

Induction Lesson – Economics 'A' Level

The Circular Flow of Income

In order to understand the circular flow of income you will need an understanding of the 4 factors of production and their factor rewards

Factor of production	Factor Income
Land	Rent
Labour	Wages
Capital	Interest
Enterprise	Profit

What is the Circular Flow of Income?

Definition

The circular flow of income is a basic economy model that depicts how money, goods, and services move between economic agents.

Different Components of the Circular Flow of Income

- There are 2 sectors:
 - Households
 - Firms



Lets identify each participant in the market

- **Individuals/Households-** This is your role in the circular flow. You provide a service, labor to the factor market in exchange for wages. You also purchase goods and services from the product market using your income.
- **Factor or Resource Market-** This is where factors of production are bought and sold. The Factor Market gives productive resources (goods used to produce other goods; like capital goods) to Businesses in exchange for payment.



Lets identify each participant in the market cont..



- **Businesses-** Businesses buy productive resources from factor markets to create a product that they sell to the Product Market.



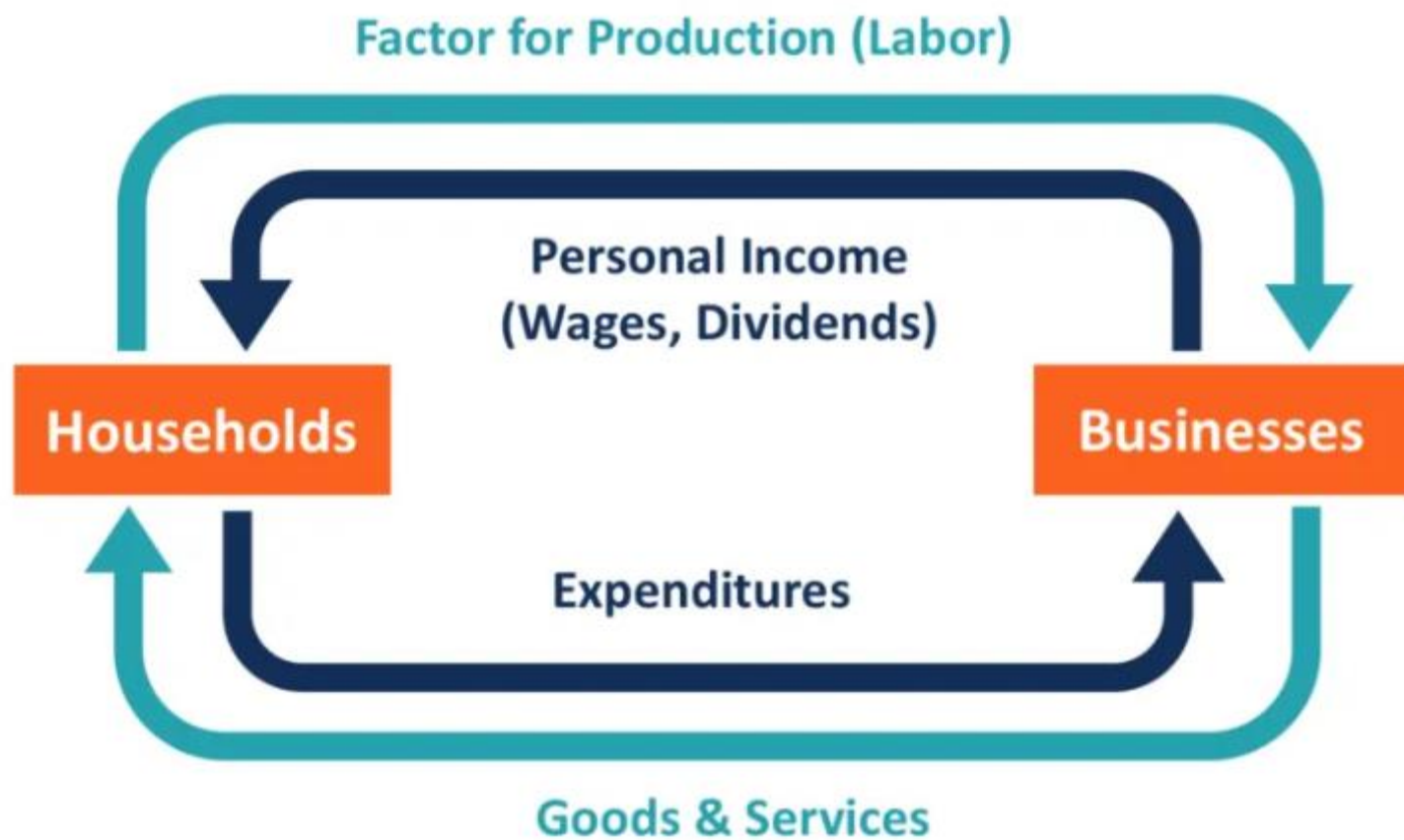
- **Product Market-** the Product Market receives products from businesses and provides goods and services directly to the individual consumer in exchange for payment.

