Ch 2: The Measurement and Structure of the Canadian Economy

- 2.1 National Income Accounting
- 2.2 Gross Domestic Product
- 2.3 Saving and Wealth
- 2.4 Price Indices, Inflation, and Interest Rates

2.1 National Income Accounting

- National Accounts - provide a measure for assessing economic performance
- Measure output produced (the product approach), incomes received (the income approach), purchases made (the expenditure approach)
- The three approaches are equivalent (fundamental identity of n.i.a.):

total production = total income = total expenditure

2.2 Gross Domestic Product (GDP)

- (1) Product Approach:
- Use market values
- Cannot value activity in informal markets - eg. the underground economy (cash payment to local handyman or babysitter who does not report this income)
- Measures only new production (eg. not capital gains!)
- Gov’t production is valued at cost

- (2) Expenditure Approach:
- $Y = C + I + G + NX$ $(NX = X - M)$
- C: consumption (durables, semi-durables, non-durables, services) eg. fridges, clothes, groceries, health care
- I: investment (residential construction, non-res. I, machinery and equipment) eg. new homes, new factory bldgs, tractors
- G: Gov't purchases (not including gov't I interest payments or transfers - EI benefits, welfare)
- NX:net exports - must add domestic production going abroad and remove foreign production used domestically

- (3) Income Approach:
- a) labour - wages, salaries, benefits
- b) firm profits
- c) interest & investment income
- d) unincorporated business income
- e) indirect taxes
- f) capital cost allowances (worn-out capital)
- a) through d) gives net national income, NNI
- NNI and e) gives net domestic product, NDP

Other Important Items

- GNP: Gross National Product
- GNP = GDP + NFP (net factor payments)
- NFP = payments to domestic factors used abroad less payments to foreign factors used domestically
- Private disposable income (PDY) = Y + NFP + TRansfers + INTerest on gov't debt + Taxes

Check

- Using the expenditure approach and the national accounts, where would a car purchased in Canada but built in the US appear?
- Where would we find entries for the payment for contracting services by a Cdn company in Brazil?

2.3 Saving and Wealth

- The economic situation of a household or nation is dependent on resources, both present income, and wealth
- W = assets - liabilities
- W accumulates from past savings out of income
- National Savings, S = Sp + Sg
- Private S: Sp = PDY-C
- Gov't S: Sg = T-TR-INT-G

Uses of Saving

- $S = Y + NFP - C - G$
- $S = (C + I + G + NX) + NFP - C - G$
- $S = I + (NX + NFP)$
- $S = I + CA$ CA: current account balance
- $(Sp + Sg) = I + CA$
- $Sp = I - Sg + CA$ The Uses-of Saving Identity

Relationship between Saving and Wealth

- Saving is a flow variable - per unit time
- Wealth is a stock variable - defined at a point in time
- $W(t) = W(t-1) + S(t)$
- National Wealth = domestic assets + net foreign assets

Check

- Why is National Wealth important?
- What are the implications of a CA deficit? Government deficit?
- Is it better to have a high level of saving?
- Does higher GDP mean higher welfare?

2.4 Price Indices, Inflation and Interest Rates

- Nominal variables - measured in current market prices (eg. nominal GDP :PY)
- Real variables - measured in a base year's prices - the effect of changing prices over time is removed (eg. real GDP: Y)
- Having both variables allows the separation of price and quantity effects over time
- Real GDP is a better indicator of living standards over time

Price Indices

- Price index: measure of the average level of prices for some bundle of goods/services relative to the prices in a given base year
- Variable-weight P.I. = $P(t)Y(t) / P(base)Y(t)$
  (eg. GDP deflator)
- Fixed-weight P.I. = $Y(base)P(t) / Y(base)P(base)$
  (eg. CPI)
- Rate of Inflation - measures increases in price levels **Formula:**

Interest Rates

- Interest Rate: a rate of return promised to a lender (supplier) from a borrower (user)
- There are many rates of return in the economy due to many different assets
- Real interest rate: rate at which the real value of the purchasing power of the asset increases over time.
- Notation: $r = i - \pi$
- Some rates of return are pre-determined, inflation is not.
- Expected real return: $r^e = i^e - \pi^e$

Check

- Why are we concerned with inflation?
- Which macroeconomic variables that we have already discussed are affected by interest rates (remember simple models in ECON 110/112)? Why?
- Why are we more interested in real variables than nominal variables?