

i Candidate instructions

ECON4921

This is some important information about the postponed exam in ECON4921. Please read this carefully before you start answering the exam.

Date of exam: January 9, 2020

Time for exam: 9:00am-12:00pm

Language: The examination text is given in English. You may submit your response in Norwegian, Swedish, Danish or English.

The problem set: The problem set consists of 3 problems each consisting of several sub-questions. Be aware that the "maximum marks" on each sub-question might vary. The overall maximum marks is 100.

Sketches: You may use sketches on all questions. You are to use the sketching sheets handed to you. You can use more than one sketching sheet per question. See instructions for filling out sketching sheets on "Scantron information" below. It is very important that you make sure to allocate time to fill in the headings (the code for each problem, candidate number, course code, date etc.) on the sheets that you will use to add to your answer. You will find the code for each problem under the problem text. You will NOT be given extra time to fill out the "general information" on the sketching.

Access: You will not have access to your exam right after submission. The reason is that the sketches with equations and graphs must be scanned in to your exam. You will get access to your exam within 2-3 days.

Resources allowed: No written or printed resources - or calculator - is allowed (except if you have been granted use of a dictionary from the Faculty of Social Sciences).

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

- 1 Are the following statements true, false, or uncertain? Justify your answer. Your grade on these questions will depend on your justification, not on whether you select true, false, or uncertain.

(a) **Extending the franchise**

According to the theory of Acemoglu and Robinson (2000)¹ extension of the franchise is more likely if revolutions are unlikely.

True, false, or uncertain? Justify your answer. You might also answer on sketching paper.

¹Acemoglu, Daron, and James A. Robinson. "Why did the West extend the franchise? Democracy, inequality, and growth in historical perspective." *The Quarterly Journal of Economics* 115.4 (2000): 1167-1199.

Maximum marks: 10

Attaching sketches to this question?

Use the following code:

XXXXXXXX

(b) **State formation**

Sanchez de la Sierra (forthcoming)¹ found that an increase in the price of coltan lead armed groups in the Democratic Republic of the Congo to form proto-states. This is consistent with the theory of Mayshar et al (2018)².

True, false, or uncertain? Justify your answer. You might also answer on sketching paper.

¹Sanchez de la Sierra, Raul. "On the Origins of the State: Stationary Bandits and Taxation in Eastern Congo". *Journal of Political Economy* (forthcoming)

²Mayshar, Joram, et al. "*The Emergence of Hierarchies and States: Productivity vs. Appropriability.*". Working Paper, 2018.

Maximum marks: 10

Attaching sketches to this question?

Use the following code:

XXXXXXXX

- 2 Assume Norway considers whether to invade Sweden. First, Norway decides how large share of Sweden to invade, α . Then Sweden chooses whether to declare war against Norway or to let Norway keep the invaded land without resisting. If there is no war the utility for Norway is α and Sweden is $1 - \alpha$. If there is a war Norway and Sweden are equally likely to win. If Norway wins, Norway receives utility $1 - c_N$ and Sweden receives $-c_S$. If Sweden wins, Norway receives utility $-c_N$ and Sweden receives $1 - c_S$. Assume the cost of war c_S and c_N are positive and that the countries maximize expected utility.

(a) **When does Sweden prefer war**

For which values of α does Sweden prefer war?

Fill in your answer here and/or on sketching paper

Maximum marks: 5

Attaching sketches to this question?

Use the following code:

XXXXXXXX

(b) **Norway's choice**

Given this, how much of Sweden, α , will Norway invade?

Fill in your answer here and/or on sketching paper

Maximum marks: 5

Attaching sketches to this question?

Use the following code:

XXXXXXXX

(c) Unknown cost of war

In the remaining of the sub-questions assume that the cost of war for Sweden c_S is either high or low. Specifically, assume that with probability p the cost of war for Sweden is $c_S = c_H$ and with probability $1 - p$ the cost is $c_S = c_L$ where $0 < c_L < c_H$. The value of c_S is known to Sweden but not to Norway.

For which values of c_H will there be a positive probability of war?

Fill in your answer here and/or on sketching paper

Maximum marks: 15

Attaching sketches to this question?

Use the following code:

XXXXXXXX

(d) The likelihood of war

Why is war more likely if c_H is large?

Fill in your answer here and/or on sketching paper

Maximum marks: 5

Attaching sketches to this question?

Use the following code:

XXXXXXXX

(e) Knowing the cost of war

If Norway knew the value of c_S , war could be avoided. Why might it be difficult in practice for Norway to get to know c_S ?

