The UNIVERSITY of VERMONT

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Notes – Topic 4

Topic 4: GDP

I. GDP
   a. Gross Domestic Product
   b. Most commonly used Summary measure of National Output (same as National Income)
   c. Market value of all *final* goods and services produced in a nation in a one-year period.
   d. Value of "Intermediate" goods not included
      i. Intermediate goods → Sold from one firm to another for further processing
      ii. Sales of inputs
      iii. Their value is included in the market value of the final product
      iv. Example
         1. Farmer sells wheat to baker for $0.60
         2. Baker sells bread to retailer for $1.00
         3. Retailer sells bread to public for $1.10
         4. ONLY $1.10 final cost added to GDP
      v. Value-added → Could also sum the value-added figures for each step to get GDP ($0.60 + $0.50 + $0.10 = $1.10)
      vi. Simplest way is to sum the final values of all products sold.
   e. Market value of goods and services only.
      i. Informal sector ("the Black Market," "the Underground Economy") not counted in GDP.
         1. Economic activity taking place without government knowledge.
         2. Agents trying to avoid taxes and laws governing their transactions.
         3. Lemonade stands & lawn mowing to illicit drug deals.
      ii. A few items not trading in markets that *are* represented in GDP
         1. Imputed value (estimated value) of government-provided services
            a. Police
            b. Military
            c. Schools
         2. Some countries add imputed value of informal sector transactions. Not USA
   f. Only goods & services produced *in* the nation counted
      i. Does not include goods and services made in other countries by US citizens or US firms.
      ii. *Does* include goods made in the United States by non-US citizens or non-US firms.
   g. Newly produced goods and services only.
      i. Transfers of existing goods or services don't count.
      ii. Buying a used car does *not* add to the GDP.
      iii. Having a house built in 2001 adds the cost of the house to the GDP. Reselling the same house (regardless of the price) in 2002 adds nothing.

II. Per Capita GDP
   a. GDP is *not* the most common measure of material living.
   b. Must account for population.
   c. GDP / Population = Per Capita GDP
   d. Example
      i. India: GDP = $1805b, Pop = 1014m. $1800 per Capita GDP
      ii. Switzerland: GDP = $197b, Pop = 7.7m, $27100 per Capita GDP
      iii. United States: GDP = $9255b, Pop = 275m, $33900 per Capita GDP
   e. Not a measure of social welfare.
      i. Doesn't include all activity enhancing welfare; doesn't exclude some negative things.
      ii. Some goods/services add to welfare that aren't traded on markets.

1. Cutting your own lawn adds nothing.
2. Hiring someone to cut your lawn adds the cost of that service.
3. Exactly the same result, but one doesn't count.

iii. Some economic activities associated with loss of welfare
1. War-related activity (very good for GDP)
2. Rebuilding after earthquakes and hurricanes
3. Cutting down forests; depleting non-renewable resources

iv. Doesn't account for value of leisure
1. If we could produce the same level of GDP while working half as much, quality of life would be better.
2. Rising GDD due to more work doesn't mean better quality of living.

v. Social Damage Control
1. Added to GDP
2. Private Security, Prisons, etc.
3. Growth in prison industry leads to a higher GDP but *worse* living.

