

Retake Exam for the M. Sc. in Economics  
University of Copenhagen  
Political Economics, Fall 2015

3 hours

Answer only in English

No aids allowed

February 17th, 2016

1. a. The paper by Acemoglu et al. “Colonial Origins of Comparative Development: An Empirical Investigation” wants to provide a reliable estimate of the effect of institutions on economic performance. To do so, they start by presenting a theory of institutional differences among countries colonized by Europeans, and exploit this theory to derive a possible source of exogenous variation in institutions. Explain the theory presented by Acemoglu et al. in their paper and the source of exogenous variation that they will exploit in their paper.

b. In the paper, they use an Instrumental Variables (IV) method. Write down the two main equations of such method and explain the variables in them. Why is it necessary to use an IV (or any other empirical strategy that might be suitable) to estimate the effect of institutions on economic performance?

c. The IV method rests on four main assumptions. Write each assumption and discuss what they mean *both* in theory and giving examples in the context of Acemoglu et al. paper.

2. a. The paper by Alesina and Fuchs-Schundeln “Good-Bye Lenin (or Not?): The Effect of Communism on People’s Preferences” analyzes whether individual policy preferences are exogenous or endogenous to political regimes. To do so, they compare the differences in policy preferences of East and West Germans after the reunification of Germany. In particular, they focus on individual preferences for state intervention and redistributive policies. According to them, what explains people’s preferences for such policies?

b. The reunification of Germany happened in 1990. The authors use survey questions that asked

Germans about their policy preferences. The surveys took place in 1997 and 2002 and there is a variable that identifies whether the respondent is an Eastern or Western German. Write down the main specification that the authors use. Name the identification assumption that they rely on and explain its meaning using both words and equations.

c. The following table shows some of the results in the paper. The notes below the table and the next lines contain all the information you need to interpret the findings. The dependent variable is an indicator variable that takes the value one if the household responds that the state should be responsible for the financial security of different groups. *East* is a dummy indicating if the survey respondent is from East Germany; *Year02* is a dummy if the answer is from the 2002 survey. *Age* is the age of the respondent. Discuss the qualitative meaning of the findings in column 2 only. Note that by qualitative I mean the following: you have to explain the story that can be told given the results. That is: focus on the direction of the effects and not the quantities.

TABLE 2—REGRESSIONS WITH AGE INTERACTED WITH EAST

Dependent variable: Responsibility for financial security ...	... when unemployed	... when sick	... of the family	... when old	... when requiring care
East	0.029 (0.064)	-0.034 (0.060)	-0.032 (0.060)	-0.226*** (0.060)	0.002 (0.059)
Year02	0.070*** (0.023)	0.172*** (0.023)	-0.006 (0.024)	-0.024 (0.023)	0.108*** (0.023)
East * year02	-0.139*** (0.039)	-0.176*** (0.036)	-0.074** (0.037)	-0.168*** (0.036)	-0.189*** (0.036)
Age	-0.000 (0.001)	-0.002 (0.001)	-0.003** (0.001)	-0.003*** (0.001)	-0.005*** (0.001)
East * age	0.009*** (0.001)	0.011*** (0.001)	0.010*** (0.001)	0.015*** (0.001)	0.008*** (0.001)
Observations	18,489	18,487	18,485	18,516	18,514
Log likelihood	-11,034	-12,148	-11,914	-12,165	-12,541

Notes: Probit regressions. The dependent variable is an indicator variable that takes the value one if the household responds “only the state” or “mostly the state” to the question of who should be responsible for the financial security of different groups. Included as controls are number of children and number of adults in household, logarithm of household income, and dummies for education, sex, marital status, employment status, and occupation.

\*\*\* Significant at, or below, 1 percent.

\*\* Significant at, or below, 5 percent.

