UCLA - Econ 102 - Fall 2019
Instructor: François Geerolf
Midterm Exam 2A
November 20, 2019
Time Limit: 1 hour 15 minutes

Last Name: _____

First Name: _____

Student ID Number: _____

Signature _____

Midterm Exam 2

This exam contains 11 pages (including this cover page). You can earn 100 points.

Instructions:

1. Print your Last name, First Name, Student ID Number and Signature at the top of this page.

2. The only items which should be on your desk are pencils and/or pens. NO other items are allowed. Place any other item UNDER your desk. Calculators are NOT allowed.

3. Once the exam begins, you are not allowed to leave the room until you hand in your exam.

Good luck ! Budget your time wisely ! (skip the question or even the exercise if you get stuck)

Do not write below this line (Grader use only)

Question	Points	Score
1	60	
2	20	
3	20	
Total:	100	

30 Multiple Choice Questions (60 points)

1. (60 points) Each multiple choice question has only one right answer. Use the Scantron to mark your answers.

    (1) (2 points) "Crowding Out" of government debt refers to the idea that:
    - A. Government debt reduces output today
    - B. Government debt reduces consumption today
    - C. Government debt reduces investment
    - D. Government debt reduces government spending in the future
    - E. Government debt leads to higher taxes in the future

    (2) (2 points) In the Neoclassical model (as discussed in class), tax cuts for households can increase GDP because
    - A. Lower taxes increase households' willingness to spend
    - B. Lower taxes increase productivity of firms
    - C. Lower taxes increase labor supply
    - D. Lower taxes force government to reduce wasteful spending
    - E. Lower taxes distribute income to high marginal-propensity-to-consume individuals

    (3) (2 points) In the Keynesian model (as discussed in class), tax cuts for households can increase GDP because
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    (4) (2 points) According to Ricardian equivalence, raising taxes:
    - A. Only reduces consumption.
    - B. Only increases public debt.
    - C. Leaves consumption unchanged.
    - D. Leaves public debt unchanged.
    - E. Both reduces consumption and increases public debt.

    (5) (2 points) The Paradox of Thrift refers to the idea that
    - A. Increases in savings effort can lead to higher aggregate consumption
    - B. Increases in savings effort can lead to higher aggregate output
    - C. Increases in savings effort can lead to lower aggregate savings
    - D. Increases in savings effort can lead to lower aggregate tax revenue
    - E. Increases in savings effort can lead to lower thriftiness

(6) (2 points) In the OLG model discussed in class, which of the following was a conclusion about Pay-As-You-Go pensions (e.g. Social Security) and rolling over government debt?

    A. The two policies are fundamentally different with different effects on interest rates.

    B. Both policies help to raise the level of the capital stock.

    C. Social Security tends to help today's young while government debt tends to hurt today's young.

    D. Rolling over government debt is always infeasible while PAYG is feasible.

    E. The two policies are broadly similar ways to address excessively high levels of capital accumulation.

(7) (2 points) Suppose that consumption is given by $C = 10 + 0.6(Y - T)$, while taxes (T), investment (I), and government spending (G) are fixed exogenously. In the Keynesian goods market model, how much does GDP change when taxes are increased by \$1?

    A. -\$2.5

    B. \$-1.5

    C. \$0

    D. \$1.5

    E. \$2.5

(8) (2 points) Say's Law refers to the (controversial) idea that:

    A. Increased supply will always find a willing buyer.

    B. Economies always operate efficiently.

    C. Increasing government debt always displaces investment.

    D. Higher savings effort leads to lower aggregate savings.

    E. Government debt will grow even when the primary budget is balanced.

(9) (2 points) In the lecture, we argued that "rational bubbles":

    A. cannot occur because they are a Ponzi scheme.

    B. transfer resources from young to old in an unstable way.

    C. happen because some investors have incorrect beliefs.

    D. reduce the real interest rate.

    E. actually fund useful investments.

(10) (2 points) In a Keynesian world, there is no room for policy intervention to increase GDP in a recession:

