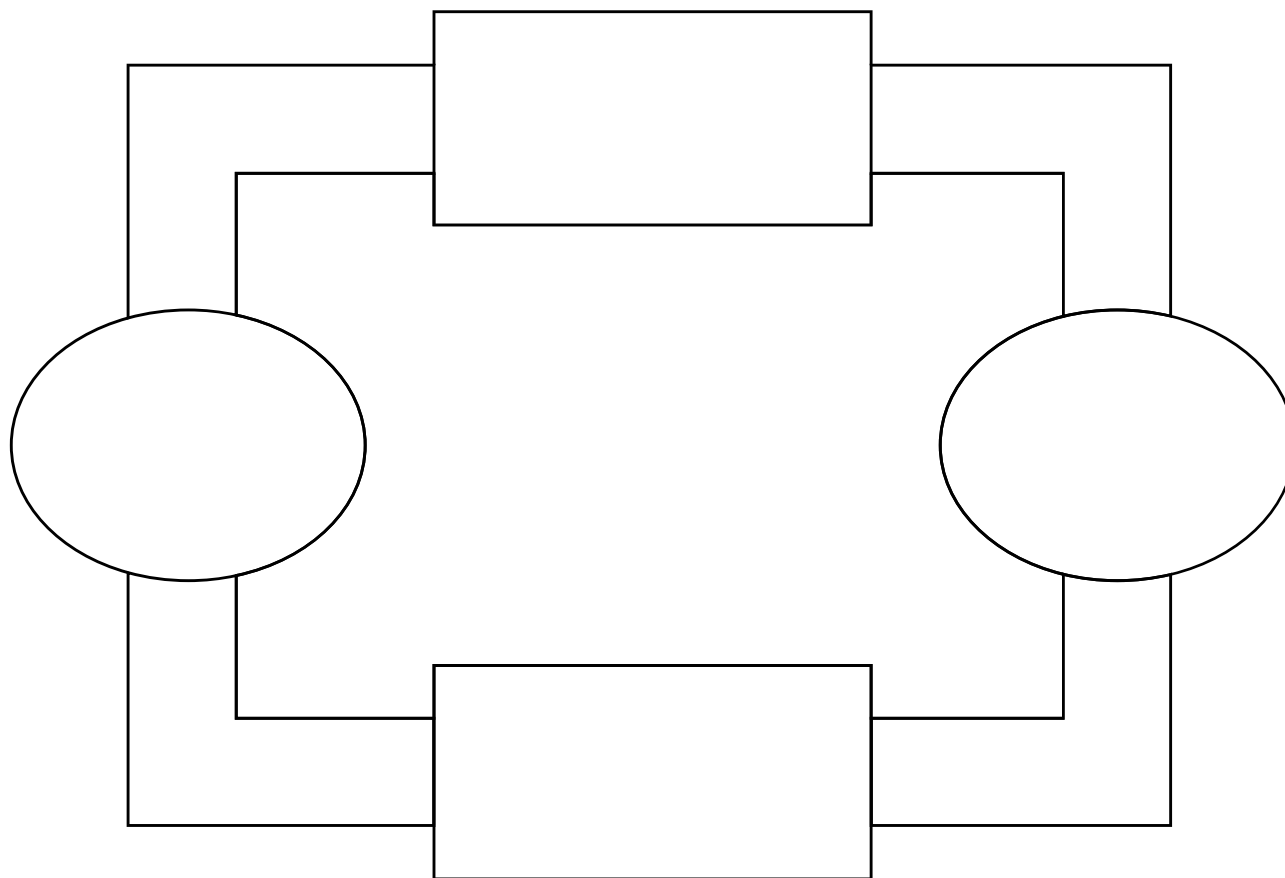




Introducing the Circular Flow



Injections and Leakage in the Circular Flow

Leakage – when money moves out of the Circular Flow

Households/Businesses don't spend **all** of their income.