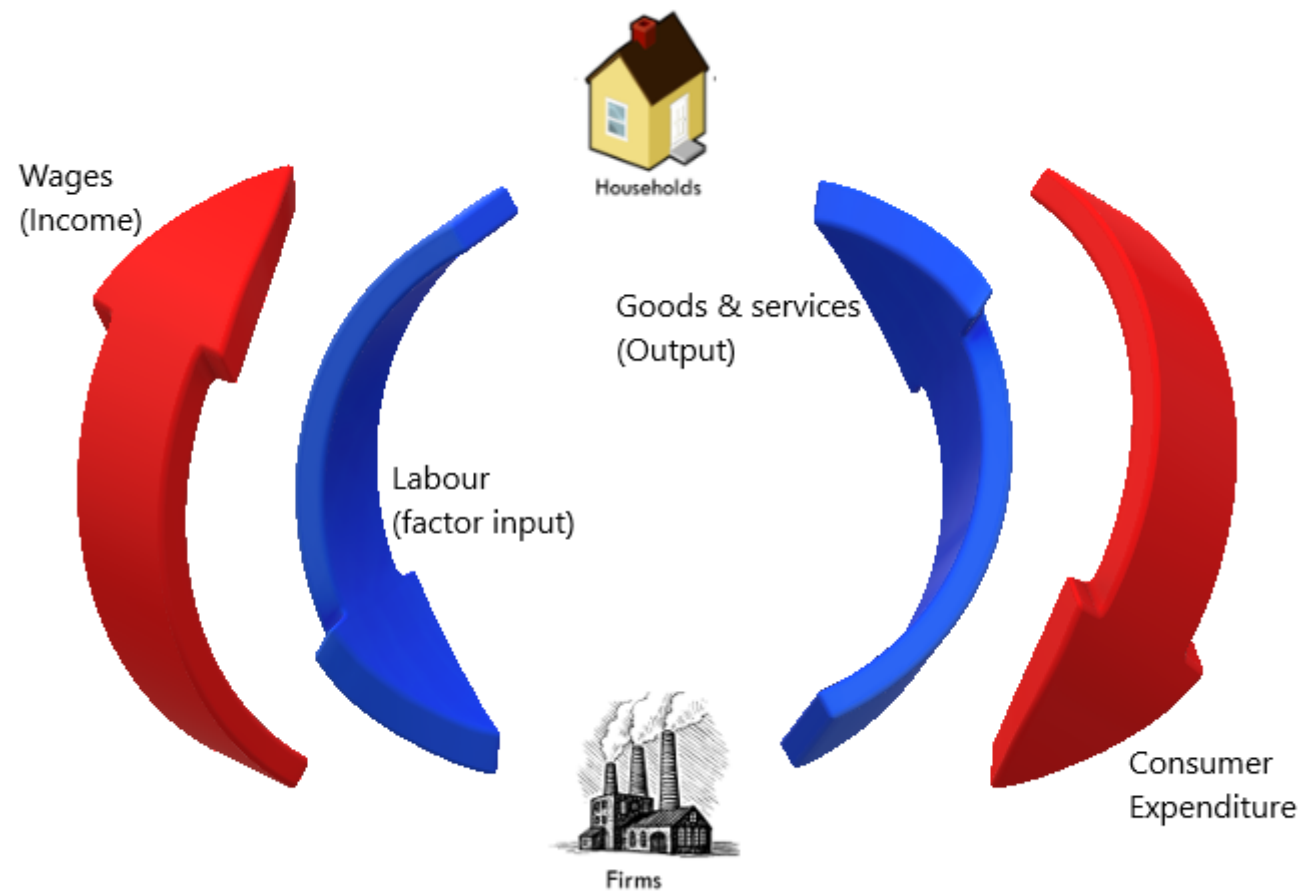
The Basic Model

In the basic model, the circular flow of income consists of two components:

- **Firms:** companies that produce goods and pay wages to employees.
- **Households:** individuals who receive wages from firms while simultaneously purchasing the goods and services from the firms.

Two-Factor Circular Flow Model





The Basic Assumptions

This model is very basic. It assumes a few things:

- 1) There are **no governments involved**
- 2) The market is a **closed economy**. There are no purchases of imports or exports.
- 3) **All income earned is spent**

- From the diagram above we can also see the following condition is true:

'Expenditure = Output = Income'

Circular Flow Models with Sectors

Two-Sector Model

- The model described above is the two-sector model, which is the most basic model containing only two sectors: individuals or households and businesses. In the two-sector model, it is assumed that households spend all their incomes as consumer expenditures and purchase the goods and services produced by businesses. Thus, there are no taxes, savings, or investments that are associated with other sectors.

But there are complications....

- Not all Household – or FACTOR INCOME - is spent on UK goods.

There are leakages from income.

- Savings – households may not spend all their income
- Taxation - taken from wages and off the price of goods (VAT) etc
- Imports – households and firms may spend on imports.

