

Competitiveness of the pig chains in Northern Europe

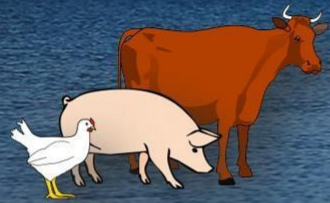
Csaba Jansik



Lihafoorum, Rakvere
November 22, 2019



Comparison of eight countries around the Baltic Sea



beef

pork

poultry



Europa Mała Awangarda
Polska i Unia Europejska
Europa Mniejsza i
większa

Set of indicators - meat chain competitiveness



Indicators of economic competitiveness

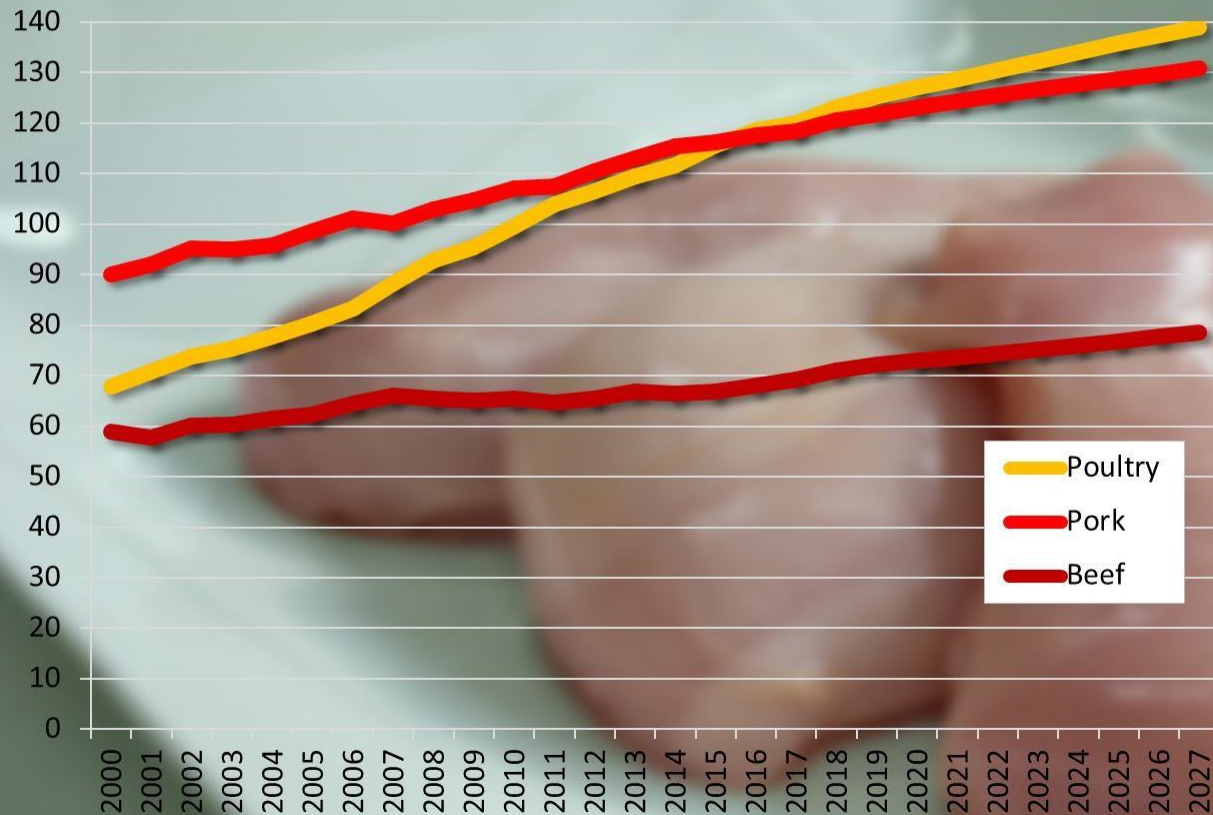
Productivity	⇒	Labor productivity, total factor productivity (TFP)
Foreign trade performance	⇒	Balassa indices (RCA), export intensity (export share of sales) market shares in major markets, foreign trade balance
Economic performances, market and ownership structures	⇒	Profitability, Industry concentration (CR4) Meat farm structure, average farm size, Meat prices, domestic vs. foreign ownership, coops
Growth	⇒	Growth of meat industry sales, Meat production growth, Export growth of meat and meat products
Innovation	⇒	R&D expenses

Indicators of biological competitiveness

Natural productivity indicators	⇒	Piglets per sow, Feed conversion ratios Live piglets/ pigs per sow, Poultry meat production/m ² /year
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The global demand of meat, 2000-2027

million tons



Poultry meat demand exceeded pork demand in 2016-2017.

