# **International Economics**

# Non-graded Problem Set - Part 2 Spring 2024

Part of the following exercises on macromagnitudes will be covered in class.

What elements are included in GNP at market prices and are not included in GNP at factor costs? (a) Amortizations (b) Grants (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 r        | 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 C        | 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                                                                     |
| Whic         | th 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 <b>C</b> | 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 <b>production tax</b> ?:                          |                                                                                |  |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--|
| (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 <b>directly affects</b> the production process?: |                                                                                |  |
| (a)                                                                           | Wealth taxes                                                                   |  |
| (b)                                                                           | Business income taxes                                                          |  |
| (c)                                                                           | Product Tax                                                                    |  |
| (d)                                                                           | Personal Income Tax                                                            |  |
| Wha                                                                           | t compensation should companies give for receiving <b>product subsidies</b> ?: |  |
| (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                                         |  |
|                                                                               |                                                                                |  |

| Whic  | h of the following <b>is not a production subsidy</b> ?:                          |
|-------|-----------------------------------------------------------------------------------|
| (a)   | Aid to promote youth employment                                                   |
| (b)   | Aid for investment in R&D                                                         |
| (c)   | Help to reduce pollution                                                          |
| (d)   | Guaranteed price for agricultural products                                        |
| Whic  | h of the following is a <b>product subsidy</b> ?:                                 |
| (a)   | Almond export subsidy                                                             |
| (b)   | Tax on Sugary Drinks                                                              |
| (c)   | Value Added Tax                                                                   |
| (d)   | Interest bonus                                                                    |
| For w | which of the following objectives are <b>subsidies</b> granted?:                  |
| (a)   | Raise money                                                                       |
| (b)   | Influence production levels                                                       |
| (c)   | Reduce the amortization of productive equipment                                   |
| (d)   | Influence prices                                                                  |
|       | h of the following concepts should not be taken into account to calculate the dif |
| (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

| vvnic | ch of the following countries has the highest <b>absolute GDP</b> in current terms:    |
|-------|----------------------------------------------------------------------------------------|
| (a)   | Germany                                                                                |
| (b)   | France                                                                                 |
| (c)   | Italy                                                                                  |
| (d)   | Spain                                                                                  |
| Whic  | ch of the following countries has the highest <b>GDP per capita</b> in current terms?: |
| (a)   | Germany                                                                                |
| (b)   | France                                                                                 |
| (c)   | Italy                                                                                  |
| (d)   | Spain                                                                                  |
| Whic  | ch of the following countries has the highest <b>absolute GDP</b> in current terms?:   |
| (a)   | Germany                                                                                |
| (b)   | United States                                                                          |
| (c)   | China                                                                                  |
| (d)   | Japan                                                                                  |
| Whic  | ch of the following countries has the highest <b>GDP per capita</b> in current terms?: |
| (a)   | Spain                                                                                  |
| (b)   | Italy                                                                                  |
| (c)   | China                                                                                  |
| (d)   |                                                                                        |

| Wha | t would you call a drop in <b>GDP</b> for more than two consecutive quarters?: |
|-----|--------------------------------------------------------------------------------|
| (a) | Expansion                                                                      |
| (b) | Stagnation                                                                     |
| (c) | Boom                                                                           |
| (d) | Recession                                                                      |
| Wha | t would you call a quarterly <b>GDP</b> increase of 2.5%?:                     |
| (a) | Expansion                                                                      |
| (b) | Stagnation                                                                     |
| (c) | Boom                                                                           |
| (d) | Recession                                                                      |
| Wha | t would you call a quarterly <b>GDP</b> increase of 10%?:                      |
| (a) | Expansion                                                                      |
| (b) | Stagnation                                                                     |
| (c) | Boom                                                                           |
| (d) | Recession                                                                      |
| Wha | t would you call a quarterly <b>GDP</b> 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
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- (c) National Production of Spain
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| What | are <b>Primary Income</b> ?:                                  |
|------|---------------------------------------------------------------|
| (a)  | Income that remunerates factors of the production process     |
| (b)  | Workers' salaries                                             |
| (c)  | Benefits of entrepreneurs                                     |
| (d)  | Redistributed income due to tax action                        |
| What | t 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 | t does the <b>Gross Operating Surplus (GOS)</b> not include?: |
| (a)  | Provisions for capital amortization                           |
| (b)  | Financial interests                                           |
| (c)  | Capital income                                                |
| (d)  | Benefits                                                      |
| What | t does the <b>Property Income (PI)</b> 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.
- 2. Calculate the change in nominal and real GDP in year 1 with respect to year 0.

