ECO 403 – L0301
Developmental Macroeconomics

Lecture 2
The Role of Aggregate Demand in the Process of Growth

Insufficient Aggregate Demand and Recessions

- How to increase ***Aggregate Demand*** when the economy is in a recession?
- Advocates of ***fiscal austerity*** argue that ***fiscal consolidation*** will increase private sector ***confidence***
  - Therefore, ***consumption*** and ***investment*** will rise
- But ***higher taxes*** and/or ***lower government spending*** will have a ***contractionary effect***
  - Therefore, private sector confidence will not increase
- If ***consumption*** and ***investment*** will not rise in the short-run, then ***government spending*** must be increased
  - Thus ***fiscal consolidation*** should wait until the economy recovers

Fiscal Policy and the Great Recession (N. Roubini)

- What is the relationship between levels of ***public debt*** and ***economic growth***?
- What are the ***causes*** of ***high deficits*** and ***debts***?
- What is the size of ***fiscal multipliers***?
- What is the risk of ***fiscal dominance***?
- How to reduce a ***debt overhang***?
- What is the optimal pace of ***fiscal consolidation***?

Aggregate Demand and Long-Term Economic Growth

- Long-term ***economic growth*** is determined by ***Aggregate Demand***
  - It does not depend on ***previous savings*** or on ***availability of means of production***
  - It depends on ***availability of credit*** and on the existence of ***lucrative investment opportunities***

- Expansion of ***autonomous*** components of ***Aggregate Demand*** creates lucrative investment opportunities

- Therefore, long-term ***economic growth*** is a function of the ***rate of investment*** (i.e., of the ***increase*** in the ***capital stock***)

The Autonomous Component of Aggregate Demand

- ***Domestic consumption*** cannot drive long-term growth unless:
  - The ***share of wages*** in total income continuously increases over time
  - Consumers continuously take on more ***debt***
- ***Public expenditure*** cannot drive long-term growth either
  - It will cause ***inflation*** and ***balance-of-payment crises***
- The autonomous component of ***Aggregate Demand*** that drives long-term growth is ***exports***
  - An increase in external demand will cause ***export-oriented investment*** to increase

External Constraints to Growth

- An increase in ***autonomous exports*** causes ***investment*** to increase, which causes ***growth***
  - ***Savings*** thus increase as ***income*** increases
  - Therefore, ***investment*** determines ***savings*** and not the other way around

- But potential growth might not be realized due to ***external constraints*** (i.e., ***balance-of-payments crises***)
  - If the country exports ***primary goods***, because of relative ***income elasticities*** of exports and imports
  - If the country exports ***manufactured goods***, because it might experience ***Dutch disease***

Supply-Determined Growth

- ***Neoclassical growth models*** postulate that ***supply conditions*** determine long-term growth
  - Economic growth depends on the rates of growth of ***capital***, ***labour***, and ***productivity***
  - Whether the demand for a good exists or not is not relevant
  - Aggregate Demand only explains the degree of ***utilization*** of ***productive capacity***

- Therefore, ***Say's law*** remains valid for neoclassical theory
  - The ***accounting identities*** $Y = Wages + Profits$, $Y = C + S$, and $Y = C + I$ are transformed into ***economic laws***

The Solow Growth Model

- $Q = A\,F(K, L)$
  - Where Q is real output, A is total factor productivity, K is the stock of physical capital, and L is the quantity of labour

- $F(K, L)$ is assumed to be a ***linear homogeneous*** function
  - Constant returns to scale

- ***Perfect competition*** is assumed in all markets
  - The price of factors of production is equal to the value of their marginal products

- ***Technological progress*** is assumed to be ***exogenous***

The Solow Growth Model (cont'd)

- ***Q* = *A F*(*K*, *L*)**
- The rate of ***growth*** is thus:

$$\frac{\Delta Q}{Q} = \frac{\Delta A}{A} + \alpha_K \frac{\Delta K}{K} + \alpha_L \frac{\Delta L}{L}$$

where α_K and α_L are, respectively, the shares of ***capital*** and ***labour*** in total ***income***

- The ***known*** variables are not enough to enable an estimation of the potential ***growth*** rate
- Solow's solution was to assume the ***growth*** rate of ***total factor productivity*** to be a ***residual***

Other Shortcomings of the Solow Model

- Economy's ***past behaviour*** determines the estimate for potential growth

- How do we measure ***physical capital***?

