

International Economics

Non-graded Problem Set - Part 2

Solutions guide

Spring 2024

What elements are included in GNP at market prices and are not included in GNP at factor costs?

- (a) Amortizations
- (b) Subsidies
- (c) Indirect taxes
- (d) Transfers

What is the most used indicator to determine economic growth?

- (a) Real GDP (at constant prices)
- (b) Nominal GDP (at current prices)
- (c) GDP deflator
- (d) Unemployment rate

The GDP:

- (a) Measures the difference between income and expenses of the public sector
- (b) It is an index to quantify inflation
- (c) Measures the Gross Industrial Product of an economy
- (d) It is a measure of the quantity of final goods and services produced in an economy in a year

The **real GDP** of an economy can increase because of:

- (a) an increase in the production of goods and services
- (b) an increase in current prices
- (c) a decrease in investment offset by an increase in consumption
- (d) real GDP cannot increase, because it is the maximum limit of an economy

The Gross Domestic Product calculated **as the value of the final product (or added value)**:

- (a) is greater than that calculated as the sum of total expenses (or total sales)
- (b) is lower than that calculated as the sum of the total income
- (c) is the same as the rest of the methods
- (d) none of the above

Which of the following costs is incorporated into the **basic prices** of production?:

- (a) Value Added Tax
- (b) Import tax
- (c) Subsidies on products
- (d) Production tax

The **GDP deflator** provides information on:

- (a) the CPI
- (b) on inflation worldwide
- (c) on the variation in the prices of all goods produced
- (d) none of the above

GDP does not count:

- (a) the goods that are the object of a commercial transaction
- (b) goods produced for self-consumption
- (c) goods intended for export
- (d) the goods that are destined for the army

The **added value** is defined as:

- (a) Value of a company's sales
- (b) Value of the goods and services that are incorporated to produce the final goods and services
- (c) Value of sales plus the value of raw materials and other intermediate goods used to produce the goods being sold
- (d) Value of a company's sales minus the value of the raw materials and other intermediate goods it uses to produce the goods it sells

The **intermediate consumption** is defined as:

- (a) Value of goods and machines used to produce final goods and services
- (b) Value of the goods and services that are incorporated to produce the final goods and services
- (c) Value of sales plus the value of raw materials used to produce the goods being sold
- (d) Value of a company's sales minus the value of the raw materials and other intermediate goods it uses to produce the goods it sells

Which of the following is an example of **double counting** of value?:

- (a) $GVA_{wheat} + GVA_{bread}$
- (b) VBP_{flour}
- (c) $CI_{flour} + GVA_{bread}$
- (d) $VBP_{wheat} + VBP_{bread}$

taxes on production:

- (a) are paid only when profits are made
- (b) are not considered a production cost in companies
- (c) are indifferent to production volume
- (d) are used to finance grants

Which of the following is not a **production tax**?:

- (a) Real estate property tax
- (b) Activity license
- (c) Value Added Tax
- (d) Driving license

Taxes on products:

- (a) do not affect the market price of the products
- (b) paid for each unit produced/distributed/imported
- (c) affect the added value
- (d) are paid only when profits are made

Which of the following is a **production tax**?:

- (a) Real Estate Property Tax
- (b) Value Added Tax
- (c) Corporate Tax
- (d) Real Estate Tax

The **Corporate Tax** is:

- (a) a wealth tax
- (b) an income tax
- (c) a tax on products
- (d) a tax on production

Which of the following taxes **directly affects** the production process?:

- (a) Wealth taxes
- (b) Business income taxes
- (c) Product Tax
- (d) Personal Income Tax

What compensation should companies give for receiving **product subsidies**?:

- (a) They must give part of their products to low-income households
- (b) They must meet minimum sustainability requirements
- (c) They must sell their products at the agreed prices
- (d) There is not necessarily any trade-off

Which of the following **is not a production subsidy**?:

- (a) Aid to promote youth employment
- (b) Aid for investment in R&D
- (c) Help to reduce pollution
- (d) **Guaranteed price for agricultural products**

Which of the following is a **product subsidy**?:

- (a) **Almond export subsidy**
- (b) Tax on Sugary Drinks
- (c) Value Added Tax
- (d) Interest bonus

For which of the following objectives are **subsidies** granted for?:

- (a) Raise money
- (b) **Influence production levels**
- (c) Reduce the amortization of productive equipment
- (d) Influence prices

Which of the following concepts **should not be taken into account** to calculate the **difference between national income and disposable income**?

