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## FREEHOLDERS vs. TENANTS

Property rights, farm productivity and investment in southern Sweden, 1700-1860

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### Research Question

Over the 18<sup>th</sup> and 19<sup>th</sup> century, Sweden experienced a manorial system with peasants being subject to a different **property rights regimes** and **unpaid labour services** to be provided to the landlords: the main division was between **freeholders** and **tenants**.



Is there a **differential in farm productivity** between freeholders and tenants in Sweden in the period 1700-1860?

### Historical Background and Literature

The relationship between property rights and economic growth has been much studied in order to understand the **forging ahead of Western Europe**. The classical hypothesis by North and Weingast (1989) is that better protected property rights led to higher farm productivity because of the increased chance of enjoying the fruits of own effort. However, this view has been challenged by authors such as Clark (2007).

**Quantitative testing** of the effect of property rights on production are rare because of data constraints.

### The Swedish case in the European framework

This study contributes to the debate by testing the effect of the major wave of demesne expansion in Scania, the most southern region of Sweden, in the early 19<sup>th</sup> century. In this period the peasantry was split into:

- **Subject tenants**, who did not own their land, had insecure tenancies and were obliged to provide unpaid labour services to the landlord;
- **Freeholders**, who owned their land and were not providing any service to the landlord;
- **Crown tenants**, who were not providing any service to the landlord, had secure tenancies but whose property rights were restricted in terms of selling and parcelling their land.

Economic theory would predict that more secure property rights and absence of unpaid labour will create, *ceteris paribus*, the incentives to the freeholders to be more productive.

However, the historiography on Swedish rural society is not unanimous in the assessment: according to authors like Heckscher (1949) and Möller (1989, 1990), landlords were faster in undertaking agricultural change. However, enclosures were initiated by freeholders (Olsson and Morell, 2010) and moreover, several indirect indicators such as population growth and literacy suggest that freeholders' farms were more advanced (Svensson, 2005; Nilsson, 1995).



The aim of this study is to test the productivity differential between farmers subject to different property rights and labour arrangements.

### Methodology

$$y_{t,i} = \text{farm size}_{i,t} + \text{land ownership}_{i,t} + \text{early enclosures}_i + \text{radical enclosures}_i + \text{natural conditions}_i + \text{expected prices}_{i,t} + \text{year dummy}_t$$

$y_{t,i}$ : grain production in farm  $i$  at time  $t$ .

$\text{farm size}_{i,t}$ : farm size in *mantal*.

$\text{land ownership}_{i,t}$ : 4 types of land ownership (freeholder, crown tenant, lordship tenant 1 and lordship tenant 2). Freeholder is the baseline. Lordship tenants 1 and 2 are both subject tenants, however the former were living close to the landlord's estate and deeply involved in unpaid labour services.

$\text{early enclosures}_i$ : enclosed, not enclosed and re – enclosed farm.

$\text{radical enclosures}_i$ : open field, enclosed and solitary .

$\text{natural conditions}_i$ : plains, intermediate and woods.

$\text{expected prices}_{i,t}$ : weighted average of 5-year real prices (grain prices divided by an index of rural day labourers wages).

$\text{year dummy}_t$ : dummy for 10-year period.

The model is estimated as a panel using OLS. The model is ran for the two subperiods, 1702-1802 and 1803-1864 to compare the effect of the first (milder) wave of demesne expansion with the more severe wave that followed. We expect to find a stronger effect of the expansions, in terms of production differential, in the second period.

### Data

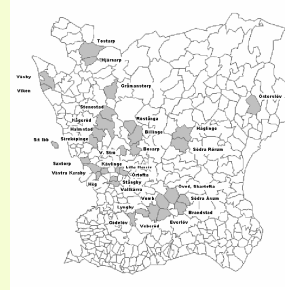


Figure 1 - The region of Scania and the 34 parishes in the sample.

### Historical Database of Scanian Agriculture

Unique dataset at farm level. Information on output of crops and livestock, soil fertility, enclosures, prices and farm size.

The sources are the registers of tith payments (as share of production) to the local clergy. Very reliable as every priests could check actual production by farms.

2,200 farms in 34 parishes., 84,000 production-year data points. On average same farm recorded for 34 years.

