

Chapter 2.3: Macroeconomic Objectives II- Economic Growth & Equity in Income Distribution**Question 1**

The following table shows data from Snowland's national income accounts.

Year	2009	2010	2011
Real GDP (million Sni)	5000	5100	5151
Real GDP per capita (Sni)	2000	1980	1960

- Calculate the rate of growth in real GDP for 2010 and 2011.
- Calculate the rate of growth in real GDP *per capita* for 2010 and 2011.
- Explain how it is possible for real GDP to be increasing while real GDP *per capita* is falling.

The following table shows income shares of population quintiles in Riverland and Lakeland.

	Lowest 20%	2 nd 20%	3 rd 20%	4 th 20%	Highest 20%
Lakeland	9%	14%	18%	23%	36%
Riverland	4%	7%	12%	19%	58%

- Outline the meaning of 'quintiles' in the table, and outline how the data would differ if income shares were shown by population deciles.
- Analyse the data on income shares and explain which of the two countries has a more equal distribution of income.
- Construct Lorenz curves for Lakeland and Riverland, and explain which of the two countries has a more equal distribution of income.
- Based on your curves for part (f), explain which of the two countries, Lakeland or Riverland, has a higher Gini coefficient, and what this means for its income distribution in comparison with the other country.
- Outline the maximum and minimum values that can be taken by a Gini coefficient.
- Draw a diagram showing an initial Lorenz curve, and a possible Lorenz curve that would result if the government of the country placed increased emphasis on indirect taxes and lower emphasis on direct taxes as sources of government revenue.
- Outline whether income distribution is likely to become more or less equal following the change in the government tax policies described in part (i).

Question 2

The following table provides information on income tax rates in Mountainland (in Mnl, the national currency).

Annual Income (Mnl)	Marginal Tax Rate (%)
0 – 7,000	0
7001 – 20,000	10
20,001 – 45,000	25
45,001 – 100,000	35
100,001+	45

- Distinguish between marginal and average tax rates.
- Calculate the amount of income tax paid by families with an annual income of
 - 10 000 Mnl
 - 35 000 Mnl
 - 107 000 Mnl.

- c. For each of the family incomes in part (b), calculate the corresponding average tax rate, and state the corresponding marginal tax rate.
- d. The family with an annual income of 35 000 Mnl spends 30 000 Mnl on goods and services, which includes spending on indirect taxes of 6000 Mnl.
- Calculate the indirect tax rate.
 - Calculate spending on indirect taxes as a fraction of annual income.
 - Calculate this family's total average tax rate, including direct and indirect taxes.
- e. Explain whether a constant indirect tax rate applied uniformly on all spending is progressive, proportional or regressive.

Snowland consists of two states, Upper Snowland and Lower Snowland. Each state has its own income tax system with its own tax rates. The following table shows the amount of income tax paid in each state on four different annual income levels (in Snl, the national currency).

Annual Income (Snl)	Upper Snowland Amount of income tax paid annually (Snl)	Lower Snowland Amount of income tax paid annually (Snl)
25,000	5,750	5,750
36,000	8,280	7,200
43,000	9,890	8,170
47,000	10,810	8,460

- f. Explain what type of tax system Upper Snowland and Lower Snowland each has, progressive, proportional or regressive.
- g. Explain which of the three tax systems shown in the tables above, Mountainland's, Upper Snowland's or Lower Snowland's, is most appropriate as a method to make the distribution of income more equal.

Chapter 2.4: Demand & Supply-Side Policies

No topics covered by HL paper 3.