

Prof. Dr. Bernd Kempa

2nd Exam
Macroeconomics
IBA
(WS 2006/2007)
02.04.2007

- please answer all questions
- only write on the paper supplied
- a maximum of 120 points can be achieved
- the exam lasts 120 minutes
- you may use a dictionary and a calculator
- do not use a lead pencil

Name: _____

Student ID: _____

Course of Studies: _____

Semester: _____

Signature: _____

1	2	3	4	5	6	7	Σ
8	6	13	12	20	15	46	120

1. The following table displays the composition of the German Gross Domestic Product (GDP) for the year 2005.

German Gross Domestic Product and National Income (Billion €) in prices of 2005	
GDP	2,246
Net Income from Abroad	4
Depreciation	328
Indirect Taxes and Tariffs	211
Subsidies	27
Wages	1,129
Profits	555
Direct Taxes and Transfers	216

- a) Explain the difference between Gross Domestic Product and Net National Income. Calculate Net National Income. (4 points)
- b) Is the GDP an appropriate welfare indicator? Explain your answer. (4 points)

2.

- a) Display the equilibrium condition for the money market and illustrate using a money market diagram. (3 points)
- b) Assume an increase in income. Demonstrate graphically and verbally the effects on the money demand curve and the equilibrium rate of interest. (3 points)

3.

- a) Use the Mundell-Fleming model with fixed exchange rates and high capital mobility to explain both graphically and verbally the effects of an expansionary fiscal policy on the endogenous variables of the model. (11 points)
- b) How do you rate the effectiveness of expansionary fiscal policy in a system with fixed exchange rates? (2 points)

4. The basic equation of the income-expenditure model is as follows:

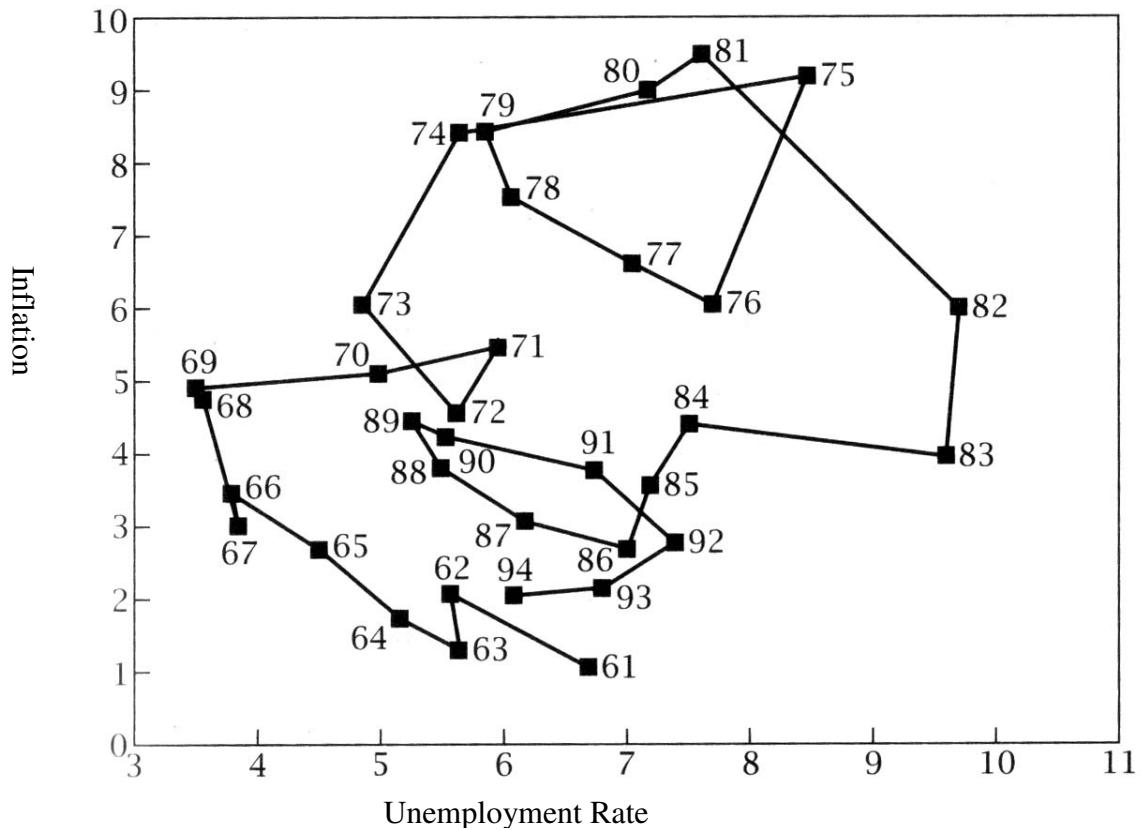
$$y = c_0 + c_y(y - \bar{t}) + \bar{i} + \bar{g}$$

- a) Explain the meaning of the different symbols and calculate the balanced budget multiplier (Haavelmo Theorem). (4 points)
- b) Explain both graphically and verbally the effects of an increase in government spending within the framework of the income-expenditure model. (8 points)

5. The equilibrium income in an economy shall be raised by means of monetary and/or fiscal policy.
- a) How can monetary and fiscal policy be used to raise aggregate output without changing the interest rate? Illustrate this scenario graphically in an IS-LM diagram. What is the macroeconomic terminology for such a combination of monetary and fiscal policy? (8 points)
 - b) Imagine that the equilibrium rate of interest is close to zero so that holding money entails no opportunity costs in terms of lost interest rate earnings. What is the proper terminology for this scenario? Illustrate this scenario graphically using the LM curve. (3 points)
 - c) Now compare the effectiveness of an expansionary monetary policy and an expansionary fiscal policy with respect to raising aggregate output in the scenario of part b) of the question. (12 points)

6. The following diagram depicts the time series of US unemployment and inflation between 1961 and 1994, with their individual percentage rates on the horizontal and vertical axes, respectively. For instance, in 1961 the unemployment rate was 6.8% with inflation around 1%. The individual years are chronologically connected by a continuous line.

US unemployment and inflation, 1961-1994



- a) What kind of relationship between unemployment and inflation can you detect for the subperiods 1961 to 1969 and 1976 to 1979? Explain this relationship both graphically and verbally using an appropriate model. (7 points)
- b) Now consider the time period 1972 to 1974. What relation between the unemployment rate and the inflation rate can you detect now? Explain this observation both graphically and verbally using your diagram from part a). (8 points)

7. The anticipated demographic development in Germany points to a substantial decrease in the working-age population and hence in the national labor supply.
- a) Firstly, illustrate the Solow model with depreciation and population growth by means of an appropriate graph. (5 points)
 - b) Use the graph from above to explain both graphically and verbally the effects of a decrease in population growth on the capital stock, income, consumption and investment. (5 points)
 - c) Secondly, analyze the effects of a reduction in the population on employment and wages in an isolated labor market diagram. (3 points)
 - d) The following diagram of the AS-AD model depicts an equilibrium. Use the diagram to analyze a reduction in the labor force. (15 points)
Hint: Start by labelling all graphs and axes.
 - e) Now verbally analyze the changes in employment, output, interest rate and the price level in the longer run that arise from a reduction in the labor force in comparison to the original equilibrium. (15 points)
 - f) Finally, briefly compare the two models with respect to the effects of a shrinking population on output and economic growth. (3 points)

