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## A historical database on European agriculture, food and policies

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## LICOS Discussion Paper Series

Discussion Paper 399/2017

### **A Historical Database On European Agriculture, Food And Policies**

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**A HISTORICAL DATABASE ON  
EUROPEAN AGRICULTURE, FOOD AND POLICIES**

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**Abstract**

This dataset includes annual data on agricultural production, prices, trade and derived policy indicators for various commodities and nine European countries since the second half of the 19<sup>th</sup> century until the countries joined the EU. The countries are Belgium, France, UK, Netherlands, Germany, Finland, Sweden, Spain and Italy. The data was collected from a variety of sources, mostly national statistics, and the commodity and time coverage varies between countries.

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## 1. Data Sources

### Belgium

- Annuaire statistique de la Belgique, 1871-1909  
Centraal Bureau voor de Statistiek, Landbouwcijfers, 1923-1990  
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Exposé de la situation du Royaume, 1851-1860, 1861-1875, 1876-1900  
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Nationaal Instituut voor de Statistiek, Landbouwstatistieken, 1900-1961  
Nationaal Instituut voor de Statistiek, Maandelijks Bulletin over de buitenlandse handel van de Belgisch-Luxemburgse Unie, 1963-1966  
Statistisch Jaarboek voor België. Annuaire Statistique de la Belgique, 1960-1989  
Statistisch Jaarboek voor België en Belgisch-Kongo, 1910-1959  
Tableau général du commerce avec les pays étrangers, 1850-1913

### The Netherlands

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Van Der Meer, C.L.J. (unpublished). Data Bank of Series on Long Term Economic Development in Early and Late Developing Countries manuscript, University of Groningen.

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- Direction générale des Douanes: 'Tableau général annuel du Commerce'. (prices, 1950-1960)
- Direction Générale des douanes et droits indirects (1865-1955), Tableau général du commerce extérieur. (import and export quantities)
- INSEE : Annuaire statistique rétrospectif de la France (1949, 1951, 1966). (Total consumption, added value in industry, price indices)
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- Van Der Meer, C.L.J. (unpublished). (share of agricultural population)

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- Sauerbeck, A.. Prices of commodities and precious metals, in: Journal of the Royal Statistical Society, 1904-1927
- Van Der Meer, C.L.J. (unpublished). (Relative income, share of population in agriculture)

## Germany

Producerprices, production, agricultural population, GDP, consumption data:

- Hoffmann, W.G. (1965). Das Wachstum der Deutschen Wirtschaft seit der Mitte des 19. Jahrhunderts. Springer Verlag. pp842
  - FAO, production yearbook
  - EUROSTAT, agricultural prices
- Trade quantities, -values:
- Statistisches Jahrbuch für das Deutsche Reich
  - Statistisches Jahrbuch über Landwirtschaft, Ernährung und Forsten
  - Wirtschaft und Statistik
  - FAO, trade yearbook
- Production quantities, GDP:
- Mitchell, B.R. (1981). European Historic Statistics 1750-1975. Sijthoff & Noordhoff International Publishers. pp 868
  - Statistisches Jahrbuch für die Bundesrepublik Deutschland
- Agricultural and total Population
- OECD, manpower statistics
- GDP, GNP and consumption data:
- OECD, national accounts

## Finland

- Tilastokeskus (Central Statistics, Helsinki):
- Ulkomaankauppa (Import and export data, 1885-1990)
  - Kulutus Suomen Kansalouden (Consumption data, 1900-1975), Eino H. Laurila. The Research Institute of the Finnish Economy, Helsinki 1985.
  - Statistical Yearbook, Official Statistics Finland (production, GNP, value added, 1880-1990)
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  - Statistical Yearbook of Finnish Agriculture (domestic producerprices, 1975-1990)
  - Population by Industry and Commune in 1880-1975, stat. Surveys nr. 63. Helsinki 1975. (Employment distribution, 1880-1975)
- MTTL (Maatalouden Taloudinen Tutkimuslaitos, Helsinki – Agricultural Economics Research Institute)
- Tilastoja Suomen Maatalodesta (Balance sheets for food commodities) (1950-1990)
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- PSM (Pellervo-Seuran Markinnatutkimuslaitos, Turku)
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- Jordbruksekonomiska meddelanden, Statens Jordbruksnämnd (producerprices)
- Jordbruksekonomiska uppgifter, Kommerkollegium och Statens Livsmedelskommission (producerprices)
- Krantz, O. & Nilsson, C.A. (1975) Swedish National Product 1861 – 1971, new methods and measurement. (GDP)
- Ljungberg, J. (1990) Priser och marknadskrafter i Sverige 1885 – 1969, en prishistoriska studie (producerprices)
- Statistisk Årsbok för Sverige, Statistiska Central byrån, Stockholm (production quantities, rural population, added value in agriculture)
- Statistiska meddelanden – National räkenskaper, Statistiska Centralbyrån, Stockholm (GDP, consumption)
- Utrikeshandel, Statistiska Centralbyrån, Stockholm (trade data)

