

ECON 133 “Global Inequality and Growth” Final Exam

Exercise 1: True False Statement/Questions (20 points)

Explain your answer fully based on the material seen in lecture and section (no more than 5 lines per question). All the credit is based on the explanation. (2 points for each question.)

1. The increase in income inequality since the 1970s has reduced intergenerational mobility in the U.S. That is, children born to low-income families are less likely to become high-income adults today than four decades ago.
2. Policies have not mattered much in the rise of U.S. inequality—only market forces have.
3. Gordon (2012) argues that the US economy will face six headwinds in the future—baby-boomer retirement, stagnating educational attainment, rising inequality, globalization, global warming, mounting public and private deficits—and that only the first one can potentially be counteracted.
4. Since its introduction in 1933, the US federal minimum wage has kept increasing, leading to high unemployment rates among low-skilled individuals.
5. The US can contribute to reducing global inequality by increasing immigration.
6. Global capital mobility has small effects on inequality across countries but can exacerbate inequality within countries.
7. The Panama Papers have revealed how easy it is for wealthy individuals to avoid and evade taxes. This means that governments should cut capital taxes.
8. The linear income tax rate that maximizes income tax revenues also maximizes the Rawlsian social welfare function.
9. If inequality came entirely from labor income inequality, then capital taxation should be zero.
10. Effective corporate tax rates on US corporate profits have fallen substantially since the 1990s because of artificial profit shifting to low-tax countries.

Exercise 2 (10 points): Pareto coefficient and optimal labor taxation at the top

1. Assume that income is Pareto-distributed at the top, with Pareto-coefficient a . Is inequality high or low when a is low? Is a higher for income distributions or wealth distributions? (2 points)
2. In addition to the Pareto coefficient a , give two other ways to quantify income and wealth inequality among individuals (2 points).
3. Assume that labor income is Pareto-distributed with Pareto coefficient a . Express the revenue-maximizing tax rate τ^* on top labor incomes as a function of a and of the elasticity of taxable income with respect to the net-of-tax rate e . Interpret this formula. (2 points)
4. A number of recent studies have estimated that e is around 0.2 for top earners. Could the U.S. federal government raise more revenue today by increasing its marginal income tax rate? (1 point)
5. Based on empirical and theoretical evidence discussed in class, how do you think an increase in top income tax rates would affect inequality and growth? (3 points)

Exercise 3 (10 points): $r > g$

1. Explain why wealth inequality tends to be high when the gap between r and g is high. (2 points)
2. Historically, how has the gap between r and g evolved? (2 points)
3. What are the main ways in which tax policy can affect r ? (2 points)
4. Do you think that $r > g$ is the main reason why inequality is rising in the United States today? (2 points)
5. What will happen to the gap between the rate of return r and the income growth rate g if g falls and the aggregate saving rate s remains constant? Discuss how the results depend on the elasticity of substitution between capital and labor. (2 points)

Exercise 4 (10 points): Models of Wealth Distribution

Denote sh_W^p the share of wealth owned by fractile p (for instance p can be the top 10%), sh_Y^p the share of income earned by fractile p , s^p the saving rate of fractile p and s the economy-wide saving rate.

1. Show that in a long run steady-state without price effects (i.e., without capital gains or losses), $sh_W^p = sh_Y^p \cdot \frac{s^p}{s}$. (3 points)
2. Interpret this equation. (2 points)
3. Consider the saving rate s^p of the top 10% of the income distribution. Under the precautionary saving model, is $\frac{s^p}{s}$ smaller, equal to or larger than 1? (2 points)
4. Is the precautionary saving model consistent with the data? (1 point)
5. What are the economic forces that can explain why the relative saving rates s^p/s of top earners (top 10% and above) is greater than 1? (2 points)

Exercise 5 (10 points): Inherited vs Self made wealth

Denote φ the proportion of inherited wealth in total wealth.

1. How does Modigliani measure φ ? What value for φ does Modigliani find in the US? (2 points)
2. How do Kotlikoff and Summers measure φ ? What value for φ do Kotlikoff and Summers find in the US? (2 points)
3. What explains the difference between Modigliani's and Kotlikoff-Summers' results? (2 points)
4. Give the correct definition of φ that we saw in class (Piketty, Postel-Vinay and Rosenthal's definition). (3 points)
5. In the US today, what is the approximate value of φ ? (1 point)