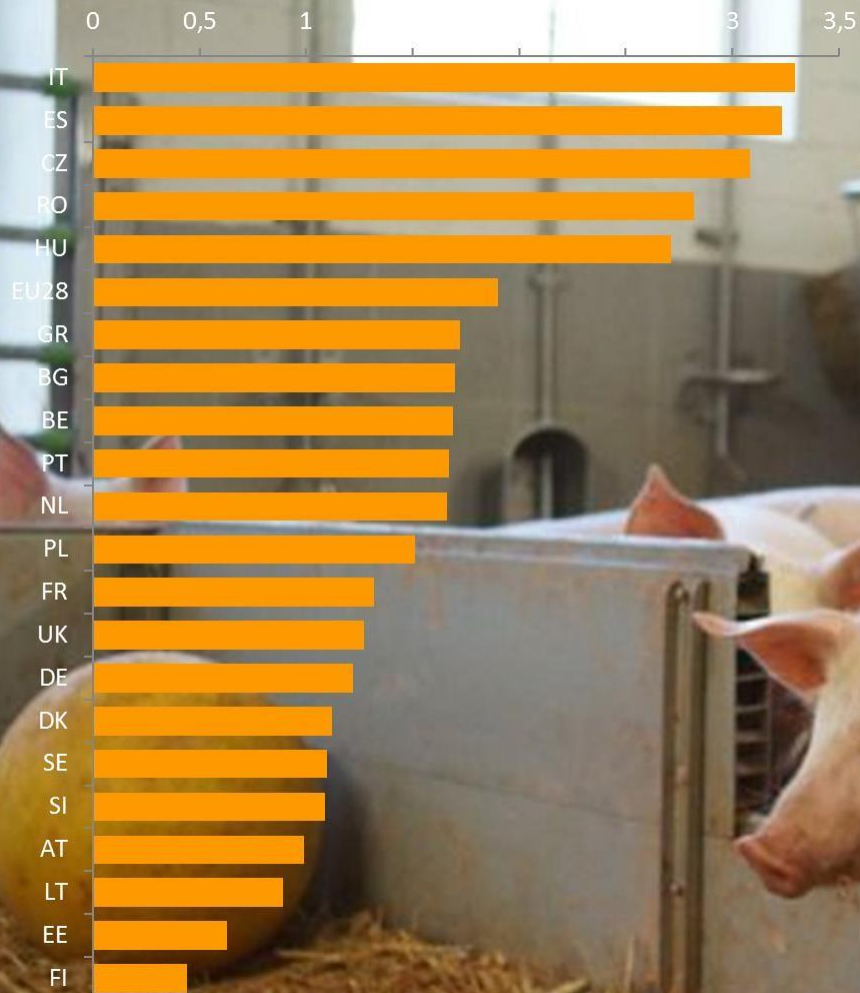
Global pork demand will continue to grow at its earlier pace in the next decade.

Growth rates of poultry will slightly decrease and beef slightly increase

Source: OECD/FAO (2018), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database)