    A. False, the government can increase taxes to increase GDP.

    B. False, the government can reduce taxes to increase GDP.

    C. True, taxes and government expenditures do not affect GDP.

    D. True, GDP will only be determined by firm's investment.

(11) (2 points) The multiplier of government expenditures in the Keynesian model is understood as:

    A. The change in GDP coming from a change in government expenditures.

    B. The change in government expenditures as a result of GDP changes.

    C. The rise of inequality between high-income people and low-income people.

    D. A change in the demand for goods and hence a change in prices to clear the markets.

(12) (2 points) In the basic Keynesian model, where $C = c_0 + c_1(Y - T)$, $I = \bar{I}$, $G = \bar{G}$ and $T = \bar{T}$:

    A. Taxes are more effective than government expenditures to increase GDP (for the same dollar amount of deficit).

    B. The multiplier of gov. exp. is $\frac{1}{1+c_1}$.

    C. Aggregate demand does not depend on the level of investment done by firms.

    D. Government expenditures are more effective than taxes to increase GDP (for the same dollar amount of deficit).

(13) (2 points) An important assumption of Keynesian theory is:

    A. There is capacity (unemployed resources) to increase supply of goods after an increase in demand.

    B. People always find jobs if they want to work, i.e. the unemployment is only voluntary.

    C. The government can not implement automatic stabilizers, i.e. taxes of the form: $T = t_0 + t_1Y$.

    D. Investment has to be exogenous, i.e. can not depend on output.

(14) (2 points) The marginal propensity to save in the Keynesian model:

    A. Is constant.

    B. Depends on income.

    C. Depends on taxes.

    D. Is the marginal propensity to consume plus one.

(15) (2 points) In the basic Keynesian model, where $C = c_0 + c_1(Y - T)$, $I = \bar{I}$, $G = \bar{G}$ and $T = \bar{T}$, consumers will only purchase goods if they have positive income.

    A. True if $c_0 = 0$.

    B. True: they always consume a fraction of their disposable income and save the rest.

    C. False: they will adjust consumption according to their risk aversion.

    D. False: if the marginal propensity to consume is positive, then it implies that agents will consume a positive amount of goods regardless of their income.

(16) (2 points) Following the model with heterogeneous agents under a Keynesian framework (Lecture 9 - Redistribution Policies):

    A. A redistribution of income from low to high marginal propensity to consume agents can boost GDP.

    B. Only the rich agents can consume.

    C. Income should go to the rich agents for the economy to have larger GDP.

    D. A tax reduction for the poor is not so effective to increase GDP as a tax cut for the rich.

(17) (2 points) According to the Keynesian-cross analysis, if the marginal propensity to consume is 0.6 and government expenditures and autonomous taxes are both increased by 100, equilibrium income will rise by:

    A. 0.

    B. 100.

    C. 150.

    D. 250.

(18) (2 points) Which of the following would tend to make the tax expenditure multiplier smaller?

    A. an increase in the marginal propensity to consume

    B. an increase in the marginal propensity to save

    C. a reduction in taxes

    D. a reduction in government spending

    E. none of the above

(19) (2 points) Which of the following would tend to make the government expenditure multiplier greater?

    A. a decrease in the marginal propensity to consume

    B. a reduction in lump-sum taxes

    C. a reduction in autonomous consumption

    D. a decrease in the marginal propensity to save

    E. none of the above

(20) (2 points) Which of the following would tend to make the government expenditure multiplier smaller?

    A. an increase in the marginal propensity to consume

    B. a reduction in autonomous investment

    C. an increase in the proportional income tax rate

    D. a decrease in the marginal propensity to save

    E. none of the above

(21) (2 points) An extreme version of supply-side economics implies that:

    A. Tax cuts for the rich are self-financing, because we are on the left side of the Laffer curve.

    B. Tax cuts for the rich are self-financing, because we are on the right side of the Laffer curve.

    C. Redistributing income from the rich to the poor reduces government debt.

    D. Keynesian stimulus is self-financing.

    E. None of the above.

(22) (2 points) According to Keynesian economics, a demand-side policy can be self-financing if:

