{Y} - \bar{T}) + I(r) + \bar{G}$
 - What is the equilibrating variable in equation 1?
 - How does r create equilibrium?
 - Rewrite (1) to get: $\bar{Y} - C(\bar{Y} - \bar{T}) - \bar{G} = I(r)$
 - $Y - C - G = S$ so it must be the case that equilibrium requires
 - $\bar{S} = I(r)$ or
 - $(Y - T - C) + (T - G) = I$
 - $Y - T - C = \text{private saving}$
 - $T - G = \text{public saving}$
 - Know the graph and how the interest rate creates equilibrium (Hint: this is basically demand and supply of loanable funds.)
-

- The impact of fiscal policy and other exogenous changes in GDP
 - What is fiscal policy?
 - What happens with an increase or a decrease in G ?
 - Define crowding out and how it occurs
 - Does C change when G changes?
 - Does I change when G changes?
 - Be sure that you understand exactly how the crowding out occurs and which sector of the economy is affected.

- What happens with an increase or a decrease in T ?
 - Does crowding out occur with this change?
 - Does C change when T changes?
 - Does I change when I changes?
 - What happens with an increase or a decrease in I ?
 - Why does $I(r)$ change?
 - Given the above assumptions, if $I(r)$ shifts right does equilibrium I increase?
 - How does the above answer change if C is also a function of the interest rate ($C = C(r)$)?
-