- Savings
- Pay taxes
- Buy imports from other countries

Injection – when money is added to the circular flow

- Households/Businesses borrow money
- Government buys goods/services
- Sell exports to other countries

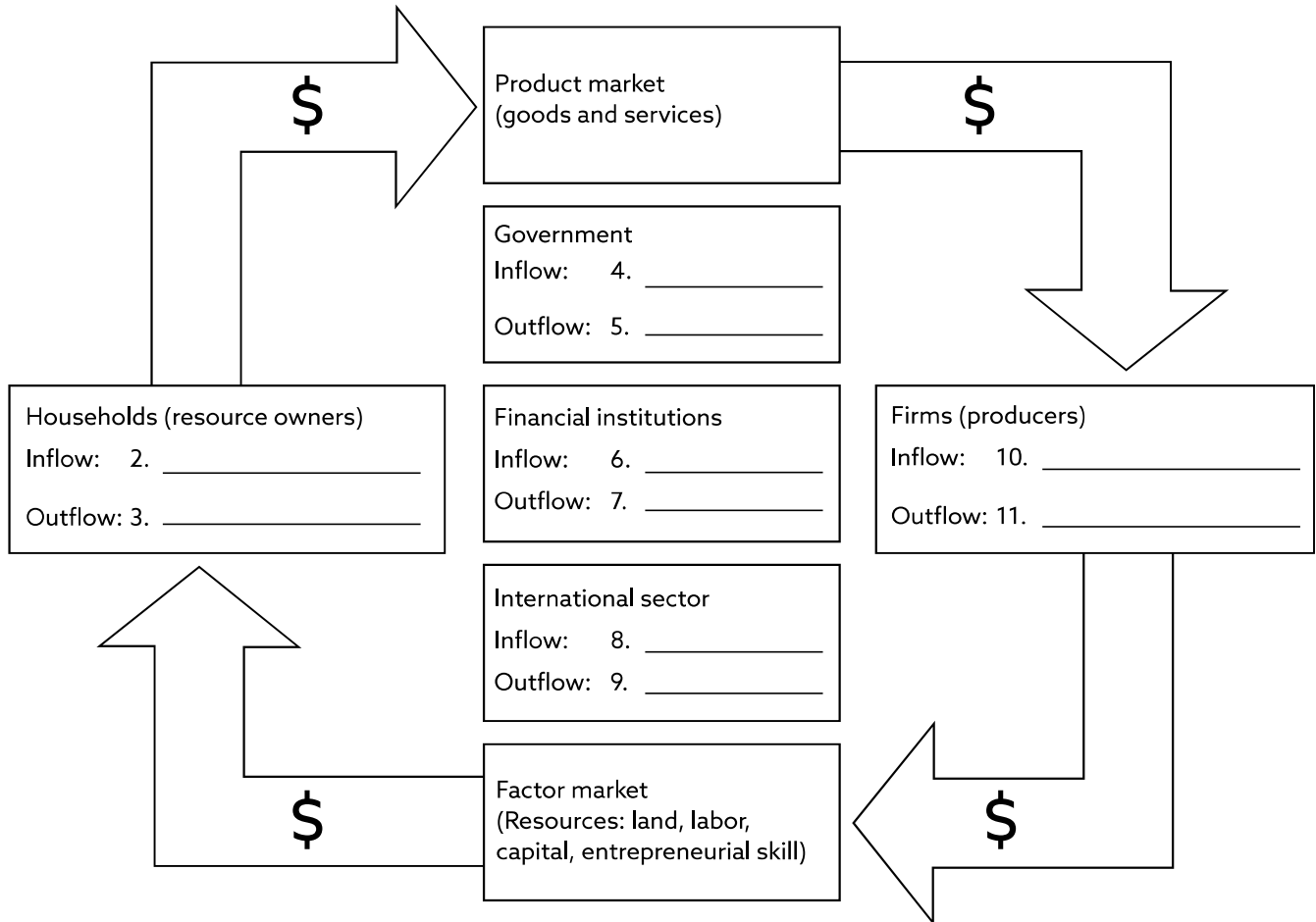
Injections are not from:

- Businesses selling goods/services
- Households selling resources

Circular Flow Diagram

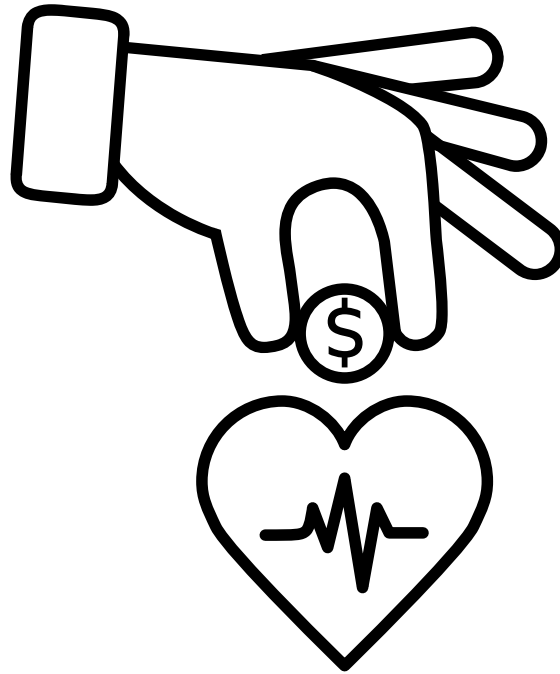
The Circular Flow of Resources, Goods, Services, and Money Payments

Money that flows out of the Circular Flow 1. _____



Money that flows into the Circular Flow 12. _____

GDP Measures the Health of the Economy



Gross Domestic Product is

- the total value
- of all final goods and services
- produced in a given year
- within the borders of a country.

Determining GDP Using the Expenditures Approach

Economists often measure GDP by totaling the money spent on four major categories of goods and services:

$$GDP = C + I + G + (X - M)$$

- **Consumption (C):** Spending by households on goods and services. Includes durable and non-durable goods.
- **Investment (I):** Spending by businesses on machinery, factories, equipment, tools, and construction of new buildings. Includes changes in inventory
- **Government (G):** Spending by all levels of government on goods and services.
- **Net Exports (X – M):** Spending by people abroad on U.S. goods and services (exports, or X) minus spending by people in the U.S. on foreign goods and services (imports, or M). Also written as X_N

Limitations of Expenditures Approach to Calculating GDP

What is Not Counted?

Produced But Not Counted

Illegal Goods

Any “black market” or illegal goods; the underground economy of services paid for in cash or “under the table”.

Non-Market Transactions

Fixing your own car is a service, as is volunteering, but these are seen as occurring outside of any marketplace.

Intermediate Goods

Goods used in the production of other goods and services are not counted, so the steel used to produce a car would not count, only the value of the car itself.

No Production Taking Place

Used Goods

A used textbook or car would not count because it was already counted the year it was produced.

Financial Transactions

Purchases of stocks or other investments do not count because no good or service was produced.

Calculating GDP

Expenditures Approach

$$GDP = C + I + G + (X - M)$$

C = Consumer spending on goods and services

I = Investor spending on business capital goods

G = Government spending on public goods and services

X = exports

M = imports

Income Approach

Total Income (wages, rents, profits, interest)

- plus taxes on production and imports (indirect business taxes)
- plus consumption of fixed capital/depreciation
- minus net foreign factor income
- plus statistical discrepancies

Value Added Approach

The value of all final goods and services produced in the economy minus the value of intermediate goods and services used to produce the final goods.

UNIT 2 ACTIVITY 2-2.2

Three Approaches for Calculating GDP

Econo Island produces tomatoes and tomato soup, but nothing else. Some of the tomatoes are consumed domestically, some are exported, and some are used to make soup. Some cans of soup are consumed domestically and some are exported. All ingredients for making soup are imported except for tomatoes. Labor is the only factor of production on Econo Island. The government of Econo Island purchases soup to supplement the public schools' lunch program.