Profitability of granivores - pork and poultry farms

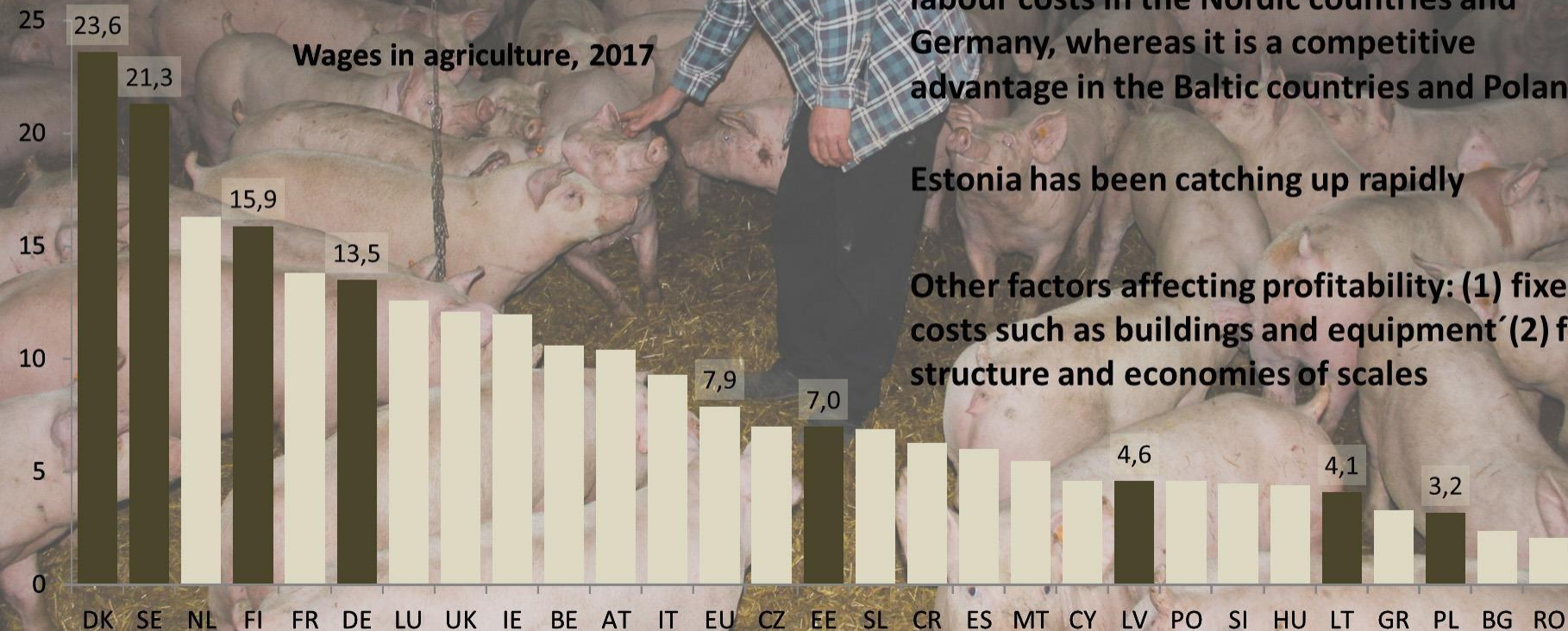


Source: FADN dataset

Costs affect farm profitability



€/h



Farm profitability is adversely affected by high labour costs in the Nordic countries and Germany, whereas it is a competitive advantage in the Baltic countries and Poland