### Preliminary Results

Table 1 - The determinants of grain production, 1702-1802

Dep. var: grain production 1702-1802	(1)	(2)	(3)	(4)
Farm size	76.83*** (8.186)	77.45*** (8.038)	76.79*** (8.324)	76.79*** (8.105)
Crown tenant	-7.855*** (0.880)	-3.970*** (0.664)	-2.853*** (0.648)	-2.853*** (2.248)
Lordship tenant 1	-4.885*** (1.026)	-3.621*** (0.998)	-6.031*** (0.966)	-6.031*** (4.455)
Lordship tenant 2	-11.70*** (0.830)	-6.897*** (0.807)	-3.119*** (0.887)	-3.119*** (2.831)
Early enclosures	2.407*** (0.287)	-3.330*** (0.302)	-4.430*** (0.312)	-4.430*** (4.357)
Early re-enclosures	-0.702 (0.702)	3.385*** (0.714)	0.148 (0.720)	0.148 (4.543)
Radical enclosures	3.915*** (2.754)	5.973*** (2.670)	5.728*** (2.880)	5.728*** (3.958)
No Radical enclosures	-0.636 (2.304)	1.359 (2.233)	1.891 (2.140)	1.891 (2.305)
Intermediate	-53.29*** (1.699)	-53.74*** (1.646)	-53.21*** (1.588)	-53.21*** (5.497)
Woods	-46.03*** (1.771)	-46.97*** (1.716)	-47.31*** (1.658)	-47.31*** (4.903)
Expected prices		4.024*** (0.0822)	2.821*** (0.186)	2.821*** (1.142)
Constant	73.16*** (3.036)	62.34*** (2.949)	61.98*** (3.089)	61.98*** (7.100)
Year dummies	no	yes	yes	yes
Parish clustering	no	no	yes	yes
Observations	38,855	38,855	38,855	38,855
Number of groups	1,306	1,306	1,306	1,306
R-sq	0.46	0.50	0.52	0.53

Table 2 - The determinants of grain production, 1803-1864

Dep. var: grain production 1803-1864	(1)	(2)	(3)	(4)
Farm size	164.7*** (5.343)	166.3*** (5.251)	168.8*** (5.127)	168.8*** (29.33)
Crown tenant	-17.07*** (1.252)	-14.19*** (1.261)	-8.395*** (1.211)	-8.395*** (7.464)
Lordship tenant 1	-21.07*** (2.142)	-20.33*** (2.105)	-19.71*** (2.054)	-19.71*** (9.340)
Lordship tenant 2	-18.18*** (2.724)	-17.30*** (2.676)	-16.16*** (2.613)	-16.16*** (8.633)
Early enclosures	3.059*** (1.270)	2.085*** (1.238)	-1.957 (1.158)	-1.957 (4.468)
Early re-enclosures	0.697 (2.252)	-4.898*** (2.199)	-13.35*** (2.132)	-13.35*** (6.828)
Radical enclosures	23.03*** (8.982)	18.49*** (8.917)	10.21*** (8.833)	10.21*** (6.745)
No Radical enclosures	-1.034 (3.957)	0.351 (3.891)	2.445 (3.805)	2.445 (4.228)
Intermediate	-52.34*** (2.290)	-54.05*** (2.251)	-58.77*** (2.197)	-58.77*** (10.35)
Woods	-44.91*** (2.544)	-47.40*** (2.499)	-53.62*** (2.439)	-53.62*** (10.60)
Expected prices		5.640*** (0.130)	3.939*** (0.156)	3.939*** (0.594)
Constant	69.53*** (4.658)	35.62*** (4.641)	35.06*** (5.040)	35.06*** (9.474)
Year dummies	no	no	yes	yes
Parish clustering	no	no	yes	yes
Observations	32,429	32,429	32,429	32,429
Number of groups	1,728	1,728	1,728	1,728
R-sq	0.53	0.46	0.46	0.46

### Main results:

- In first period, with mild demesne expansions, the dummies capturing different land ownership arrangements do not appear significant when we cluster by parish (column 4).
- In the second period, when demesne expansions were more severe, we see that lordship tenant 1 has a negative coefficients double of that of crown tenants and significant at the 5% level while lordship tenant 2 has a slightly smaller effect, significant at the 10% level.

### Conclusions and Future Research

- Study on farm productivity in Scania, the most southern region of Sweden, in the period 1702-1864.
- There is evidence of a negative effect on production given by restrictions to land ownership and provision of unpaid labour by the tenants. In particular, we find that the strongest effect is on subject tenants who lived close to the landlord's estate.
- The effect is stronger in the second period, which corresponds to the most severe wave of demesne expansion in Scania.
- Next steps: attempt to measure investment and test effect of land ownership.