Consider the following data:

Data from Tomato Factories	
Total labor hours worked:	200,000 hours
Tomato factory wage:	\$6/hour
Total pounds of tomatoes sold:	240,000 lbs.
Price per pound of tomatoes:	\$5 per lb.
Data from Soup Factories	
Total labor hours worked:	75,000 hours
Soup factory wage:	\$12/hour
Total pounds of non-tomato ingredient inputs:	80,000 lbs.
Price of non-tomato ingredients:	\$2.50/lb.
Total tomato inputs:	60,000 tomatoes
Total tomato soup sales:	140,000 cans
Price of soup per can:	\$10/can
Data from Households	
Tomatoes consumed:	160,000 lbs.
Cans of soup consumed:	120,000 cans
Government Data	
Soup purchased by government:	10,000 cans of soup
Trade Data	
Soup exported:	10,000 cans
Tomatoes exported:	20,000 lbs. tomatoes
Ingredients imported:	80,000 lbs.

Measuring Inflation

A **Price Index** is a measure of the overall price level.

$$\text{Price Index} = \frac{\text{Current-year cost}^*}{\text{Base year cost}^*} \times 100$$

*Cost = cost of your market basket full of goods and services

The **Consumer Price Index (CPI)** is used to measure the change in prices over time (inflation or deflation).

$$\text{Rate of Inflation} = \frac{\text{Change in CPI}}{\text{Beginning CPI}} \times 100$$

Shortcomings of CPI

1 Substitution Bias

The CPI assumes that consumers continue to purchase the same basket of goods and services even as prices change.

2 Basket of Goods

CPI may not reflect the consumption patterns of all households. Households with different income levels or demographic characteristics may have different consumption patterns that are not fully captured by the CPI.

3 Quality Adjustments

CPI does not account for changes in quality. If a new smartphone is introduced with better features than the previous model, the CPI may not reflect the increase in value that consumers receive from the improved technology.

Inflation



Who is hurt?

- Lenders (banks)
 - Savers
 - Retired or on fixed income without a Cost-of-Living Adjustment (COLA)
-



Who is not hurt?

- Borrowers with fixed rate loans
 - Businesses who raise prices quickly
 - Government- gain more revenue from taxes and cheaper to pay back their debts.
-

Costs of Inflation

Shoe leather costs

- Increased transaction costs caused by inflation.

Menu costs

- The cost of changing a listed price.

Unit of account costs

- The cost of having a less reliable unit of measurement.

In and Out of the Labor Force

Population

IN the labor force



Employed

- Currently holds a full- or part-time job
- Includes those who are underemployed

Unemployed

- Not working but actively seeking work (sent out resumes, interviewed, etc.)
 - Does not include discouraged workers
-

OUT of the labor force



- Children under age 16
 - Retired
 - Full-time student (not working)
 - Choose not to work
 - Want a job but not actively seeking work
 - Stay-at-home parent
 - Institutionalized
 - Discouraged workers
 - Active-duty military
-

Calculating Employment

The labor force participation rate (LFPR) – the percentage of the population that is considered part of the labor force.

$$\text{LFPR} = \frac{\text{labor force}}{\text{population}} \times 100.$$

The unemployment rate (UR) – the number of people who are unemployed as a percentage of the labor force. To be counted as unemployed you must be jobless, but actively looking for work (sent out resumes, interviewed, etc.) in the past four weeks.

$$\text{UR} = \frac{\text{number of unemployed}}{\text{labor force}} \times 100.$$

Types of Unemployment

Frictional Unemployment

- Someone “between jobs”
- Voluntarily left one job and looking for another
- Looking for your first job

Usually short term

Unavoidable in market economy

Good for the economy

Seasonal Unemployment

- often classified as a type of frictional unemployment – “adjusted seasonally”
- Demand for labor depends on the season – tourism, agricultural, construction, Christmas season
- Students in the summer → unemployment goes up because students move from “not in labor force” to looking for work