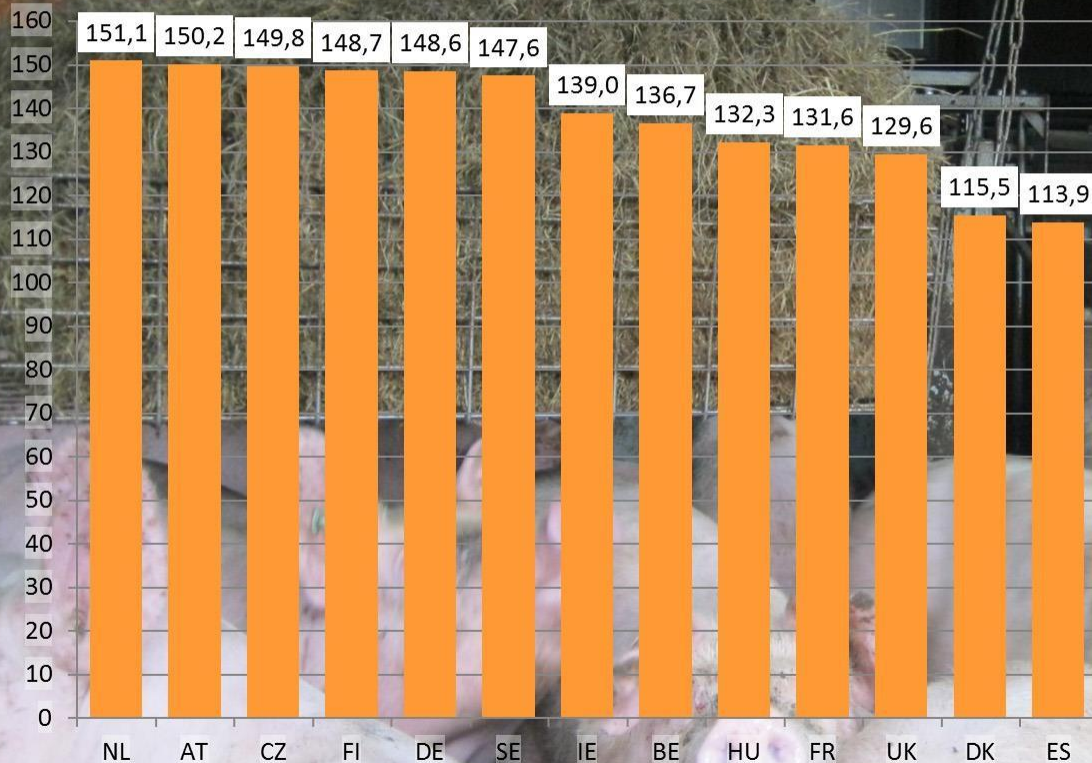
Estonia has been catching up rapidly

Other factors affecting profitability: (1) fixed costs such as buildings and equipment (2) farm structure and economies of scales

Costs affect farm profitability

EUR

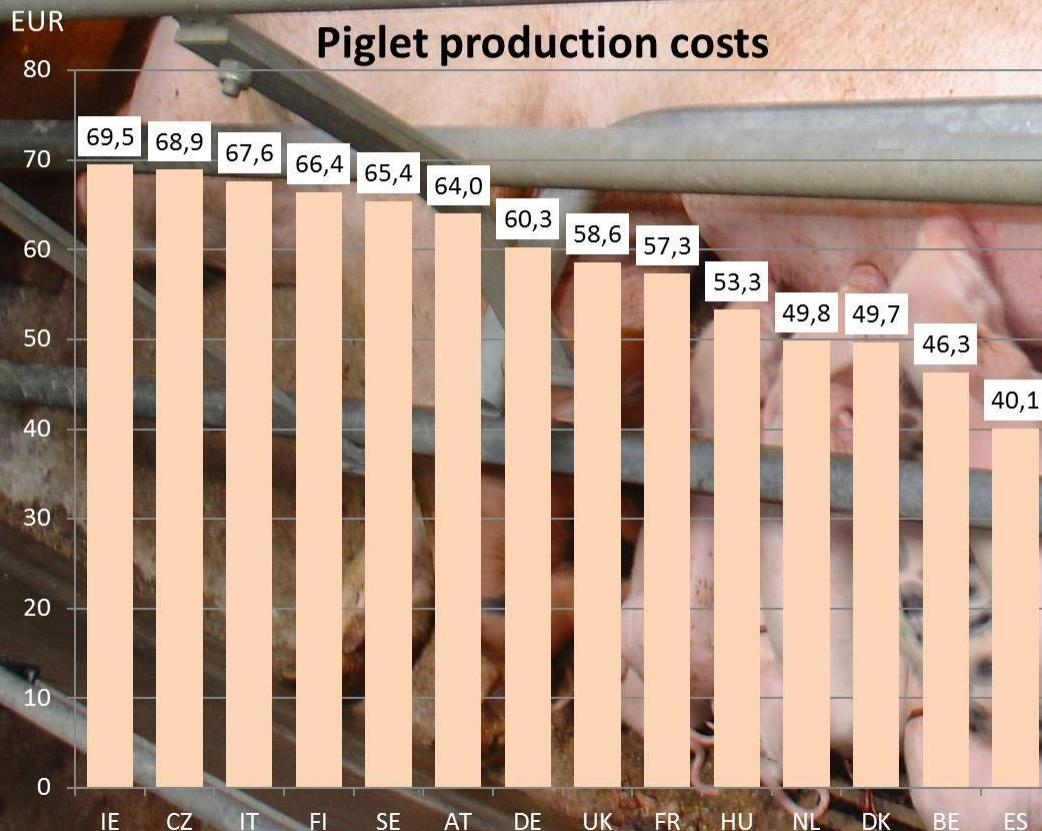
Production costs of slaughter pigs, 2017



The two biggest cost items by far are piglets and feed

Source: INTERPIG database.