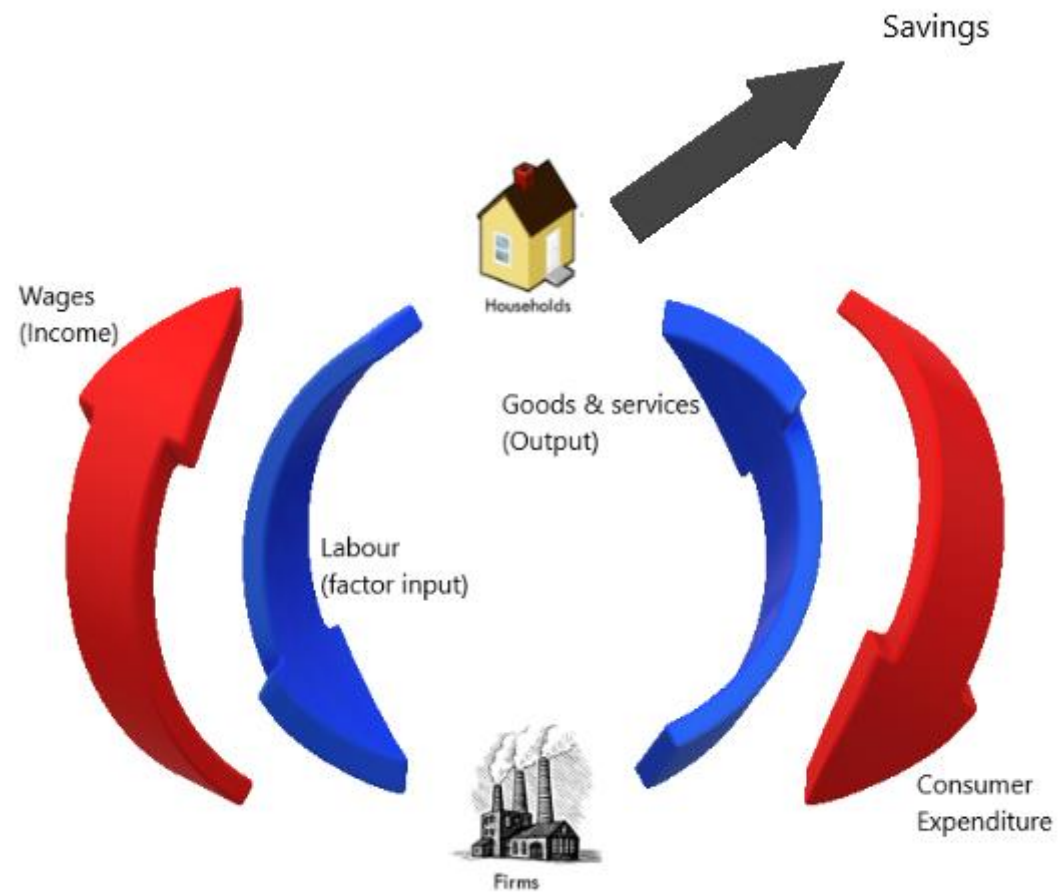
ALL OF THE ABOVE ARE LEAKAGES FROM UK INCOME

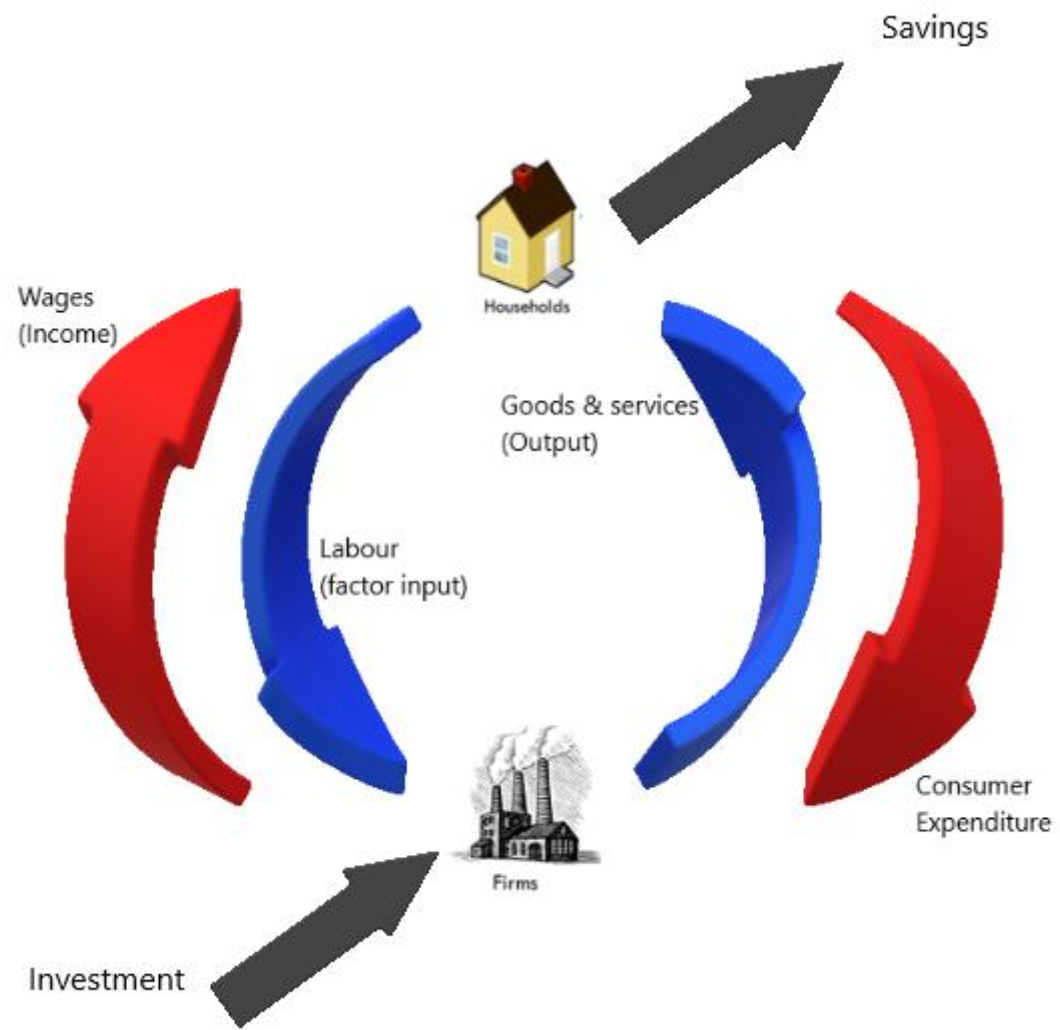
Injectors Into the Circular Flow of Income

- These flows out of the circular flow of income will be balanced by the fact that there will be flows back into the circular flow of income.
- These flows are called injections. These may take the form of:
 - Money spent by other firms – also known as ***investment***.
 - Money from the government – in other words ***government spending***.
 - Payment from foreign economies for domestic goods and services - exports