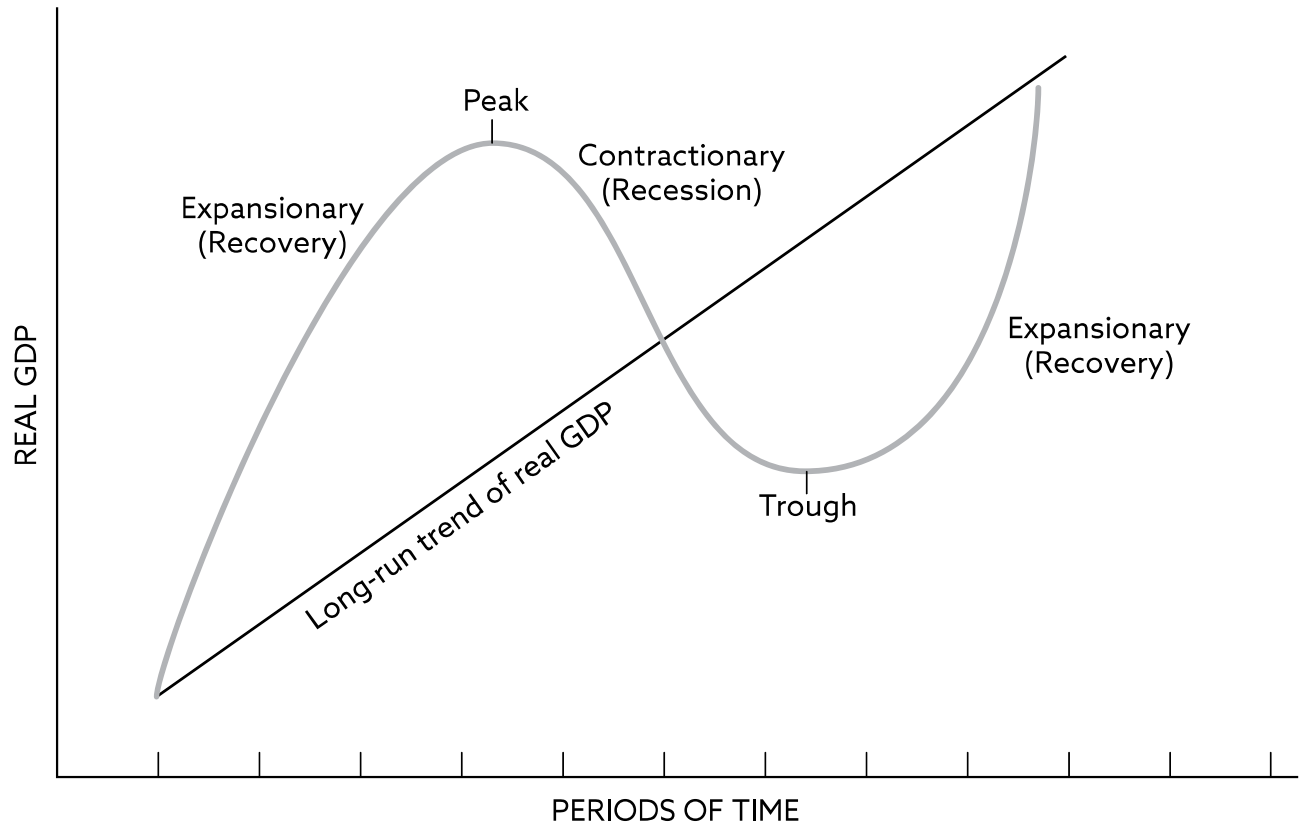
Structural Unemployment

- Advances in technology make jobs obsolete or reduce demand for certain skills
- Unemployed workers who don’t have the skills that in-demand jobs require

Cyclical Unemployment

- Due to a decline in business activity during an economic downturn or recession
- NOT due to changing jobs or lack of worker’s skills

Phases of the Business Cycle



Output Gaps and the Business Cycle

