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Spring 2003, 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 1:50 and can leave early, if you wish.

1. **[40%]** Here are some business cycle statistics for Canada. All data has been deseasonalized (seasonally adjusted), then logarithms were taken, then cyclical components were obtained with the HP-filter.

Variable	SD%	Correlation of GNP with								
		x_{t-4}	x_{t-3}	x_{t-2}	x_{t-1}	x_t	x_{t+1}	x_{t+2}	x_{t+3}	x_{t+4}
Output	1.80	.05	.29	.51	.75	1.00	.75	.51	.29	.05
Consumption	1.07	.04	.12	.24	.42	.59	.51	.42	.30	.20
Fixed investmt	5.12	.15	.06	.31	.51	.63	.62	.51	.40	.30
Govt expenses	4.24	.00	.06	.05	.11	.20	.11	.09	.06	.07
Net exports	1.16	.01	.10	.22	.38	.51	.55	.50	.30	.06
Total hours	1.69	-.03	.17	.38	.58	.75	.78	.68	.56	.43
Employment	1.33	-.09	.11	.33	.55	.72	.77	.69	.57	.46
Average hours	.48	.14	.30	.42	.54	.66	.62	.49	.38	.26

(a) Why take logarithms?

(b) What are the differences between total hours, employment and average hours (in terms of definitions, not in terms of cyclical behavior)?

(c) Characterize the business cycle facts in terms of comovements. Are there any leads or lags?

(d) Are the stylized facts for the labor market comparable with those in the US? Explain.

2. **[40%]** Circle the correct answer to each of the following questions:

(a) The GDP deflator is a broader measure of inflation than the CPI because (check all that apply):

    i. it covers investment;

    ii. it covers imports;

    iii. it covers exports;

    iv. it covers sales taxes.

(b) The product approach to measuring GDP values government production at:

    i. the price it would sell on the market;

    ii. its cost of production;

    iii. its value to society;

    iv. the total amount of taxes collected.

(c) In an economic model, an exogenous variable is:

    i. a stand-in for more complicated variables;

    ii. determined by the model itself;

    iii. determined outside the model;

    iv. a variable that has no effect on the workings of the model.

(d) In a static economic model, the government budget constraint requires that government spending:

    i. equals taxes plus government employee wages;

    ii. equals taxes plus borrowing;

    iii. equals taxes less borrowing;

    iv. equals taxes.

(e) When consumption and leisure are both normal goods and there is an increase in real dividend income minus taxation, the household:

    i. increases consumption and increases leisure;

    ii. increases consumption and decreases leisure;

    iii. decreases consumption and increases leisure;

    iv. decreases consumption and decreases leisure.

(f) A static decision is one that:

    i. is made very slowly;

    ii. involves planning over one tme period;

    iii. involves planning over exactly two time periods;

    iv. involves planning over many periods.

3. **[20%]** Suppose that the government decides to tax businesses and simply transfers the proceeds to households. To keep things simple, all firms are taxed the same amount, whatever their output (think of it as a business registration fee), and all households obtain the same transfer, whatever their income. What is the impact of this on labor supply and labor demand? Show graphically how and why each of these curves shift (there is more space on next page, if necessary).

4. **[Bonus: 10%]** This is a possibly tricky question: suppose that there is a military draft, and that conscripts are not paid in any way. Show graphically what impact this would have on the budget constraint of the representative household, bearing in mind that it represents the average household.