

University of Connecticut
College of Arts and Sciences
Department of Economics
Christian Zimmermann

Fall 2005, Intermediate Macroeconomics, section 3

ECON 219 Mid-term exam I

Name:

General recommendations:

- Read questions thoroughly and answer each.
- Work individually.
- There are four pages.
- No documentation, cell phones, pagers, calculators and bathroom breaks.
- You have until 10:45 and can leave early, if you wish.

1. **[10%]** Here are some economic data gleaned from a photographer: wage of assistant 500\$, photographic material purchased 300\$, photographic material sold 450\$, photographs sold 1250\$, taxes 150\$, gifts to local charities 50\$.

(a) What is the contribution to GDP of this photographer according to the production approach? Explain.

(b) And according to the income approach?

2. **[30%]** Here are some business cycle statistics for a fictional country. All data has been seasonally adjusted, then logarithms were taken, then cyclical components were obtained with the HP-filter.

Variable	SD%	Correl. of GNP with		
		x_{t-1}	x_t	x_{t+1}
GNP	1.89	.65	1.00	.65
Consumption	1.08	.32	.58	.45
Fixed investmt	5.45	.57	.77	.62
Govt. expenses	0.55	-.12	-.35	-.43
Employment	1.08	.35	.48	.43
GDP defl.	1.72	-.46	-.43	-.34

- (a) Explain what we mean by a stylized fact.
- (b) What stylized facts do you see in this economy?
- (c) Compared to the US stylized facts, what strikes you as being different?
- (d) From the table above, what can we say about the size of the government in this country?

(e) Why is the analysis of the correlation of GNP and prices so important?

3. [40%] Circle the correct answer to each of the following questions. Remember that there can be several answers:

(a) In equilibrium:

- i. wage equals marginal rate of substitution;
- ii. wage equals marginal rate of transformation;
- iii. marginal rate of transformation equals marginal rate of substitution;
- iv. income effect equals substitution effect.

(b) An increase in profits π leads to:

- i. a higher labor demand;
- ii. a lower labor demand;
- iii. a higher labor supply;
- iv. a lower labor supply.

(c) To compute a consumer price index, we need:

- i. data about consumption habits in every month;
- ii. data about item prices every month;
- iii. fixed exchange rates;
- iv. the GDP or GNP deflator.

(d) Employment is

- i. countercyclical;
- ii. procyclical;
- iii. very volatile;
- iv. very smooth.

(e) When the wage decreases, the income effect leads for households to:

- i. a decrease in consumption demand;
- ii. an increase in consumption demand;
- iii. a decrease in leisure demand;
- iv. an increase in leisure demand.

(f) The role of the logarithm is to:

- i. highlight deviations from the trend;
- ii. remove fluctuations due to price changes;
- iii. smooth data to reveal trends;
- iv. express all deviations from trend in %.

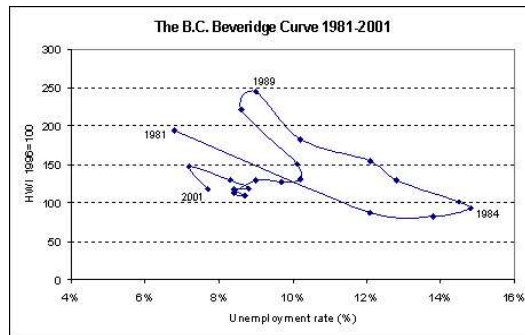
4. [20%] The government increases the lump-sum tax.

(a) What is the consequence for labor supply?

(b) What is the consequence for labor demand?

(c) Thus, what happens to the equilibrium wage and employment?

5. [Bonus: 10%] This figure represents a scatter plot of the unemployment rate and an indicator of vacancies.



(a) Notice how the dots have been connected. What feature of the business cycle does this allow to evaluate?

(b) In this particular case, what stylized facts would emerge?