- The value of the stock of capital is not independent of the ***distribution of income*** between wages and profits
  - Not possible to estimate the ***value*** or the ***contribution of capital*** to long-term economic growth

- Temporary shocks have a permanent effect on real output (***path dependency***)

Growth Determined by Aggregate Demand

- ***Path dependency*** shows that growth cannot be independent of ***Aggregate Demand***
- Further, no good will be produced unless there exists an ***expected demand*** for it
- ***Technological progress*** also depends on ***demand***
- ***Capital goods*** are produced if there is a ***demand*** for them
  - Availability of capital is thus not independent of demand
- The fundamental issue is not the ***allocation of resources***, but rather the ***pace*** at which these resources are ***created***

Investment and Long-Term Growth

- ***Investment*** increases the ***productive capacity*** of the economy

- ***Investment*** depends on two main factors:
  - The opportunity ***cost of capital***
  - The ***profit opportunities*** perceived by enterprises, which depends on expectations of future ***demand***

- ***Investment*** adjusts to the expected growth of ***demand*** as long as the ***expected rate of return*** is higher than the ***cost of capital***
  - Thus the availability of capital is not an obstacle to growth

- Orthodox theory opposes the idea of ***demand-led growth*** on the grounds that ***investment*** depends on ***previous savings***

Savings and Investment

- ***Investment*** requires the availability of ***credit***, which depends on the creation of ***liquidity*** by the financial system
  - If banks are willing to extend their credit lines, enterprises can implement their investment projects
- Once the ***investment*** is carried forward, ***income*** is created
  - This income generates further ***Aggregate Demand*** (***consumption***) and there is a ***multiplying*** effect
  - As ***income*** increases, ***savings*** also increase
- Therefore, ***savings*** always adjust to the level of ***investment*** desired by entrepreneurs
- ***Obstacles*** to the expansion of productive capacity have a ***financial nature*** (i.e., ***cost of capital*** higher than ***expected profit***)

Technological Progress and Growth

- If ***technological progress*** is considered ***exogenous***, then the pace at which technology expands will limit ***growth***
  - But technological progress is not exogenous
- Since ***technology*** is usually embedded in ***physical capital***, the pace of introduction of ***innovation*** is largely determined by the pace of ***capital accumulation***
- Not possible to distinguish between increases in ***productivity*** due to ***technological*** progress or to higher ***capital/labour*** ratio
- Therefore, greater ***capital accumulation*** induced by greater ***demand*** leads to:
  - Faster pace of ***technological*** progress
  - Labour ***productivity*** growth

Investment, Technological Progress, and Economic Growth

- In the long run, the basic determinant of output is ***Aggregate Demand*** (which encourages ***investment*** and ***technological*** progress)

- The rate of ***investment*** depends on the existence of lucrative investment ***opportunities*** (which in turn depend on ***Aggregate Demand***)

- If there is demand, enterprises will increase production and productive ***capacity*** (as long as the ***profit*** margin is high enough)

- ***Investment*** can be oriented to the ***domestic*** or ***foreign*** market depending on the growth of the ***domestic*** or ***external*** demand

Autonomous Aggregate Demand

- Growth in ***Aggregate Demand*** depends on increases in ***consumption***, ***investment***, ***government*** spending, and ***exports***

- ***Consumption*** depends largely on total ***wages***, which in turn depend on the distribution of ***income*** and the level of ***employment***
  - Therefore, ***consumption*** is an ***endogenous*** and not an ***exogenous*** variable

- ***Investment*** largely depends on the level of ***income*** and thus is also an ***endogenous*** and not an ***exogenous*** variable

- Therefore, there are only two ***exogenous*** components of Aggregate Demand: ***government*** spending and ***exports***

Aggregate Demand and Economic Growth

- An increase in an ***exogenous*** component of ***Aggregate Demand*** would cause the economy to expand
  - It would cause ***income*** to increase
  - It would create a ***multiplying*** effect by also causing the ***endogenous*** components of Aggregate Demand to expand

- In the ***short run***, increases in ***consumption***, ***investment***, ***government*** spending, and ***exports*** will cause the economy to expand

- In the ***long run***, only increases in ***exports*** will cause the economy to expand
  - Therefore, the ***export*** growth rate is the ***exogenous*** variable par excellence in the determination of economic ***growth***