    A. Ricardian equivalence holds.

    B. Jean-Baptiste Say was right.

    C. The multiplier is equal to $1/(1 - c_1 - b_1)$.

    D. The multiplier is larger than the inverse of the proportional tax rate.

    E. The government lowers taxes instead of increasing expenditures.

(23) (2 points) The Laffer curve plots:

    A. Public debt as a function of tax rates.

    B. Consumption as a function of tax rates.

    C. Investment as a function of tax rates.

    D. Government receipts as a function of tax rates.

    E. None of the above.

(24) (2 points) According to Greg Mankiw, which factor was NOT contributing to hold back consumption in November 2008:

    A. Declining house values.

    B. Declining retirement saving (401(k) balances).

    C. Increasing interest rates on corporate bonds.

    D. Rising unemployment rate.

    E. Declining stock market prices.

(25) (2 points) Why was John Maynard Keynes fundamentally a conservative?

    A. He favored reduction in taxes over government spending.

    B. He believed in Say's law.

    C. He would side with the aristocratic establishment, against the educated bourgeoisie.

    D. He was trying to make sure that the capitalist system would survive.
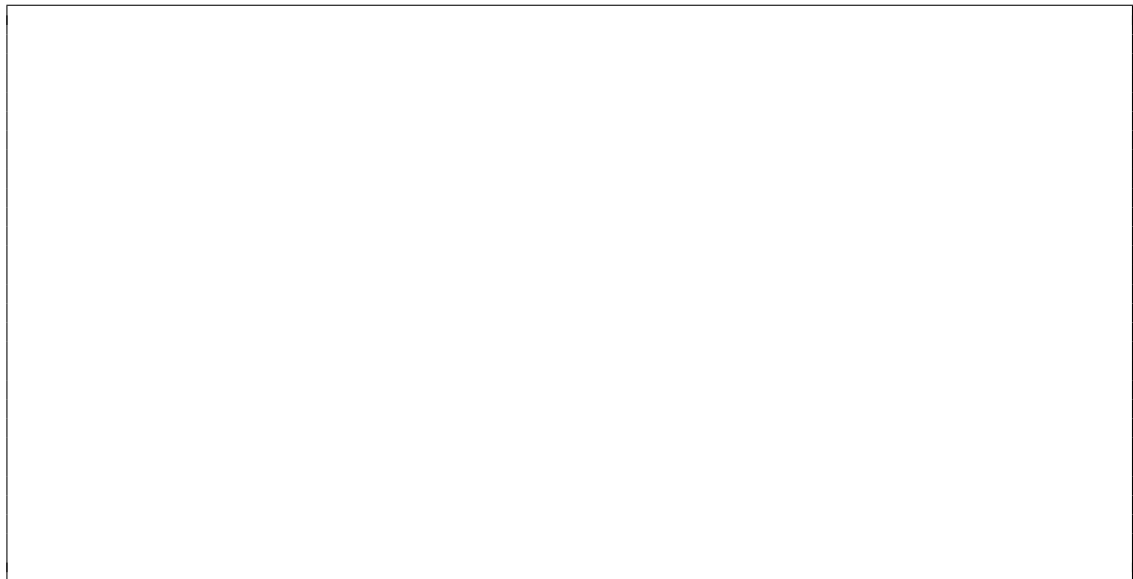
    E. He was opposing Roosevelt's policies.

(26) (2 points) Which economic orthodoxes are falling with interest rates, according to Neil Irwin?

    A. The idea that government deficits decrease interest rates.

    B. Keynesian economics.

    C. Trickle-down economics.

    D. The idea that government deficits crowd out investment spending.

    E. The idea that there exists a paradox of thrift.

(27) (2 points) How can we test "trickle-down economics" using state-level data?

    A. We use state-level changes in aggregate taxes as instruments.

    B. We may send out surveys to businessmen in each different states.

    C. We use the timing of reforms, and compare the effects of the Bush versus the Clinton tax cuts.

    D. We compare economic growth in states with more or less high income people, following national-level tax changes.

    E. None of the above.

(28) (2 points) How is a financial bubble similar in many ways to public debt, and to a pay-as-you-go system?