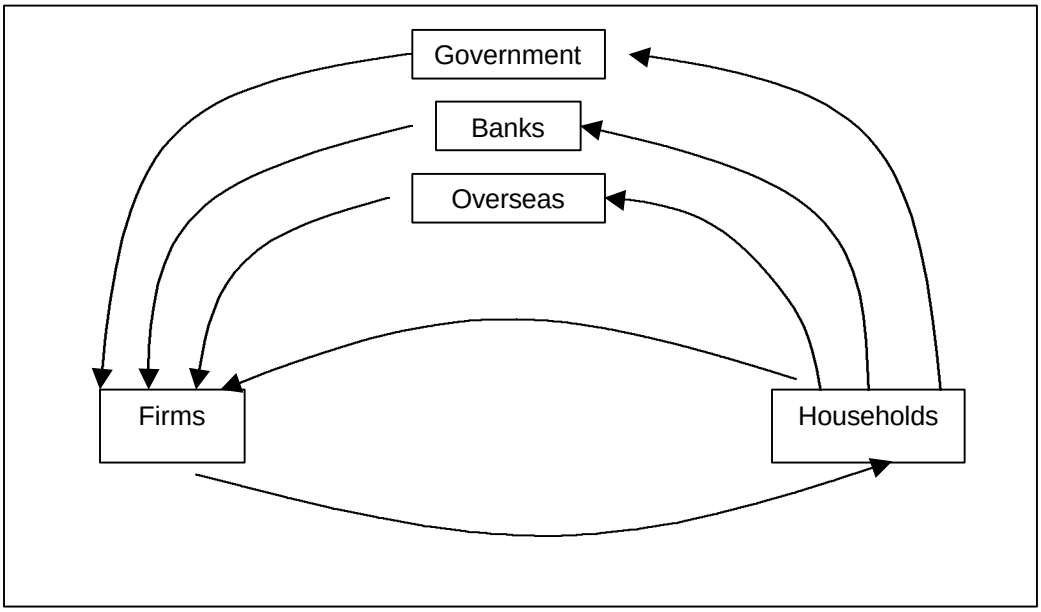
vi. Trying to find alternative measures that might reflect welfare better.

III. GDP Advantages / Disadvantages

a. Include certain non-market production and qualify inclusion of some negative things (perhaps subtract from GDP to account for lost non-renewable resources, for example)
b. Try to get summary measure that reflects well-being.
c. All alternatives are very subjective! How to decide what gets left out and what stays in?
d. GDP has advantage of being very objective.
e. Still general correlation between GDP and social welfare
i. GDP per capita of some minimum level is necessary to provide essentials for decent level of living.
ii. Nations with low per capita GDP generally have…
1. Less education
2. Worse public health
3. Contagious diseases
4. High Infant Mortality
5. Etc.
f. Best proxy for material standards of living
g. Gives a single number to summarize everything going on – an extremely useful number.

IV. National Income Accounting

a. GDP is summary measure of aggregate output, OR summary measure of income.
b. By definition, both are identical. Expenditure for someone is the same as Income for someone else.
c. National income accounting is the way to calculate GDP.
d. Aggregate Income = Aggregate Expenditure
e. *** $Y = C + I + G + (X - M)$ ***
i. $Y \rightarrow$ Aggregate Income
ii. $C + I + G + (X - M) \rightarrow$ Aggregate Expenditure
iii. $C \rightarrow$ Consumption. Purchase of final goods/services by households.
iv. $I \rightarrow$ Investment. Purchases by firms (for purpose of augmenting capacity)
v. $G \rightarrow$ Government Expenditures. Government purchase of goods/services.
1. Not all government spending counts as G.
2. Reshuffling / Transfers don't count. Welfare, Social Security, etc.
vi. $(X - M) \rightarrow$ Net Exports.
1. $X \rightarrow$ Exports.
2. $M \rightarrow$ Imports
f. Circular Flow Diagram



g. Factor Payments
    i. Wages & Salaries (Predominant Form / 70%)
    ii. Rents (use of land and buildings)
    iii. Interest (Use of borrowed funds. To book holders)
    iv. Profits (To Owners & Stockholders)

h. Households can also spend income on
    i. Taxes (T). To the Government, back into national spending
    ii. Savings (S). To banks. Also re-injected as investment.
    iii. Imports (M).
    iv. ^ Leakages out of otherwise closed circle.

i. Simplest Case
    i. S = I
    ii. G = T
        1. Balanced Budget
        2. G > T = Deficit
        3. G < T = Budget Surplus
    iii. X = M
        1. Balanced Trade
        2. X > M Trade Surplus
        3. X < M Trade Deficit
    iv. Simplest case very rarely happens.
    v. Fortunately, it's not necessary for everything to be equal for national income accounting to hold.