Costs affect farm profitability



Denmark effective despite the high labour prices – scales of economies and production efficiency

Sweden and Finland high costs – lower production efficiency

Production efficiency indicators



	Pigs weaned per sow/year	Pre Weaning Mortality (%)	Average live weight at slaughter (kg)	Feed conversion ratio (kg feed/kg live weight)
Italy	24,8	13,1%	168,0	3,70
Hungary	25,5	6,6%	110,7	3,22
Czech. R.	29,1	9,2%	116,5	2,97
Sweden	26,6	16,9%	121,9	2,94
Austria	24,9	13,3%	121,0	2,94
Great Britain	25,8	12,4%	108,8	2,92
Finland	27,1	14,4%	121,2	2,90
Belgium	30,1	12,5%	115,7	2,88
Germany	29,7	14,9%	121,6	2,86
France	27,7	14,2%	120,8	2,82
Denmark	33,3	13,6%	113,7	2,73
Ireland	28,5	10,7%	110,8	2,71
Spain	27,0	13,7%	110,4	2,66
Netherlands	30,2	13,4%	120,6	2,66

Source: INTERPIG database, 2018.

Productivity of the meat industry

- ▶ A relation between labour productivity and labour costs.
- ▶ Poland and Lithuania performing the fastest growth and Germany out of the old member states.