The Banking Sector

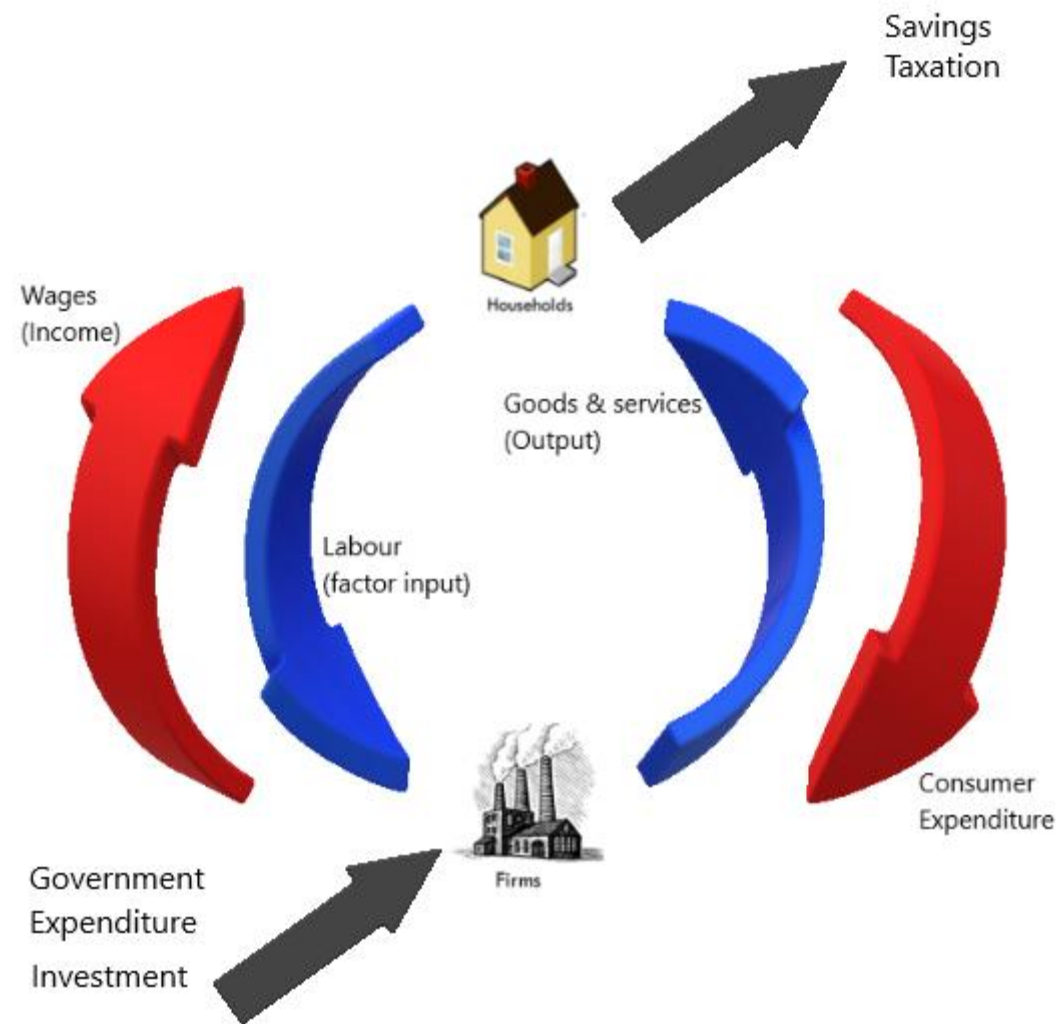
- The third sector – the banking or financial sector – is added to the circular flow model. It includes banks and other institutions that provide borrowing and lending services to the other sectors. Savings and investments are assumed in the three-sector model, which flow from other sectors with residual cash into the financial institutions, then out to the sectors that need money. As long as lending (injection) is equal to borrowing (leakage), the circular flow reaches an equilibrium and can continue forever.





