

UNIVERSITY OF OSLO

DEPARTMENT OF ECONOMICS

Exam: **ECON4921 – Institutions and Economic Systems**

Date of exam: Monday, December 12, 2011

Grades are given: January 5, 2012

Time for exam: 2:30 p.m. – 5:30 p.m.

The problem set covers 3 pages (incl. tables)

Resources allowed:

- No resources allowed

The grades given: A-F, with A as the best and E as the weakest passing grade. F is fail.

Answer each of the following questions (and sub questions). For the first two questions, an answer of about one page is sufficient. For question III, a longer answer is recommended.

I. (Weight 20%)

A firm owned by the workers produces widgets with a technology that only depends on the number of workers. The marginal product of labor is positive but declining in the size of the workforce. Widgets are sold at a constant price p , and the firm faces a fixed cost C .

- a) Explain how the cooperative chooses its size, i.e. the number of workers
- b) An improvement in the widget production technology is discovered so productivity goes up. What is the theoretical implication for the size of the cooperative, and what do you think would happen in a real world cooperative?

II. (Weight 20%)

Explain what Barth and Moene (2011) mean by complementary institutions, i.e. how we can get an “equality multiplier”. What does it mean that the equality multiplier is 1.62?

III. (Weight 60%)

- a) Discuss how bad institutions may explain why some countries fail to develop.
- b) Knack and Keefer (*Economics & Politics* 1995) regress per capita GDP growth between 1974 and 1989 on two measures of institutions, a composite of indices from the International Country Risk Guide (ICRG) and a composite of indices from the Business Environmental Risk Intelligence (BERI). The regressions control for initial GDP levels (GDP70), measures of human capital (SEC70 and PRIM70), government consumption (GCON7489), and a measure of price volatility (PP174DEV). The results are shown in the attached Tables 2 and 3.
 - What are their findings on the effects of institutions on economic growth? Discuss whether it is reasonable to believe that they have estimated the causal effect of institutions and growth.

- Explain the strategies employed by Hall and Jones (1999) and Acemoglu, Johnson, and Robinson (2001) to obtain estimates that have more credible causal interpretations, and discuss the validity of their choices of instruments.
- c) Explain why bad institutions may survive although they are inefficient.

TABLE 2 GROWTH, INSTITUTIONS AND POLITICAL VIOLENCE: ICRG

	(1)	(2)	(3)	(4)
Intercept	1.980 <i>1.980</i>	3.028 <i>2.851</i>	0.254 <i>0.237</i>	1.345 <i>1.091</i>
ICRG82			0.092 <i>3.420</i>	0.072 <i>2.499</i>
REVC7489		-1.630 <i>-1.904</i>		-1.115 <i>-1.302</i>
ASSN7489		-3.486 <i>-1.695</i>		-2.278 <i>-1.108</i>
GDP70	-0.401 <i>-2.564</i>	-0.482 <i>-3.141</i>	-0.692 <i>-4.055</i>	-0.683 <i>-4.030</i>
SEC70	6.083 <i>3.819</i>	6.284 <i>4.083</i>	5.051 <i>3.286</i>	5.411 <i>3.524</i>
PRIM70	-0.690 <i>-0.758</i>	-0.959 <i>-1.072</i>	-0.532 <i>-0.617</i>	-0.752 <i>-0.862</i>
GCON7489	-5.222 <i>-1.213</i>	-6.388 <i>-1.527</i>	-4.289 <i>-1.051</i>	-5.286 <i>-1.293</i>
PPI74DEV	-0.920 <i>-2.243</i>	-0.985 <i>-2.482</i>	-0.892 <i>-2.3</i>	-0.941 <i>-2.439</i>
R-Square	0.198	0.270	0.291	0.318
N	97	97	97	97

Dependent variable: Average annual per capita GDP growth, 1974-1989.
Numbers in italics are t-statistics.

TABLE 3 GROWTH, INSTITUTIONS AND POLITICAL VIOLENCE: BERI

	(1)	(2)	(3)	(4)
Intercept	1.022 <i>0.644</i>	0.356 <i>0.205</i>	-0.977 <i>-0.545</i>	-0.627 <i>-0.336</i>
BERI72			0.376 <i>2.111</i>	0.263 <i>1.357</i>
REVC7489		-1.653 <i>-1.304</i>		-1.630 <i>-1.300</i>
ASSN7489		-23.015 <i>-1.710</i>		-14.695 <i>-1.003</i>
GDP0	-0.501 <i>-2.751</i>	-0.594 <i>-3.277</i>	-0.694 <i>-3.520</i>	-0.721 <i>-3.566</i>
SEC70	5.376 <i>2.805</i>	4.624 <i>2.411</i>	4.047 <i>2.083</i>	4.026 <i>2.067</i>
PRIM70	0.653 <i>0.377</i>	2.793 <i>1.389</i>	0.580 <i>0.349</i>	2.018 <i>0.976</i>
GCON7489	-1.145 <i>-0.183</i>	-1.508 <i>-0.249</i>	-2.968 <i>-0.489</i>	-3.052 <i>-0.500</i>
PPI74DEV	-0.929 <i>-1.921</i>	-0.894 <i>-1.938</i>	-0.711 <i>-1.495</i>	-0.748 <i>-1.595</i>
R-Square	0.276	0.375	0.350	0.405
N	46	46	46	46

Dependent variable: Average annual per capita GDP growth, 1974-1989.
Numbers in italics are t-statistics.