Annual average growth rate of labour productivity, 2002-2016

1,3%

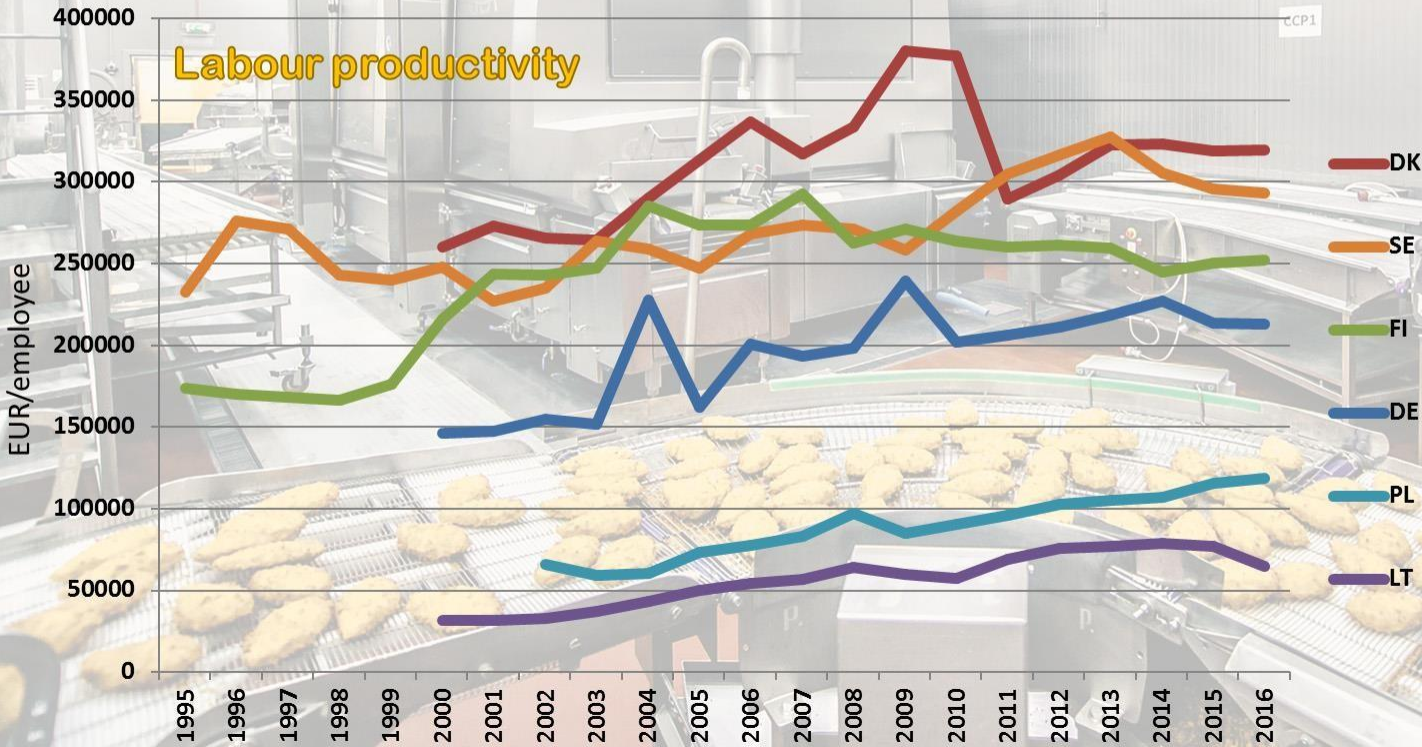
1,6%

0,3%

2,3%

4,3%

4,9%



The major factors behind productivity growth

Differences in major costs such as labour or raw material

Economies of scales in low margin activities such as slaughtering

Capital intensity, technology, automation

Branding and marketing in higher margin activities such as meat processing

Domestic and export markets

What is competitiveness?

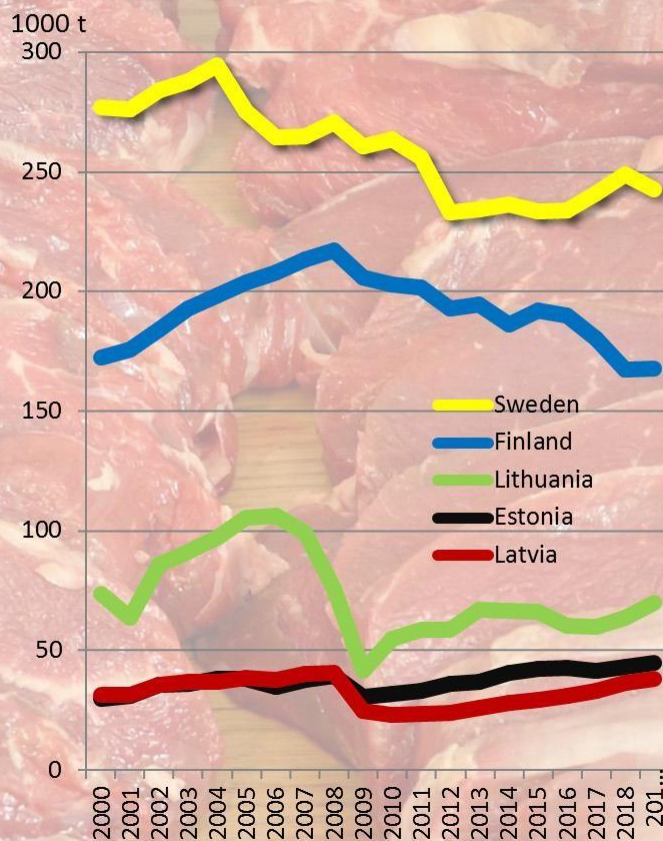
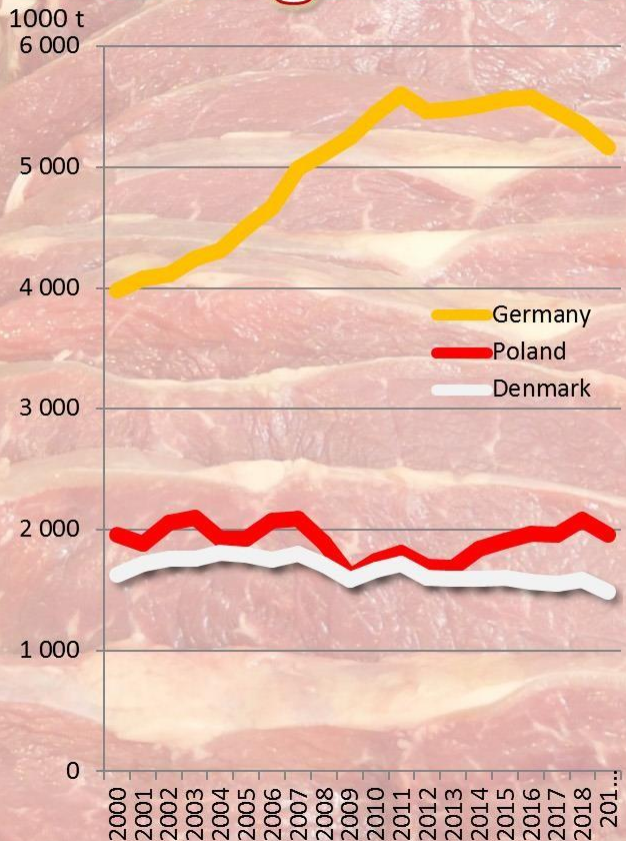
Cost effectiveness