# **Calculating National/Disposable Income:**

Consider an economy with the data in the following table:

| Consumption900Gross Capital Formation300Exports900Imports1,100Income of Nationals in Andorra400Depreciation50Retained profits130Interest on Public Debt30Public Spending550Corporate Tax115Grants70Indirect taxes125Social Transfers335Income Tax250Social Security contributions paid by the worker80Social Security contributions paid by the company100 |                                                   |       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-------|
| 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 Grants 70 Indirect taxes 125 Social Transfers 335 Income Tax 250 Social Security contributions paid by the worker 80                                                                    | Consumption                                       | 900   |
| Imports1,100Income of Nationals in Andorra400Depreciation50Retained profits130Interest on Public Debt30Public Spending550Corporate Tax115Grants70Indirect taxes125Social Transfers335Income Tax250Social Security contributions paid by the worker80                                                                                                       | Gross Capital Formation                           | 300   |
| Income of Nationals in Andorra400Depreciation50Retained profits130Interest on Public Debt30Public Spending550Corporate Tax115Grants70Indirect taxes125Social Transfers335Income Tax250Social Security contributions paid by the worker80                                                                                                                   | Exports                                           | 900   |
| Depreciation50Retained profits130Interest on Public Debt30Public Spending550Corporate Tax115Grants70Indirect taxes125Social Transfers335Income Tax250Social Security contributions paid by the worker80                                                                                                                                                    | Imports                                           | 1,100 |
| Retained profits 130 Interest on Public Debt 30 Public Spending 550 Corporate Tax 115 Grants 70 Indirect taxes 125 Social Transfers 335 Income Tax 250 Social Security contributions paid by the worker 80                                                                                                                                                 | Income of Nationals in Andorra                    | 400   |
| Interest on Public Debt  Public Spending  Corporate Tax  115  Grants  Indirect taxes  Social Transfers  Income Tax  Social Security contributions paid by the worker  30  30  31  30  31  31  32  35  35  35  35  35  35  36  37  38  39  30  30  30  30  30  30  30  30  30                                                                               | Depreciation                                      | 50    |
| Public Spending 550  Corporate Tax 115  Grants 70  Indirect taxes 125  Social Transfers 335  Income Tax 250  Social Security contributions paid by the worker 80                                                                                                                                                                                           | Retained profits                                  | 130   |
| Corporate Tax 115 Grants 70 Indirect taxes 125 Social Transfers 335 Income Tax 250 Social Security contributions paid by the worker 80                                                                                                                                                                                                                     | Interest on Public Debt                           | 30    |
| Grants 70 Indirect taxes 125 Social Transfers 335 Income Tax 250 Social Security contributions paid by the worker 80                                                                                                                                                                                                                                       | Public Spending                                   | 550   |
| Indirect taxes 125 Social Transfers 335 Income Tax 250 Social Security contributions paid by the worker 80                                                                                                                                                                                                                                                 | Corporate Tax                                     | 115   |
| Social Transfers 335 Income Tax 250 Social Security contributions paid by the worker 80                                                                                                                                                                                                                                                                    | Grants                                            |       |
| Income Tax 250 Social Security contributions paid by the worker 80                                                                                                                                                                                                                                                                                         | Indirect taxes                                    | 125   |
| Social Security contributions paid by the worker 80                                                                                                                                                                                                                                                                                                        | Social Transfers                                  | 335   |
| ,                                                                                                                                                                                                                                                                                                                                                          | Income Tax                                        | 250   |
| Social Security contributions paid by the company 100                                                                                                                                                                                                                                                                                                      | 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
- 2. Calculate the value of GDP at factor cost
- 3. Calculate the value of the GNP at factor cost
- 4. Calculate the value of National Income (NI)
- 5. Calculate the value of Disposable Income