Fill in your answer here and/or on sketching paper

Maximum marks: 10

Attaching sketches to this question?

Use the following code:

XXXXXXXX

(f) **Commitment problem**

Does Sweden face a commitment problem in this model?

Fill in your answer here and/or on sketching paper

Maximum marks: 10

Attaching sketches to this question?

Use the following code:

XXXXXXXX

3 Consider Table 4 from Angelucci et al (2017)¹ pasted below. All variables are dummy variables. Farm Grant 1348 is an indicator for whether the borough received a Farm Grant before 1348.

Table 4: Farm Grants and Representation in Parliament

Dependent variable: Indicator for borough enfranchised in Parliament by 1348

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Boroughs included:	all	all	royal	royal	royal	royal	mesne	mesne	all	all
Notes:						2SLS [#]		E-weights [§]	2SLS [†]	2SLS [‡]
Farm Grant 1348	0.466*** (0.063)	0.447*** (0.064)	0.558*** (0.069)		0.550*** (0.075)	0.609*** (0.185)			0.616*** (0.181)	0.612*** (0.197)
Royal borough	0.154*** (0.050)	0.160*** (0.049)							0.083 (0.099)	0.082 (0.103)
Navigable River				0.194** (0.085)	0.034 (0.074)		-0.001 (0.050)	-0.010 (0.047)		0.003 (0.043)
Sea Coast				0.145 (0.104)	-0.042 (0.085)		0.006 (0.048)	-0.003 (0.048)		-0.000 (0.041)
Roman Road				0.200** (0.083)	0.134* (0.074)		-0.055 (0.035)	-0.074** (0.036)		0.015 (0.033)
<i>p-value joint significance</i> <i>River, Coast, Road</i>				[0.008]	[0.201]		[0.456]	[0.184]		[0.973]
County FE		✓								
Terrain Controls		✓								
Mean Dep. Var.	0.23	0.23	0.51	0.51	0.51	0.51	0.14	0.13	0.23	0.23
R ²	0.26	0.36	0.31	0.08	0.33	-	0.01	0.01	-	-
Observations	554	554	145	145	145	145	409	409	554	554

Note: The table shows that boroughs with Farm Grants were significantly more likely to have seats in Parliament by 1348. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Terrain controls include soil quality as well as ruggedness in a 10 km radius around each borough.

[#] Two-stage least square regression that uses location on a navigable river, the sea coast, and on a Roman road to predict Farm Grants by 1348 in the first stage. The first-stage F-statistic is 10.4.

[§] Entropy balancing reweights the observations in mesne boroughs to match the mean and variance of navigable river, sea coast, and Roman road in royal boroughs. See Hainmueller and Xu (2013) for details.

[†] Two-stage least square regression that uses the following variables to predict Farm Grants by 1348 in the first stage: location on the sea coast, on a navigable river, and on Roman roads, and the interaction of these three variables with status as royal borough, as well as the status as royal borough itself. The first-stage F-statistic is 6.7.

[‡] Two-stage least square regression that uses only the three interaction terms and controls for the variables in levels. The first-stage F-statistic is 10.6.

¹Angelucci, C., Meraglia, S., & Voigtländer, N. (2017). *How Merchant Towns Shaped Parliaments: From the Norman Conquest of England to the Great Reform Act* (No. w23606). National Bureau of Economic Research.

(a) **Interpreting coefficient**

What does the coefficient 0.447 on "Farm Grant 1348" in Column (2) tell us?

Fill in your answer here and/or on sketching paper

Maximum marks: 5

Attaching sketches to this question?

Use the following code:

XXXXXXXXXX

(b) Investigating alternative explanations

The authors argue that farm grants *caused* more representation in Parliament. However, one alternative explanation of the result in Column (1) could be that boroughs who became rich from trade were both more likely to obtain farm grants and to be represented in Parliament, perhaps due to their larger de facto power. How could we use the results in the rest of the Table to argue that this alternative story is unlikely to explain all of the correlation found in Column (1)?

Fill in your answer here and/or on sketching paper

Maximum marks: 15

Attaching sketches to this question?

Use the following code:

XXXXXXXX

(c) Why did the King give up power?

According to the argument of Angelucci et al (2017) why did the King choose to voluntarily restrict his powers by, for instance, giving boroughs the right to deny royal officials from entering town walls?

Fill in your answer here and/or on sketching paper

Maximum marks: 10

Attaching sketches to this question?

Use the following code:

XXXXXXXX