\* Significant at, or below, 10 percent.

d. The authors conclude that the difference in preferences between former East and West Germany is due in large to Communism. The authors suggest that indoctrination may play a relevant role, since the results are unchanged even when they add controls for whether an individual is receiving transfers from the state. In the paper by DellaVigna and Kaplan (“The Fox News Effect: Media Bias and Voting”), the authors study the effects of media on voting behavior, and discuss their findings using two contrasting theories: rational expectations theories and behavioral and cognitive theories. Interpret the findings in the table above in light of these theories. What theory do you think is consistent with the findings in the table above?

e. There are many potential channels that can influence the formation of policy preferences within Communism that are unexplored in the paper by Alesina and Fuchs-Schundeln. For example, what is the role that indoctrination in school plays in shaping policy preferences? A group of researchers have provided some evidence regarding this question. They exploit a major textbook reform in China between 2004 and 2010. To estimate a causal effect the authors take advantage of the staggered introduction of the new curriculum across provinces (that is: the reform was first introduced in some provinces and expanded to the rest in the following years). One of the aims of the reform was to increase skepticism towards free markets. The following is the specification that they use:

$$y_{icp} = \sum_c \gamma_c + \sum_p \delta_p + \beta \text{NewCurriculum}_{cp} + \epsilon_{icp}$$

where  $y_{icp}$  is a variable capturing how much an individual thinks markets are a good way to organize economic activity ( $i$  denotes the individual,  $c$  the high school entry cohort, and  $p$  the province of high school attendance).  $\gamma_c$  and  $\delta_p$  are cohort and province fixed effects.  $\beta$  is the coefficient of interest, capturing the effect of the new curriculum. What are  $\gamma_c$  and  $\delta_p$  controlling for? What are potential threats to identification when using such specification?

3. Consider a society inhabited by a continuum of citizens of size 1. The citizens are of different types indexed by  $i$ . Each type  $i$  has quasi-linear preferences over private consumption  $c$  and publicly provided goods  $g$ , which is given by

$$w^i = c^i + H(g)$$

where  $H()$  is a concave and increasing function.  $g$  can be interpreted as a traditional public good. Government spending is financed by taxing the income of every individual at a common rate  $\tau$ ,  $0 \leq \tau \leq 1$ . The budget constraint of each individual is:

$$c^i = (1 - \tau)y^i$$

Assume that  $y^i$  is distributed in the population according to a cumulative distribution function  $F()$ . Denote the expected average value of  $y^i$  as  $y$ , and its median value as  $y^m$ .

a. Write down the government budget constraint.

b. Use the government budget constraint and the individual budget constraint to rewrite the individual preferences as a function of  $g$ , (note that  $y$  and  $y^i$  are exogenous variables in the model). Call this function  $W^i(g)$ . Then find the preferred policy for individual  $i$ .

- c. Explain how the preferred level of  $g$  depends on  $y^i$ . Explain the intuition for this result.
- d. Using a utilitarian social welfare function that sums up over the welfare of all citizens find the socially optimal policy. Whose citizen's preferred policy coincides with the social optimal policy?

Now suppose that there are elections and two parties,  $P = A, B$ . Each party maximizes the expected value of some exogenous ego rents,  $R$ . Candidate  $P$  thus sets his policy so as to maximize  $P_p R$ , where  $P_p$  is the probability of winning the election. The following is the timeline of events:

1. Parties announce  $g_A, g_B$ .
2. Elections are held and voters choose between the two candidates.
3. Winner implements announced policy

Recall from the wording above that  $y^i$  is distributed in the population according to a cumulative distribution function  $F()$ .

- e. What is the probability of winning for candidate  $A$ . What are the policies announced by each party?
- f. When is the result in e) different to the result in d)?
- g. Suppose now that the two candidates (parties) are  $R$  and  $L$  and are drawn from among voters. Assume that  $y^L < y^m < y^R$  so  $R$  has high income and prefers low spending and his bliss point in terms of  $g$  is to the *LEFT* of both  $L$ 's and the median voter's. Denote the bliss points of each candidate as  $g_L^* > g^m > g_R^*$ . When announcing policies,  $g_L, g_R$  candidates are motivated by the (expected) utility they will get from policy. Show that the equilibrium policy is the same as in e) and explain why there are no incentives to deviate.
- h. What assumption should be changed in the model if we want to find policy divergence in equilibrium?