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The Three Goals of Any Economy

1. Promote economic growth
    - Provide more jobs for more people
2. Limit unemployment
    - Unemployment limits growth by inhibiting production and decreasing consumer spending
3. Limitm inflation
    - High inflation discourages long-term investment

How Do We Check Up On the Economy?

- Economists love them some statistics on production, income, investment, and savings
    - **National income accounting** = a method of economic analysis that looks at the overall health of an economy by analysing certain figures
- **Gross Domestic Product(GDP)** = the market value of all final goods and services produced *domestically* annually
    - Only accounts for **final goods**
        * **Final goods** = the end-result of production/labor
            · This prevents GDP from being inflated by counting each step in production as its own good
    - Formula for calculating *change*

$$\% = \frac{GDP_f - GDP_i}{GDP_i} \times 100$$

    - GDP is just a metric of total domestic production
        * This leads us to believe that larger countries are "better" than smaller production
            · To avoid that misconception, we use GDP-per-capita

$$GDP_{per-capita} = \frac{GDP}{population}$$

            · According to the almighty authority on economis, GDP-per-capita is the *best* indicator of standard of living

Why Do Certain Nations Have Higher GDP's?

- The ultimate authority says: **productivity**
  - **Economic system** = capitalism is inherently superior to your inferior commie system
  - **Property rights** = because the factors of production are privately owned, we are all somehow more efficient
    - *Don't ask why.*
  - **Capital**
    - **Capital stock** = esentially just a synonym for physical capital
    - **Human capital** = knowledge, skills, education, etc
  - **Natural resources** = oil af

What Doesn't GDP Measure?

- GDP doesn't account for
  - Intermediate goods
  - Non-productive transactions
    - *e.g.*
      - Stock market purchases
      - Used goods
  - Illegally traded goods

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Calculating GDP

- There are generally two methods
  1. **Expenditures approach** = sum up all expenses that qualify for GDP
  2. **Income approach** = sum up all incocme that qualifies for GDPa
- Ideally *both* of these approaches should be roughly equal

Four Parts of GDP

1. Consumer spending(~70%)
    - Essentially just private individuals using income to purchase and consume goods and servicecs
2. Investment(~15%)
    - NOTE: this is **not** stock market purchases or bonds, as those do not qualify for domestic production
    - Rather, investment is when businesses invest capital back into the economy
        - Examples
            * Loans
            * Self-driving cars
3. Government spending(20%)
    - **NOT** transfer payments
    - Rather, things like schools and military equiptment
4. Net exports
    - Formula is essentially just

$$\Sigma X = X - M$$

    - where X is imports and M is imports

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Income Appraoch to Calculating GDP

- The model essentially boils down to 4 **factor payments**
    1. Labor income = essentially just the wages individuals earn
    2. Rental income = the income generated by owning something and renting it out
    3. Interest income = the income generated by interest on loans
    4. Profit = the income generated by exploiting the working class

Nominal GDP vs Real GDP

- **Inflation** = a rise in costs
- **Nominal GDP** = non-inflation adjusted GDP
  - For example, the nominal GDP-per-capita of the United States in 1970 was 5,246.96 USD-1970
- **Real GDP** = inflation-adjusted GDP
  - This is what's actually used to make comparisons in purchasing power between periods

Business Cycle

- **Business cycle** = a model of the economy that relates real GDP with time
  - The curve has an overall increasing trend line
    - However, the economy goes through periods of boom and bust
    - Visually, the curve snakes around an "ideal" line of full employment
      - Periods of time where the curve is above the line is **inflation**
      - Periods of time where the curve is below the line is **unemployment**
  - **Recession** = a period of decline in real GDP that lasts for 6 months
    - If significantly longer, it is a **depression**

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Unemployment

- **Unemployment rate** = the ratio of the able-bodied population that is looking for a job but hasn't gotten hired yet

$$\%_{Unemployed} = \frac{Q_{unemployed}}{Q_{laborforce}} * 100$$

- where $Q_{unemployed}$ is the number of unemployed persons in an economy and $Q_{laborforce}$ is the number of persons that are in the **labor force**
  - **Labor force** = the part of the population that is considered as employed or potentially employable

        * Must be above 16 years old
        * Able and willing to work
        * Not institutionalized
            · *i.e.* prison, mental hospitals, etc
        * Not serving in military, a full-time student, or retired

Three Types of Unemployment

1. **Frictional unemployment** = a type of unemployment characterized by apt workers that are between jobs or temporarily unemployed
    - **Seasonal unemployment** = a type of **frictional unemployment** characterized by working periods being *seasonal*
        – *e.g.* a Santa clause impersonator
2. **Structural Unemployment** = a type of unemployment characterized by the skills of the labor force becoming obselete
    - Especially relevant *now*, as automation changes the economic landscape
    - **Creative destruction** = a term that describes the process of these kinds of jobs disappearing
    - **Technological unemployment** = a specific type of **structural unemployment** driven by automation
3. **Cyclical unemployment** = a type of unemployment that is caused by the effects of a recession
    - Due to recssions, consumer demand decreases across the board, and companies respond with a reduced demand for labor
        – Cyclical unemployment is also called "demand deficient unemployment"

Natural Rate of Unemployment

- **Natural Rate of Unemployment(NRU)** = the rate of unemployment that is deemed "normal" for an economy not in recession
    – Based on frictional and structural unemployment
- **Full employment output(Y)** = the real GDP generated if an economy does not experience cyclical unemployment
    – So, "full employment" is really just an "acceptable" unemployment calculated with frictional and structural unemployment rates
        * For the United States, "full employment" is at ~5% unemployment