- (a) interest on public debt
- (b) social contributions
- (c) **family consumption**
- (d) Personal income tax

What do **depreciation funds** cover?:

- (a) Deterioration of productive assets
- (b) Consumption of intermediate goods
- (c) Workers' social contributions
- (d) Operating surplus

What is the difference between production in **net** terms and in **gross** terms?:

- (a) Takes into account only activity within borders
- (b) Taxes and subsidies on products
- (c) Fixed capital consumption
- (d) Production taxes

What does **internal production** take into account?:

- (a) Activity of residents and non-residents, within borders
- (b) Activity of residents, within borders
- (c) Activity of residents, inside and outside borders
- (d) Activity of non-residents, outside borders

What does **national production** take into account?:

- (a) Activity of residents and non-residents, within borders
- (b) Activity of residents, within borders
- (c) Activity of residents, inside and outside borders
- (d) Activity of non-residents, outside borders

In which of the following countries is national production usually greater than domestic production?:

- (a) Spain
- (b) United States
- (c) Mexico
- (d) Ireland

Which of the following indicators of well-being are reflected in **GDP**?:

- (a) Justice in income distribution
- (b) Environmental sustainability
- (c) Efficiency in the use of resources
- (d) Productive capacity

Which of the following well-being indicators **does not** make up the **Human Development Index (HDI)**?:

- (a) GDP per capita
- (b) CO_2 emissions
- (c) Life expectancy
- (d) Literacy rate

What organization prepares the estimates of **GDP in Spain**?:

- (a) Bank of Spain
- (b) National Institute of Statistics
- (c) European Central Bank
- (d) Ministry of Finance

Which of the following countries has the highest **absolute GDP** in current terms?:

- (a) Germany
- (b) France
- (c) Italy
- (d) Spain

Which of the following countries has the highest **GDP per capita** in current terms?:

- (a) Germany
- (b) France
- (c) Italy
- (d) Spain

Which of the following countries has the highest **absolute GDP** in current terms?:

- (a) Germany
- (b) United States
- (c) China
- (d) Japan

Which of the following countries has the highest **GDP per capita** in current terms?:

- (a) Spain
- (b) Italy
- (c) China
- (d) Argentina

What would you call a drop in **GDP** for more than two consecutive quarters?:

- (a) Expansion
- (b) Stagnation
- (c) Boom
- (d) Recession

What would you call a quarterly **GDP** increase of 2.5%?:

- (a) Expansion
- (b) Stagnation
- (c) Boom
- (d) Recession

What would you call a quarterly **GDP** increase of 10%?:

- (a) Expansion
- (b) Stagnation
- (c) Boom
- (d) Recession

What would you call a quarterly **GDP** increase of 0.3%?:

- (a) Expansion
- (b) Stagnation
- (c) Boom
- (d) Recession

A **Spanish** worker **lives in Andorra** and works remotely in a **company in Barcelona**. What production does it contribute to?:

- (a) **Internal and National Production of Spain**
- (b) Domestic Production of Spain
- (c) National Production of Spain
- (d) No production from Spain

A **French** worker **lives in Andorra** and works remotely in a **company in Barcelona**. What production does it contribute to?:

- (a) Domestic and National Production of Spain
- (b) **Internal Production of Spain**
- (c) National Production of Spain
- (d) No production from Spain

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- (b) Domestic Production of Spain
- (c) **National Production of Spain**
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A **French** worker **lives in Barcelona** and works remotely in a **company in Andorra**. What production does it contribute to?:

- (a) Domestic and National Production of Spain
- (b) Domestic Production of Spain
- (c) National Production of Spain
- (d) **No production from Spain**

What are **Primary Income**?:

- (a) Income that remunerates factors of the production process
- (b) Workers' salaries
- (c) Benefits of entrepreneurs
- (d) Redistributed income due to tax action