## Italy

- Annuario Statistico Italiano
- ISTAT, Benedetto Barberi: I consumi Nel Primo Secolo Dell'Unità D'Italia, 1861-1960
- FAO trade yearbook en Annuario Statistico Italiano
- National Bank

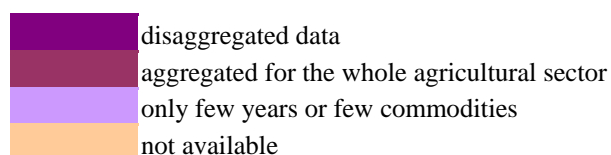
## **2. Overview of the Data**

The completeness of the data depends largely on what is available in the respective national records and statistics. We discovered that the availability of the data varies strongly between countries. Table 1 gives a summary of the available data per country and commodity.



**Table 1: Overview of the data by country and commodity**

	Belgium	Netherl.	France	UK	Germany	Finland	Sweden	Spain	Italy
	1877-1988	1929-1980	1857-1960	1875-1960	1951-1992	1931-1990	1905-1996	1875-1990	1951-1992
<i>Total Population</i>									
<i>Share of population in agriculture</i>			5/10-yearly						
<i>Relative income of the ag. sector</i>									
<i>Gross domestic product</i>									
<i>Share of commodities in GDP</i>									
<i>Self Sufficiency Rate</i>									
<i>Share of food in consumers' exp.</i>							(1945-)		
<i>Nominal protection coefficient</i>									
<i>Domestic producer prices</i>									
<i>import price</i>									
<i>Consumer price index</i>									
<i>Border prices</i>									
<i>Production</i>									
<i>import quantity</i>	netto imp								
<i>import value</i>									
<i>export quantity</i>									
<i>export value</i>									
<i>Capital intensity</i>									
Wheat	X	X	X	X	X	X	X	X	X
Rye	X	X	X			X	X	X	
Barley	X	X	X	X		X	X	X	
Oats	X	X	X	X		X	X	X	
Corn			X		X				X
Potatoes	X		X	X	X	X	X		X
Sugar	X		X		X	X	X	X	X
Eggs	X	X		X		X	X		
Milk					X	X	X		X
Cheese		X							
Butter	X	X	X	X					
Cattle	X			X	X	X	X	X	X
Pigs	X		X					X	
Sheep				X					
Wine			X		X				X
Tomatoes					X			X	X
Oranges					X			X	X
(Partially) Missing data:	1877-1904 1914-20	1940-45	1857-64 1914-19 1938-45	1875-85	1951-58	Cattle	1926-45 1905-26 (cons.)	1875-1950	1951-58



### 3. Illustration of Some Indicators in the Dataset

Figure 1. Nominal Protection Coefficients (NPCs)