    A. It transfers resources from the old to the young.

    B. According to neoclassical economics, it crowds out investment.

    C. According to neoclassical economics, it crowds in investment.

    D. None of the above.

(29) (2 points) When Jean-Baptiste Say was writing, which country was being accused of saving too much?

    A. China

    B. The United Kingdom.

    C. France.

    D. The United States.

    E. Germany.

(30) (2 points) Which of the following is connected to the issue of Say's law?

    A. The rich work and then lavishly spend their money on yachts and luxury goods.

    B. The rich work and save, neither to consume today nor tomorrow.

    C. The rich work and save, so that their children can have a better life.

    D. The rich will soon be rich enough to stop working altogether.
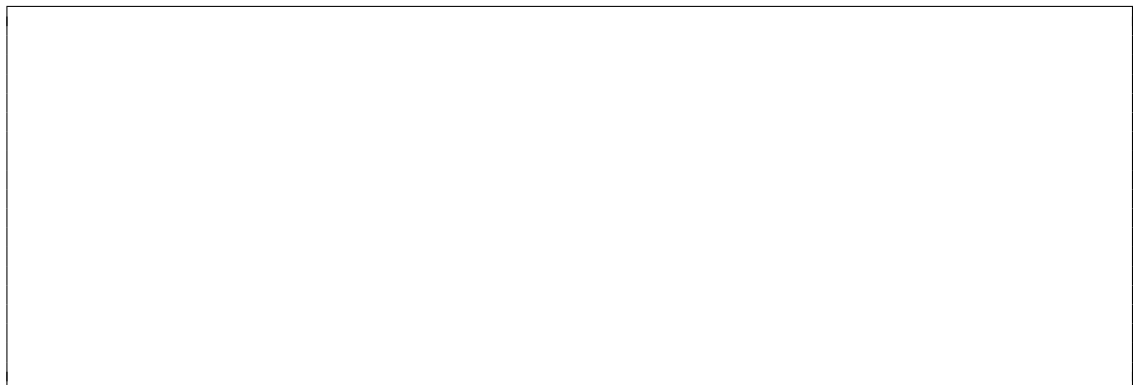
Exercice 1: The Keynesian Multiplier (20 points)

2. (20 points) Consider the closed economy goods market model where consumption is linear in disposable income with $C(Y_D) = c_0 + c_1 Y_D$, disposable income is income minus taxes, taxes are exogenous and equal to T, and investment depends on output according to the Keynesian investment function, through $I = b_0 + b_1 Y$. However, government spending depends on the level of output. For example, the government systematically spends more when GDP is higher (it builds new roads, hires new teachers, etc.), and conversely when GDP is lower (it then stops construction projects, fires teachers, etc.). Thus, government spending is given by the following equation, with $g_1 > 0$:

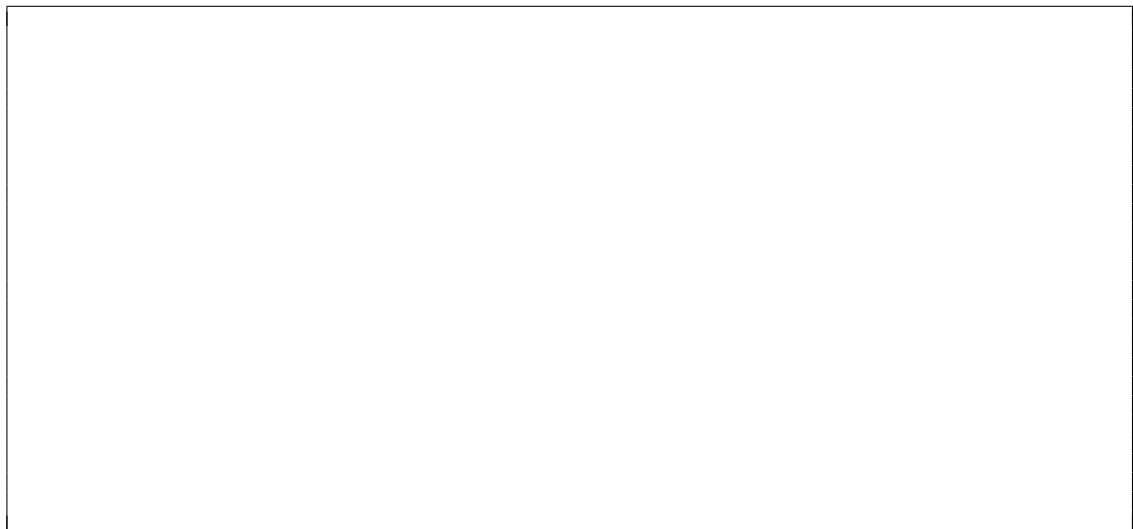$$G = g_0 + g_1 Y$$

(a) (4 points) Solve for equilibrium output.

(b) (4 points) If $c_1 + b_1 + g_1 < 1$, what is the value of the tax multiplier? (the tax multiplier is equal to the increase in output following from a \$1 decrease in taxes) If $g_1 > 0$, is the multiplier higher or lower than when government spending does not depend on GDP ($g_1 = 0$)? What is the intuition for this?

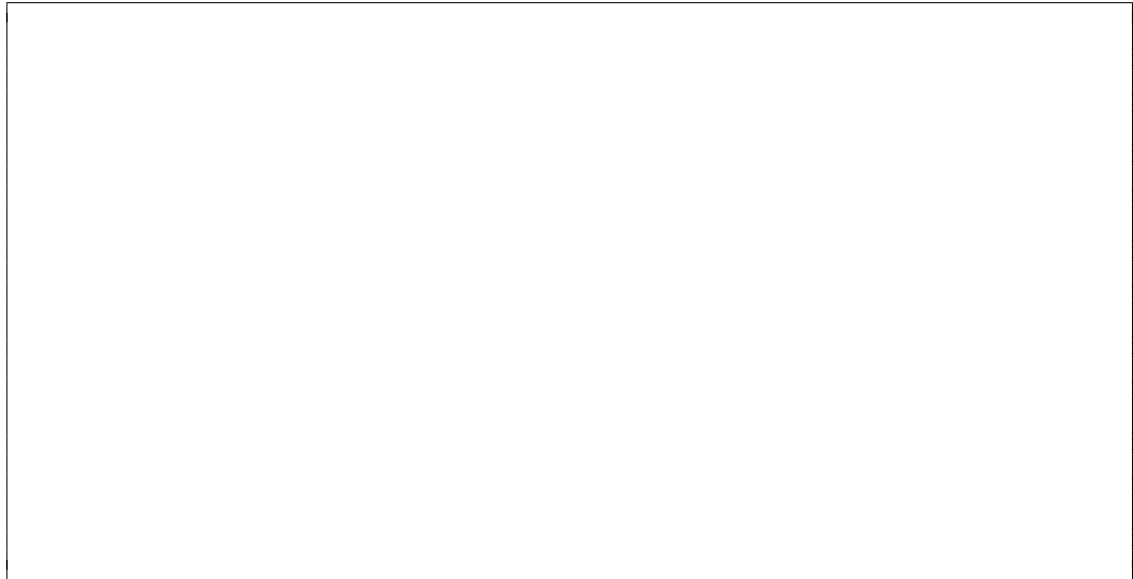(c) (8 points) Give both a graphical as well as an algebraic justification for the value of the multiplier.

