

Homework I
(Submission date: March 18 2024)
(Late submissions will not be evaluated)

1. You are given the following data for a hypothetical country.

Year	Nominal GDP (billion TL.)	Real GDP (billion TL.)	Population (million)	CPI	Average (nominal) wage (thousand TL.)
2000	300	213	62,2	100	450
2001	350	228	63,6	112	560
2002	365	221	64,9	119	580

Calculate:

- a. growth rate in nominal GDP in 2000-2002 period.
- b. average annual growth rate in real GDP in 2000-2002 period.
- c. (implicit) GDP deflator for 2000, 2001 and 2002.
- d. inflation rate in 2000-2002 period by using
 - i. CPI
 - ii. (implicit) GDP deflator
- e. growth rate in per capita real GDP in 2000-2002 period.
- f. real wage in 2001.
- g. growth rate in real wage in 2000-2002 period.

2. You are given the following information about a hypothetical economy. All figures are in billions of TL.

Social security contributions	35	
Subsidies	65	
Public investment	150	
Private consumption expenditure	450	
Exports of goods and services	100	
Public consumption expenditure	100	
Imports of goods and services	110	
Undistributed profits(retained earnings)	27	
Income generated by a domestic company in France		310
Corporate taxes		43
Income tax		94
Net unrequitted transfers		80
Government transfers and indirect payments to individuals		88
Income generated by a foreign company in Turkey		130
Private investment		250
Indirect taxes		54
Depreciation		100

Assuming the components not given above to be zero, compute:

- a. GDP from expenditure side
- b. GNP
- c. Net factor incomes from abroad

- d. Current Account Balance
- e. NDP
- f. NNP
- g. Personal income
- h. Disposable income

3. Consider the following supply chain for bread production in an economy.

A farmer sells wheat to a bakery for \$10. The bakery makes 110 loaves from the wheat and sells them to a wholesaler for \$100. The wholesaler in turns sells the 110 loaves for \$105 to various grocery stores. The grocery stores sell the 110 loaves to consumers for \$1 apiece.

- a. Calculate value added at each stage of production.
- b. What is GDP using the final sales approach? Show the calculation.
- c. What is GDP using the value added approach? Show the calculation.

4. Draw a Lorenz curve using the following information for a hypothetical economy for Year 1.

Income Quintile	Percentage of Family Income
Lowest fifth	2.7%
Second fifth	5.5
Third fifth	11.1
Fourth fifth	20.6
Fifth fifth	60.1

5. Textbook (Colander 11th edition) Chapter 25 Questions and Exercises page 579 question 14

6. Textbook (Colander 11th edition) Chapter 25 Questions and Exercises page 579 question 19

7. Textbook (Colander 11th edition) Chapter 25 Questions and Exercises page 579 question 20