

# Problem Set EARN – National Accounts

- 1) A farmer sells wheat to a baker for 10 €. The baker uses the wheat to make bread, which is sold for 15 €.
  - a) What is the value added from the Farmer? And the Baker?
  - b) How much is total sales, and how much is intermediate consumption? How much is total value added?
  - c) What is the total contribution of these transactions to GDP?
- 2) List the four components of GDP following the expenditure (or demand) approach, and give examples of each component.
- 3) Consider the GDP and GNI (gross national income or product). Which measure should a government prefer if it cares about the total income of Portuguese population? Which should it prefer if it cares about the total economic activity occurring in Portugal? Why?
- 4) Consider the economy of Fakeland. In this country the System of National Accounts is still being organized and it is currently incomplete. For the year 2009, the following data is available (where ROW is rest of the World):

Total production: 30 500

Intermediate consumption: 11 200

Gross Investment (or gross capital formation): 5 305

Taxes net of subsidies on products: 1 800

Consumption of fixed capital: 4 000

Final consumption expenditure: 12 500

Total imports: 6 300

Income flows from ROW minus income flows to ROW: - 5 000

Current transfers from ROW minus current transfers to ROW: 100

- a) What was the GDP of Fakeland in 2009?
  - b) What was the value of the total exports of Fakeland in 2009?
  - c) What was the gross saving and net saving of Fakeland in 2009?
  - d) When discussing the financial sustainability of Fakeland the government focuses its attention on Gross Saving. However, some of the opposition is basing its arguments for a change in economic policy by looking at Net Saving. What is the more prudent approach and why?
  - e) What would you suggest to increase Fakeland's Net Saving?
- 5) Consider the barber shop Hairy Harry, Inc. In one day, Hairy Harry Inc. collects €400 for haircuts. Over this day, his equipment depreciates in value by €50. Of the remaining €350, Harry sends €30 to the government in sales taxes, takes home €220 in wages, and retains €100 in his business to add new equipment in the future. From the €220 that Harry takes home, he pays €70 in income taxes. Based on this information, compute Harry's contribution to the following measures of income:
    - i) Gross Domestic Product
    - ii) Net National Income
    - iii) Gross Disposable Income

6) Consider the following information on the functioning of an economy of a given country in a given year:

Private consumption: 600

Output: 1270

Public consumption (Government Expenditures): 160

Intermediate Consumption: 300

Gross Investment (Gross Fixed Capital Formation): 480

Exports: 310

Imports: 380

Income payments from the rest of the world (ROW): 80

Taxes net of subsidies on production: 200

Consumption of Fixed Capital: 140

Income payments to the ROW: 60

Transfers from the government to the households: 200

Net transfers from the ROW: 60

- a) What is the value of Gross Domestic Product (GDP) of this economy calculated by the output and the demand approaches?
- b) What is the value of Net National Income (NNI)?
- c) At the end of the year, does the government have a deficit or a surplus? What is its value?
- d) Give one example of a real life money flow that could be considered an income payment to the rest of the world (ROW) and one example of a transfer from the ROW.