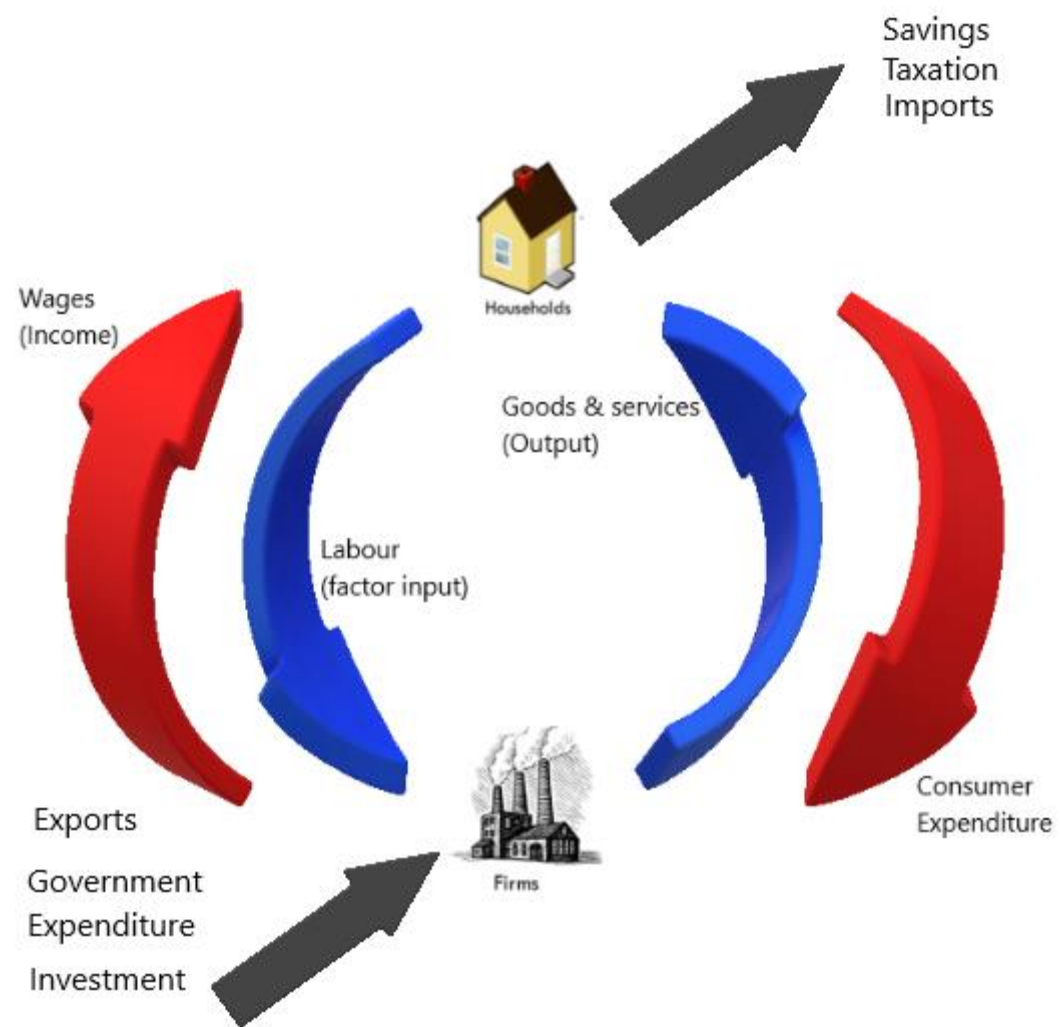
Four-Sector Model - Government

- In the four-sector model, the government is added to the three-sector model. In this model, money flows from households and businesses to the government in the form of taxes. The government pays back in the form of government expenditures through [subsidies](#), benefit programs, public services, etc.