What does the **Employee Compensation (EC)** not include?:

- (a) Net salaries and wages
- (b) Employer contributions to social security
- (c) Individual social security contributions
- (d) Capital income

What does the **Gross Operating Surplus (GOS)** not include?:

- (a) Provisions for capital amortization
- (b) Financial interests
- (c) Capital income
- (d) Benefits

What does the **Property Income (PI)** not include?:

- (a) Rentals
- (b) Land income
- (c) Financial interests
- (d) Benefits

What is **secondary distribution of income**?:

- (a) Remuneration for factors of the production process
- (b) Donations and inheritances
- (c) Income transfers with the Rest of the World
- (d) **Income redistributed due to tax action**

What is **Disposable Income**?:

- (a) Sum of all goods and services produced by residents
- (b) **Income that families have to consume and save**
- (c) Compensation to workers, net of income taxes
- (d) Remunerations to workers and employers, net of taxes

What possible use does **Disposable Income** have?:

- (a) Gross Fixed Capital Formation
- (b) Storage of finished products
- (c) Payment of taxes
- (d) **Savings**

What cannot be financed with **Gross Available Savings**?:

- (a) **Household consumption**
- (b) Purchase of new home
- (c) Machinery for the national industry
- (d) Non-perishable software licenses

Calculating the Gross Domestic Product:

Consider an economy with only three outputs: food, clothes, and services.

The quantities produced in year 0 were, respectively: 20, 40 and 30; and the unit prices were respectively: 5, 8 and 15 Euros. In year 1 the quantities were: 24, 42 and 30; and the unit prices: 6, 9 and 20 Euros.

1. Calculate the value of nominal and real GDP (base year 0) for each year.

$$\text{Nominal GDP year 0} = \text{Real GDP year 0} = 20 \times 5 + 40 \times 8 + 30 \times 15 = 870$$

$$\text{Nominal GDP year 1} = 24 \times 6 + 42 \times 9 + 30 \times 20 = 1122$$

$$\text{Real GDP year 1} = 24 \times 5 + 42 \times 8 + 30 \times 15 = 906$$

2. Calculate the change in nominal and real GDP in year 1 with respect to year 0.

$$\text{Nominal GDP change rate} = ((1122 - 870) / 870) \times 100 = 28,96\%$$

$$\text{Real GDP change rate} = ((906 - 870) / 870) \times 100 = 4,14\%$$

Calculating National/Disposable Income:

Consider an economy with the data in the following table:

Consumption	900
Gross Capital Formation	300
Exports	900
Imports	1,100
Income of Nationals in Andorra	400
Depreciation	50
Retained profits	130
Interest on Public Debt	30
Public Spending	550
Corporate Tax	115
Subsidies	70
Indirect taxes	125
Social Transfers	335
Income Tax	250
Social Security contributions paid by the worker	80
Social Security contributions paid by the company	100

1. Calculate the value of GDP at market prices

$$\text{GDP}_{\text{mp}} = C + I + G + (X - M) = 900 + 300 + 550 + (900 - 1.100) = 1.550$$

2. Calculate the value of GDP at factor cost

$$\text{GDP}_{\text{fc}} = \text{GDP}_{\text{mp}} - \text{Indirect taxes} + \text{Subsidies} = 1.550 - 125 + 70 = 1.495$$

3. Calculate the value of the GNP at factor cost

$$\text{NDP}_{\text{fc}} = \text{GDP}_{\text{fc}} - \text{Depreciation} = 1.495 - 50 = 1.445$$

4. Calculate the value of National Income (NI)

National Income is the NNP at factor costs.

$$\text{NI} = \text{NNP}_{\text{fc}} = \text{NDP}_{\text{fc}} + \text{Net income from abroad} = 1.445 + 400 = 1.845$$

5. Calculate the value of Disposable Income

$$\text{DI} = \text{NI} + (\text{Transfers} + \text{Public Debt interest}) - (\text{Social security contributions} + \text{Retained profits} + \text{Indirect taxes (on Corporations and Workers)}) =$$

$$1.445 + (335 + 30) - (80 + 100 + 130 + 115 + 250) = 1.535$$