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Fall 2003, Intermediate Macroeconomics, section 2

ECON 219 Final Exam

General recommendations:

- Read questions thoroughly.
- Please respond on this copy.
- You have two hours.
- Work individually.
- There are six pages.
- Good luck!

Your name:

1. **[25 points]** Circle the appropriate answer on each of the following items. Circle multiple items if necessary:

   (a) What stylized fact of growth below is actually not true?
   a) output per capital tends to grow; b) output growth differs a lot across countries; c) real wages are stable; d) the real return of capital is stable.

   (b) Which of the following factors increase total factor productivity:
   a) new inventions; b) more capital; c) new management techniques; d) favorable changes in government regulations.

   (c) In the endogenous growth model with human capital, an increase in the efficiency of human capital accumulation:
   a) increases the growth rate of human capital; b) increases the growth rate of output; c) decreases the growth rate of human capital; d) decreases the growth rate of output.

   (d) M1 contains:
   a) currency issued by the central bank; b) cheques; c) checking accounts; d) savings accounts.

   (e) The current demand for money increases when:
   a) current real income increases; b) current real income decreases; c) the nominal interest rate increases; d) the nominal interest rate decreases.

   (f) Money is neutral in the monetary intertemporal model because:
   a) all markets balance; b) the central bank acts optimally; c) prices are rigid; d) wages adjust immediately.

   (g) In the data, money is:
   a) strongly procyclical; b) weakly procyclical; c) acyclical; d) we cannot tell.

(h) A central bank could influence real aggregates if:
a) prices are indexed; b) agents have incomplete information on the state of the economy; c) prices are adjusted with a delay; d) it wants to change tax rates.

(i) The good ideal for use as money should be:
a) valuable for other purposes; b) durable; c) colorful; d) divisible.

(j) Central banks should be transparent because:
a) they are useless anyway; b) other agents do not like to make errors; c) governments are then less tempted to abuse them; d) that makes prices fully flexible.

2. **[10 points]** In the intertemporal model with money, explain why money is not super-neutral, first defining what super-neutrality is.

3. **[10 points]** What are the roles of money? Which ones did we cover with the intertemporal model of money? Explain.

4. **[10 points]** Explain how one may calculate the Solow residuals. What do we know about their trend?

5. **[10 points]** Is capital an engine of growth? Explain why or why not.

6. **[35 points]**

   (a) Take the intertemporal model with money. Show graphically the impact of a positive shock of government expenses on the real interest rate, the price level, output, employement, and the real wage.

(b) Repeat the exercice with a positive money shock.

(c) Discuss the cyclical behavior of consumption, investment, prices, real wages, and employment if the economy were hit by government expense shocks in the intertemporal model with money. Repeat the exercice with monetary shocks.

(d) Discuss which shock appears to be a better explanation of business cycles, assuming there would be only only one type of shocks. Is a combination of those two shocks more likely?

(e) What has the addition of the money market to the original intertemporal model given us in additional insights? Or: Comparing your results to those from a model without money, what did we gain?

(f) In the light of the results above, is it good or bad to have fluctuations in government expenses? Remember what we assumed about household preferences.

7. **Bonus question [10 points]** Germany and Japan experienced significant destruction during WWII. Using growth theory, what should we expect in terms of economic growth in those countries in the years after WWII? Compare this with countries that did not suffer such destruction.