Variable Net Exports and Algebra of Income and Expenditure

CHAPTER 10

Appendixes A and B

Variable Net Exports and the Multiplier

- **A more realistic approach:**
  - **Net exports varying inversely with income**
- **The formula for the multiplier should include the marginal propensity to import, MPM**
  - ***The fraction of each additional dollar of disposable income that is spent on imported goods***
- **Spending multiplier = 1 / (MPS + MPM)**

Algebra of Income and Expenditure

- **Real GDP demanded for a given price level occurs:**
  - **Income=planned spending**
  - **Y = C + I + G + (X – M)**

A More Realistic Consumption Function

- **C = a + b(Y – NT), or**
- **C = a – bNT + bY**

- **Where**
  - **a – bNT is autonomous consumption**
    - **Consumption that is independent of income**
  - **bY is induced consumption,**
    - **Portion of consumption generated by the level of income in the economy**

General Model

- **Since income must equal output:**

Y = a – bNT + bY + I + G + (X – M)

- **Which can be rearranged to yield**

$$Y = (\frac{1}{1-b})(a - bNT + I + G + X - M)$$

a – bNT + I + G + X – M is autonomous spending
And (1 / 1 – b) is the simple multiplier

Variable Net Exports

- **If we now add variable net exports:**

Y = a + b(Y – NT) + I + G + X – m(Y – NT)
which yields the following equilibrium equation

$$Y = \frac{1}{1-b+m}(a - bNT + I + G + X + mNT)$$