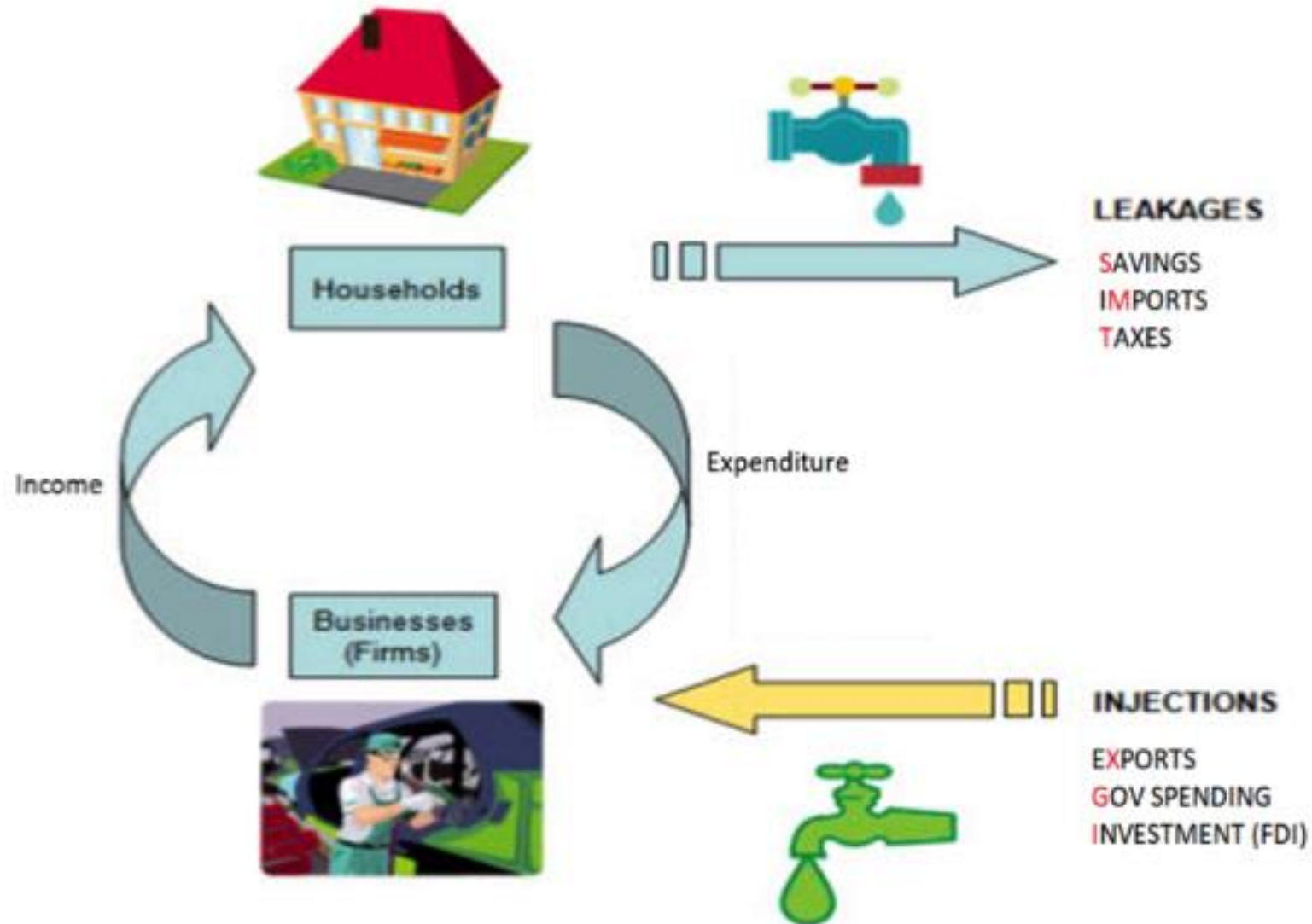


Five-Sector Model

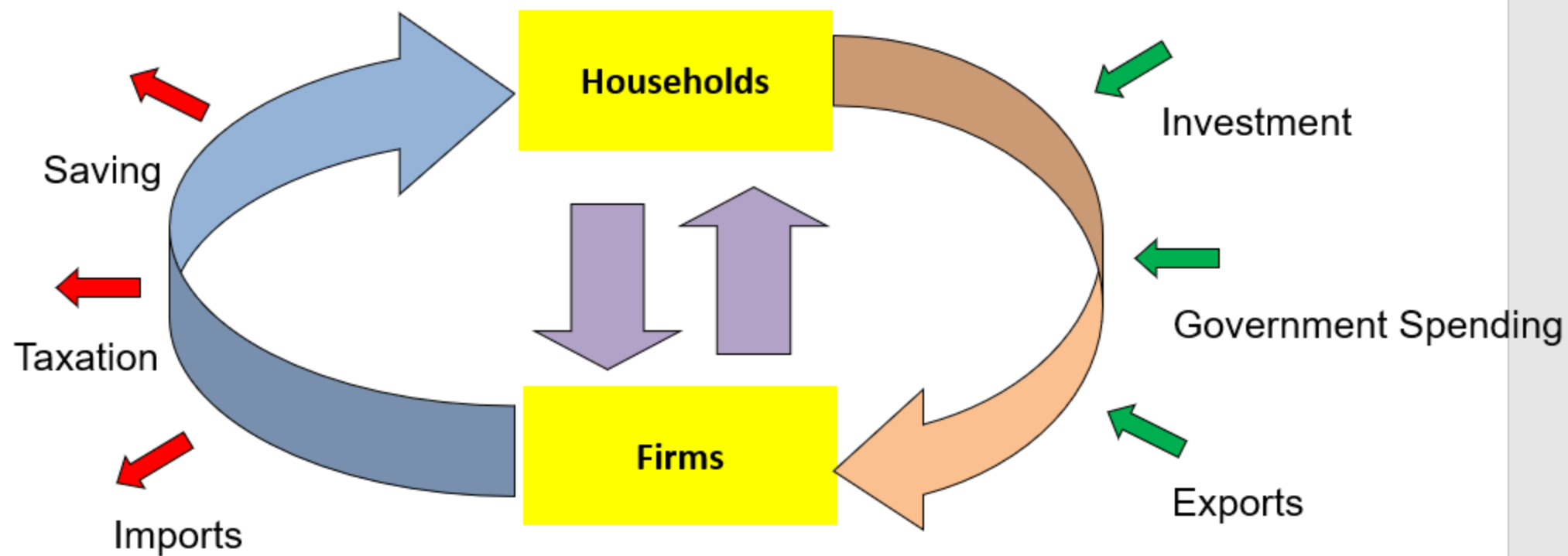
- The four-sector model contains the foreign sector, which is also known as the overseas sector or external sector. The overseas sector turns a closed economy into an open economy. It is connected to the other sectors through two flows of money: foreign trade (imports and exports) and [foreign exchange](#) (inflow and outflow of capital). Like the other sectors, each flow of money is paired with a flow of a factor of production or goods and services.



The circular flow of income, expenditure and output



This model assumes an open economy



What makes the above model different?

The above model is a more realistic view of our income. We have governments we pay taxes to, other countries that we buying imports from and we also do not spend all of our money.

Leakages


- Do you notice the red lines in the diagram? These red lines are our **leakages** or **withdrawals**. This is the money that **exits our circular flow**. Where does the money go?
- **Saving** - some of the money is saved by households. They hold back some of their income for future emergencies or future purchases.
- **Imports** - some of the money is transferred between our circular flow and another country's. Do you see on the diagram how we give money to other countries and it enters their circular flow of income.
- **Taxes** - some of the money is taxed and transferred to the government. Every country with a government will have a tax law which citizens have to follow.

Injections

- Do you notice the bright green lines in the diagram? These are our **injections**. It is money that enters our circular flow of income.
- **Investment** - some of this money is invested by firms towards the purchase of **capital goods**, for example. Capital goods are goods that firms need to make output.
- **Exports** - some of the money that enters our circular flow is from other countries. It's for our **exports**. Other countries pay us for these.
- **Government Spending** - the government can't just tax us and keep all the money, otherwise why would we pay tax? The government uses the taxation money that receive from us, and they spend money on keeping the country running. Things like **public services, roads and buildings etc** are all funded by the government.

- When INJECTIONS = LEAKAGES :
 - We have Macroeconomic Equilibrium – there is **no change** in GDP.
- When INJECTIONS > LEAKAGES:
 - More money is entering the circular flow than leaving it so there is an **increase** in GDP
- INJECTIONS < WITHDRAWALS:
 - More money is leaving the circular flow than entering it so there is a **decrease** in GDP


Test yourself questions

- 
1. Which if the following defines the circular flow of income ?
 - a. A model to demonstrate equality of income
 - b. A philosophical model of the perfect economy
 - c. A way of illustrating the dominance of some companies in an economy
 - d. An economic model to illustrates how money flows around the economy.