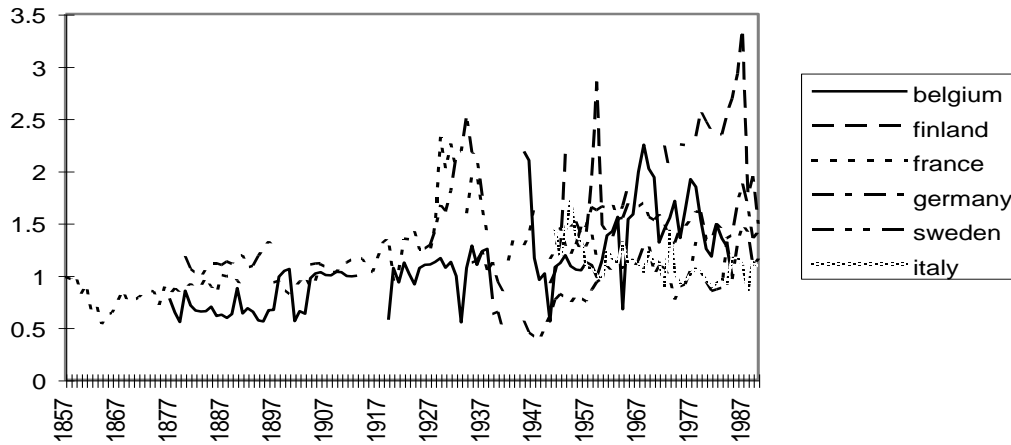


Figure 2. Share of active population in agriculture in total (active) population

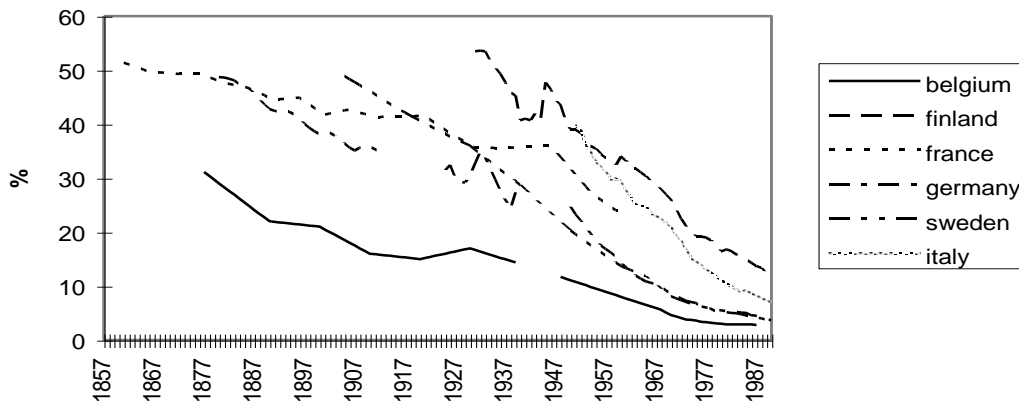
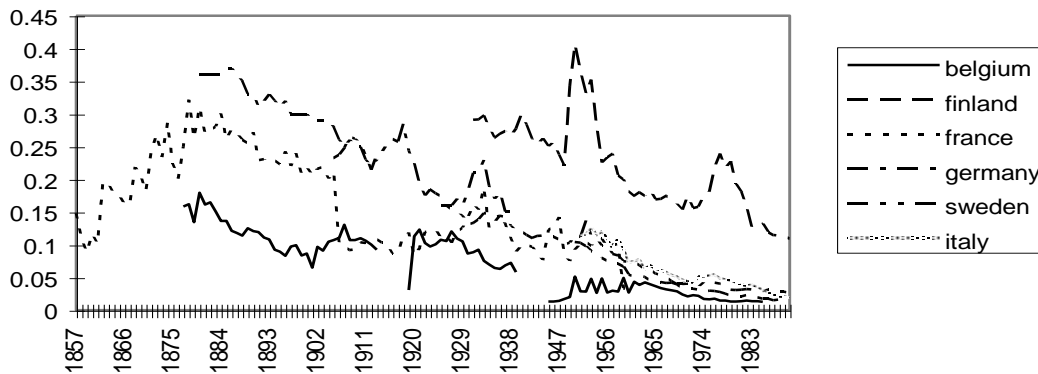


Fig3. Share of the agricultural sector in total GDP



### 4. Interpretation of Structural Changes and Policy Trends

In Swinnen (2009) I use the dataset to quantify the changes in agricultural protection by calculating long-run indices of agricultural protection over the century when the dramatic policy changes took place (i.e. from the 1870s to the 1960s) in Europe. I relate the variations in protection indicators to changes in agricultural policies and changes in political institutions and economic development, and structural change.

Swinnen, J., 2009, "The Growth of Agricultural Protection in Europe in the 19th and 20th Centuries", *The World Economy*, 32(11):1499-1537

#### 4. Abbreviations, Definitions and Units

AFF: Ancien Franc Français (Old French Francs)

Bef: Belgian Francs

DM: German Marcs

Fim: Finish Marcs

SEK: Swedish Crowns

Pts: Spanish Pesetas

CONSH: share of consumption in total consumption expenditures

GDP: gross domestic product

GDPSH: share of a commodity in the gross domestic product

NPC: nominal protection coefficient

RPOP: share of population in the rural sector

cw: hundred weight, 1 cwt= 112 lbs, 1 lbs=0.4536 kg)

hl: hectoliter

kg: kilogram

pcs: pieces

qm: 100 kg

qu: 100 kg

##### *Total Population*

Units: in millions

##### *Share of population in agriculture*

Definition: population in the agricultural sector as percentage of the active population

##### *Relative income of the agricultural sector*

Definition: ratio of the average income per person in agriculture over the average income in non-agricultural sectors

##### *Share of commodities in gross domestic product:*

Definition: ratio (in percentage) of the product of the domestic price for a product and its quantity produced in the country divided by the GDP of the country.