(d) (4 points) What happens if $c_1 + g_1 + b_1 > 1$? Explain using the multiplier intuition. Also give an explanation using $1 - c_1 - g_1 < b_1$.
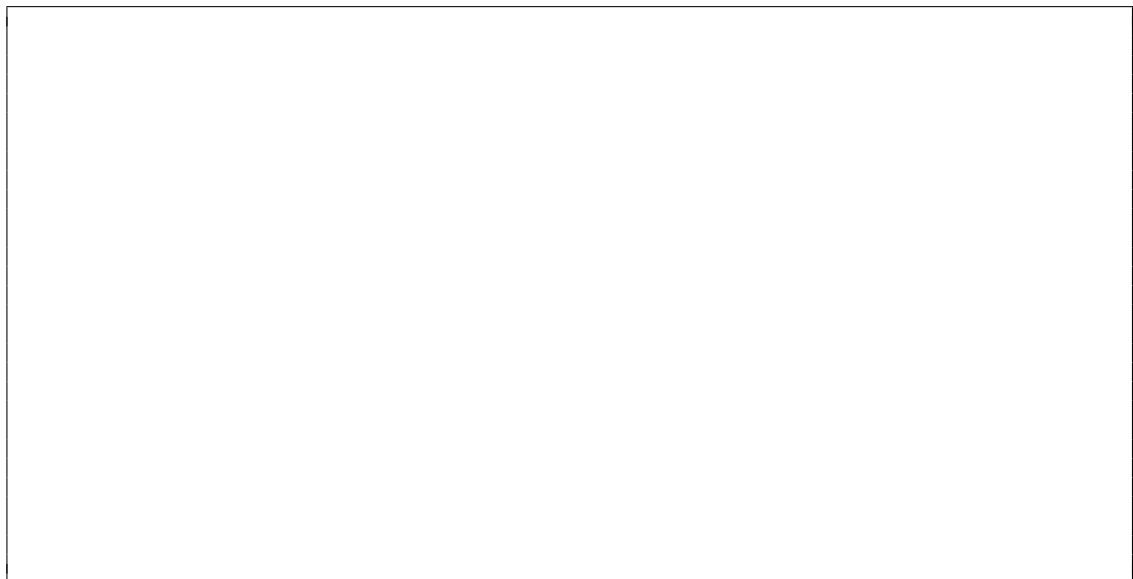
Exercise 2: The Paradox of Thrift (20 points)

3. (20 points) Consider the closed economy goods market model where consumption is linear in disposable income with $C(Y_D) = c_0 + c_1 Y_D$, disposable income is income minus taxes, government spending and taxes are exogenous and equal to G and T respectively, and investment depends on output according to the Keynesian investment function, through $I = b_0 + b_1 Y$.
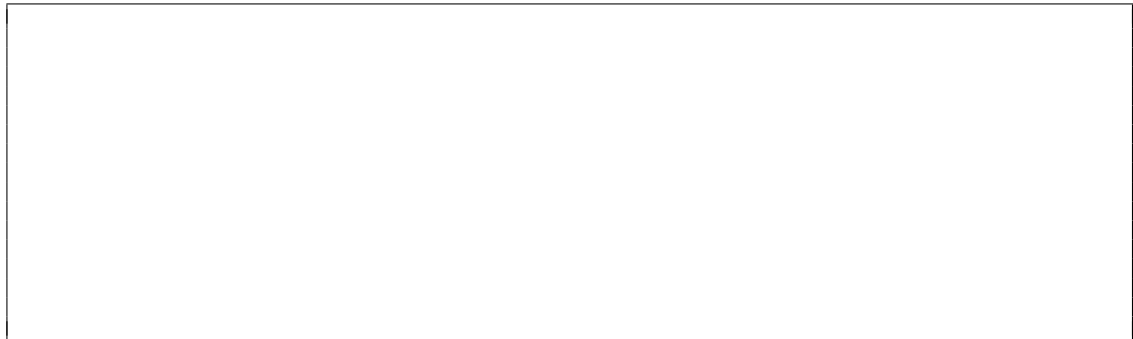
(a) (4 points) Solve for equilibrium output.

(b) (4 points) Assume that there is a fall in autonomous spending given by $\Delta c_0 < 0$. Show that there is a direct effect on private saving of the change in autonomous spending as well as an indirect effect. What is the sign of the direct effect? (Hint: the direct effect is $\Delta(-c_0)$)

(c) (4 points) What is the value of the indirect effect, as a function of the change $\Delta c_0 < 0$?

(d) (4 points) Compute the total effect of the change $\Delta c_0 < 0$ on private saving S (direct + indirect effect).

(e) (4 points) Why is the result in the previous question (d) a paradox?