

Written Exam for the B.Sc. or M.Sc. in Economics summer 2016

Public Finance

Final Exam

May 31, 2016

(3-hour closed book exam)

Please note that the language used in your exam paper must correspond to the language of the title for which you registered during exam registration. I.e. if you registered for the English title of the course, you must write your exam paper in English. Likewise, if you registered for the Danish title of the course or if you registered for the English title which was followed by “eksamen på dansk” in brackets, you must write your exam paper in Danish.

This exam consists of 3 pages in total (excluding this front page)

You are supposed to answer ALL questions. The assignments (1A)–(3E) all carry the same weight in the assessment.

Part 1: Questions on various topics

Answer "yes" or "no" to each of the questions below, and provide an explanation for your answer.

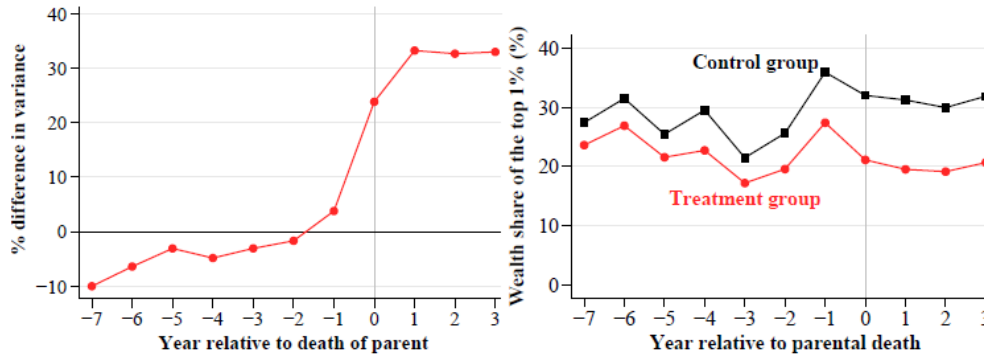
(1A) The elasticity of taxable income and the elasticity of labor supply are the same concepts.

(1B) In a supply-demand model with fixed supply, the tax incidence is fully on the sellers.

(1C) Card, Chetty and Weber (2007) use a difference-in-difference method to estimate the effect of unemployment insurance on the duration of unemployment.

Part 2: Inequality and intergenerational mobility

Boserup, Kopczuk and Kreiner (2016) study the impact of bequests following parental death on the wealth distribution of the next generation using Danish data. The graphs below are copied from the study and show some of the results. The results are related both to the literature studying inequality and to the literature studying intergenerational mobility.



Note: Copy of graphs from Boserup, Kopczuk and Kreiner (forthcoming in American Economic Review, May 2016). The graphs show the impact on the wealth distribution of receiving bequest at time = 0. The left panel shows the effect on the variance of the wealth distribution by displaying the difference in the variance between a treatment group and a control group. The right panel shows the effect on top 1% wealth share by displaying the top 1% wealth share of the treatment group and of the control group.

(2A) Describe how "inequality" and "intergenerational mobility" are different concepts (although they may be related).

(2B) Describe how the treatment group and the control group are constructed in the study of Boserup et al. (2016), and describe the result in each of the two graphs.

(2C) Describe how the two graphs lead to different conclusions about the effect of bequests on inequality, and how this difference may be explained/reconciled.

Part 3: Tax evasion

Below we consider three different models of tax evasion. In these three models, taxpayers are assumed to maximize the expected utility denoted by

$$\text{Model 1: } U^e = (1 - p) Y^{nc} + pY^c \quad (1)$$

$$\text{Model 2: } U^e = (1 - p) Y^{nc} + pY^c - \chi tE \quad (2)$$

$$\text{Model 3: } U^e = [1 - p(E)] Y^{nc} + p(E) Y^c \quad (3)$$

$$\text{All models: } Y^{nc} = [(1 - t) Y + tE] \quad (4)$$

$$\text{All models: } Y^c = [(1 - t) Y - FtE] \quad (5)$$

where Y is true income, t is the tax rate, E is unreported income, p is the probability of being detected, F is a fine in proportion to the evaded tax, and χ measures a loss of utility from being dishonest measured in proportion to the evaded tax.

(3A) Provide a definition of tax evasion, and describe how tax evasion differs from tax avoidance.

(3B) Provide an economic interpretation of the contents in each of the five equations in (1)-(5).

(3C) Show that taxpayers in Model 1 will evade taxes if and only if $(1 - p)t - pFt > 0$. Provide an economic interpretation of this result. How will the size of p , t and F influence the incentive to evade?

It is difficult to explain a low overall level of tax evasion from Model 1 in an economy where p and F are low. Model 2 and Model 3 provide two explanations, why overall tax evasion may be low when p and F are low.

(3D) Provide a thorough description of each of these explanations. [Hint: Underlying the explanation of Model 2 is an assumption that χ varies across individuals. In Model 3 the optimal amount evaded by the taxpayer E^* is determined by the equation $p(E^*)(1 + \varepsilon)(1 + F) = 1$, where $\varepsilon = p'(E^*)E^*/p(E^*)$]

(3E) Describe how some of the empirical results in Kleven et al. (2011) are consistent with the explanation of Model 3.