##### *Self Sufficiency Rate:*

Definition: ratio (in percentage) of home production over home consumption.

Consumption = production minus net exports.

Note: Belgium, eggs, from 1925 to 1937 has negative numbers (export > production + import)

##### *Share of food in consumers' expenditure:*

Definition: Ratio of consumption expenditures to a commodity and the total consumption expenditures

### *Nominal protection coefficient:*

Definition: Ratio of domestic price over border price.

### *Domestic producer prices*

Belgium: bef per ton

Netherlands: bef per 100 kg, except butter, eggs and cheese: bef per kg

France: aff/qu except wine: AFF/hl, pork: AFF/kg

UK: £ per cwt, except eggs: shilling per 120 pcs

Germany: DM per 100 kg

Finland: fim per 100 kg

Sweden: sek per kg

Spain: pts per qm

Italy: lire per kg

### *Import prices*

Belgium: bef per ton

Netherlands: bef per 100 kg, except butter, eggs and cheese: bef per kg

France: aff/qu except wine: AFF/hl, pork: AFF/kg. Wheat, potatoes and pork: export instead of import prices after 1949, barley: export prices after 1951 except 1953, rye and maize: export prices after 1949 except 1953-54, 1956, oats: export prices after 1949 except 1953, 1956, 1958, butter: export prices after 1956 except 1960.

UK: £ per cwt, except eggs: shilling per 120 pcs

Germany: DM per 100 kg

Finland: fim per 100 kg

Sweden: sek per kg

Spain: pts per Qm (except sugar: Pts per ton)

Italy: lire per kg

### *Consumer price index*

Source: International Historical Statistics: Europe 1750-1993. B.R. Mitchell, 1998.  
Base year is 1813

### *Border prices*

Definition: Ratio of import value over import quantity for imported products; ration of export value over export quantity for exported products.

Belgium: bef per ton

Netherlands: bef per 100 kg, except butter, eggs and cheese: bef per kg

France: base year 1901-10, AFF/qu, except wine: AFF/hl, pork: AFF/kg

UK: £ per cwt, except eggs: shilling per 120 pcs

Germany: base year 1913, DM per 100 kg

Finland: base year 1926, fim per 100 kg

Sweden: kr per kg

### *Production*

Belgium: ton, except eggs: 1000 pcs, pigs: 1000 ton

Netherlands: 100 kg until 1910, from 1920-1938: hl, from 1983: ton, beef and mutton: pcs  
France: million qu, except wine: 1000 hl, sugar and butter : 1000 ton,  
UK: 1000 ton  
Germany: 1000 ton (except eggs: million pcs)  
Finland: ton, except milk: kg and beef: pcs  
Sweden: ton  
Spain: 1000 qm (except sugar cane, tomato)  
Italy: 100 ton (except wine: 1000hl)

### *Import quantities*

Belgium: ton net imports (except eggs: 1000 pcs, pigs: 1000 ton)  
Netherlands: 1000 kg  
France: million qu  
Germany: 1000 ton (except cattle and pigs: pcs)  
Finland: kg.  
Sweden: ton  
Spain: ton except wheat: 1875-1935: 1000 qm, maize: 1000qm

### *Import value*

Netherlands: 1000 gldn  
Germany: million DM  
Finland: fim  
Sweden: 1000 kr  
Spain: 1000 pts

### *Export quantities*

Netherlands: 1000 kg  
France: million qu  
Germany: 1000 ton (except eggs: million pcs)  
Finland: kg.  
Sweden: ton  
Spain: ton except wheat: 1875-1935: 1000 qm,

### *Export value*

Netherlands: 1000 gldn  
Germany: million M  
Finland: fim  
Sweden: 1000kr  
Spain: 1000pts

### *Capital intensity*

Only available for Belgium and Germany (RM per labour unit)

## 5. Country and Commodity Codes

Commodities	Countries
1 Wheat	1 Belgium
2 Rye	2 Netherlands
3 Barley	3 France
4 Oats	4 UK
5 Corn	5 Germany
6 potatoes	6 Finland
7 Sugar	7 Sweden
8 Eggs	8 Spain
9 Milk	9 Italy
10 Cheese	
11 Butter	
12 Beef	
13 Pork	
14 Mutton	
15 Poultry	
16 Wine	
17 Tomatoes	
18 Oranges	
19 Grains	
20 Meat	
21 Rice	
90 Tot. Food	
99 Total	

## 6. Data

Download the data [here](#).