Answer is



☐ D




2. Which of the following is the correct term for spending by firms on building, machinery and training.

- a. Savings**
- b. Injections**
- c. Investment**
- d. Withdrawals**

Answer is



☐ C




3. What would happen to the UK economy if a foreign country decided to buy more goods and services from the UK?

- a. Leakages would be more than injections causing disequilibrium
- b. Injections into the UK economy would increase
- c. Disequilibrium would occur as a result of too much immigration
- d. Injections into the foreign country would increase

Answer is

- B



4. The circular flow demonstrates that the economy is in equilibrium when which of the following occur?

- a. $\text{Income} = \text{output} = \text{expenditure}$
- b. $\text{Savings} = \text{taxation} = \text{imports}$
- c. $\text{Inflations} = \text{income} = \text{output}$
- d. $\text{Imports} = \text{taxation} = \text{interest rates}$

Answer is



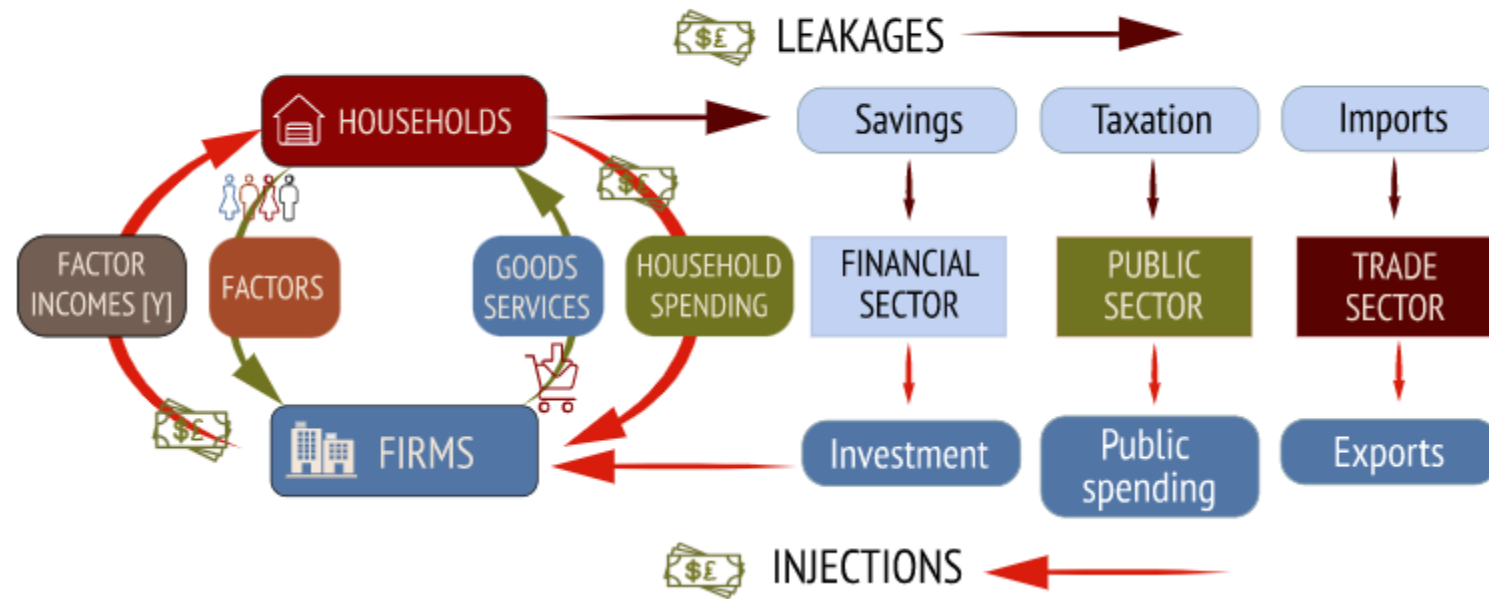
☐ A

Recap



1. What is the circular flow of income?
2. What is an injection?
3. What is a leakage?
4. What are the 3 leakages and 3 injections?
5. Draw it.

The addition of withdrawals (leakages) and injections



Define these Terms?

Content Terms

- Market
- Capital Goods
- Productive Resources
- Product Market
- Factor/Resource Market
- Circular Flow Diagram

1. Goods and services flow from

- a. firms to households via the factor market
- b. firms to households via the product market
- c. households to firms via the government
- d. households to firms via the factor market
- e. households to firms via the product market

2. The factors of production flow from

- a. firms to households via the product market
- b. firms to households via the factor market
- c. households to firms via the government
- d. households to firms via the product market
- e. households to firms via the factor market

3. The money paid to households via the factor market is called

- a. income
- b. profit
- c. wages
- d. taxes
- e. revenue

4. The money paid to firms via the product market is called

- a. wages
- b. income
- c. profit
- d. revenue
- e. taxes

5. The money paid by households and firms to the government is called

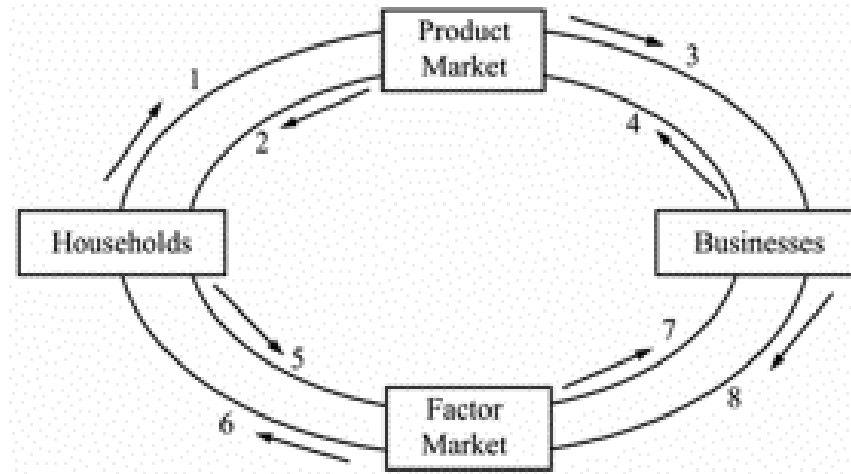
- a. profit
- b. income
- c. revenue
- d. wages
- e. taxes

- 6. When Americans buy foreign goods (import), money flows out of the circular flow. This is called a/an
 - a. injection
 - b. leakage
 - c. consumption
 - d. tax
 - e. inflation

- 7. When foreigners buy American exported goods, money flows into the circular flow. This is called a/an
 - a. injection
 - b. leakage
 - c. consumption
 - d. tax
 - e. inflation
 - .

- 8. Which of the following are LEAKAGES in the circular flow of goods/services/\$ in the product market and the flow resources/\$ in the factor market between households and firms(leakages in GDP)?
 - a. taxes
 - b. transfer payments (like social security)
 - c. imports
 - d. exports
 - e. savings

Try these Questions



1. The flow of goods and services to consumers is illustrated by
- A. 4 to 2
 - B. 8 to 6
 - C. 2 to 5
 - D. 6 to 1

2. When the U.S. government purchases a submarine from a company, the government has made a major transaction in the

- A. Factor Market
- B. Public Market
- C. Product Market
- D. Foreign Exchange Market

The Circular Flow

We have looked at the basic circular flow of income and spending that illustrates the macroeconomy. Changes in the components in this model can lead to changes in the level of a country's national income. In the exercise below, consider whether the economic event that is described will lead either to a change in an injection/leakage and whether the effect is likely to cause an expansion (↑) or a contraction (↓) in the level of national income. *For each example, assume ceteris paribus*

Economic event	Which injection or leakage is/are likely to be most affected? X, I, G, S, M, T	On balance - what is the likely effect on the level of GDP– expansion or contraction (circle your answer)
A survey finds a fall in confidence for UK manufacturing firms	X G I S M T	(↑) Expansion / Contraction (↓)
A property survey finds that homeowners expect average house prices to fall by another 5% in 2015	X G I S M T	(↑) Expansion / Contraction (↓)
The pound rises in value by 10% against the US dollar	X G I S M T	(↑) Expansion / Contraction (↓)
The government decides to freeze the pay of people working for local councils at a time when price inflation is 3%	X G I S M T	(↑) Expansion / Contraction (↓)

Economic event	Which injection or leakage is/are likely to be most affected? X, I, G, S, M, T	On balance - what is the likely effect on the level of GDP– expansion or contraction (circle your answer)
The CBI predicts that continued job losses will see unemployment peak at close to 3 million in 2016	X G I S M T	(↑) Expansion / Contraction (↓)
The government extends a car scrappage scheme for people buying vehicles more than nine years old	X G I S M T	(↑) Expansion / Contraction (↓)
The IMF predicts that world economic growth will rebound in 2017 with an increase in global trade	X G I S M T	(↑) Expansion / Contraction (↓)
The government decides to increase the UK road-building programme by £500m for 2014-15	X G I S M T	(↑) Expansion / Contraction (↓)
The prices of many consumer goods and services start to fall, and people start to expect further price reductions in the future	X G I S M T	(↑) Expansion / Contraction (↓)
The Bank of England's Monetary Policy Committee decides to raise official interest rates from 0.5% to 2% over a period of months	X G I S M T	(↑) Expansion / Contraction (↓)
The government introduces a new higher rate of income tax of 50% for people with annual incomes of more than £150,000	X G I S M T	(↑) Expansion / Contraction (↓)

Economic event	Which injection or leakage is/are likely to be most affected? X, I, G, S, M, T	On balance - what is the likely effect on the level of GDP– expansion or contraction (circle your answer)
The government increases revenues from taxes on high-income earners by £2bn and uses the money to increase spending on welfare payments to low-income families at £2bn	X G I S M T	(↑) Expansion / Contraction (↓)
To reduce the size of the budget deficit, the government increases VAT from 17.5% to 20%	X G I S M T	(↑) Expansion / Contraction (↓)
Improvements in the level of labour productivity causes lower costs and increased profits for car producers located in the UK	X G I S M T	(↑) Expansion / Contraction (↓)
The Chancellor announces a reduction in the rate of national insurance contributions paid on new employees by smaller businesses	X G I S M T	(↑) Expansion / Contraction (↓)

Classroom Activity

- In 2016 the UK's trade balance deteriorated. Exports rose in this time period, whilst the value of imports increased at a faster rate.

Questions:

- a) Explain whether exports are a leakage or an injection to the circular flow of income.
- b) As a result of this information what would you expect to happen to the level of GDP in the UK economy and why?

Stretch and challenge:

- c) GDP increased in the UK economy in the same period. Using the components of the circular flow of income, explain why this might be the case.

Summary

- **The circular flow model, also known as the circular flow of income, describes how money and economic resources flow in cycles between different sectors in an economic system.**
- **In the basic (two-factor) circular flow model, money flows from households to businesses as consumer expenditures in exchange for goods and services produced by the businesses, then flows back from businesses to households for the labor that individuals provide.**
- **The five-sector model consists of (i) households (the public sector), (ii) businesses, (iii) government, (iv) the foreign sector, and (v) the financial sector.**

- **Implications of the Circular Flow Model**

- As a fundamental concept of macroeconomics, the circular flow model has been widely applied in different studies, with significant impacts on the understanding of economics. Four examples are listed below to show the significance of the model.
- **Measurement of national income:** The sectors in the circular flow model are the components of the calculation of national income. The expenditure approach calculates a nation's GDP as the sum of the household consumption expenditures, [private domestic investment](#), government consumption and investment expenditures, and net exports ($GDP = C + I + G + [X - M]$).
- **Knowledge of interdependence:** The circular flow model underpins the knowledge of interdependence between sectors in an economic system. The activities and money flows cannot take place without interaction with another sector.
- **Unending nature of economic activities:** Money and economic resources flow in cycles indefinitely with an equilibrium of aggregate income and expenditures.
- **Injections and leakages:** The circular flow of an economy is balanced when the total injections equal the leakages. If injections overweight leakages, the country's national income will grow. If injections are below leakages, the national income will decrease.