Skills of selling



Growth

Pig meat production in the Baltic Sea region 2000-2019e

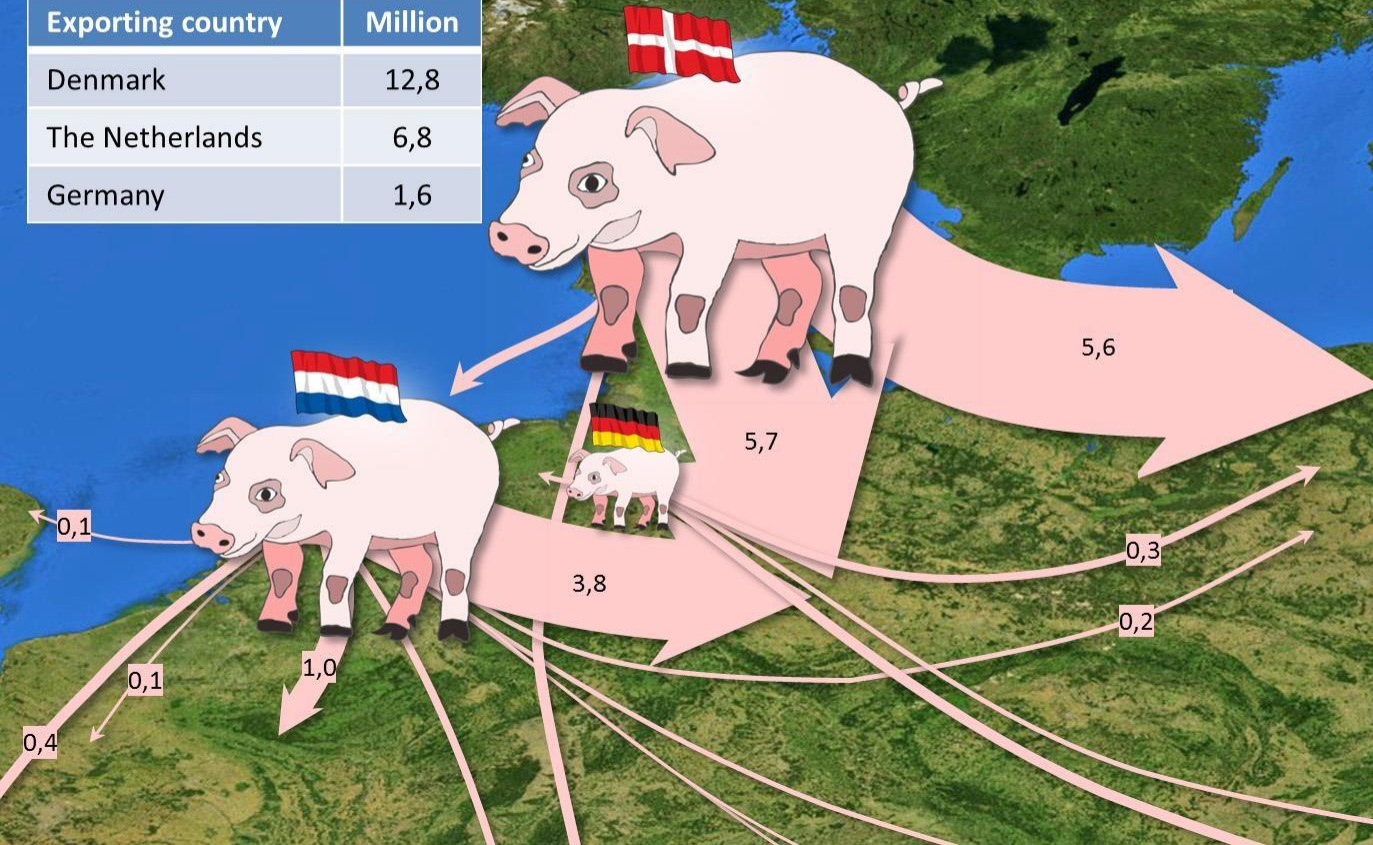


The major reason for the substantially different growth rates is a growing division of work among the countries.

Source: Eurostat, estimate for 2018 own calculations.

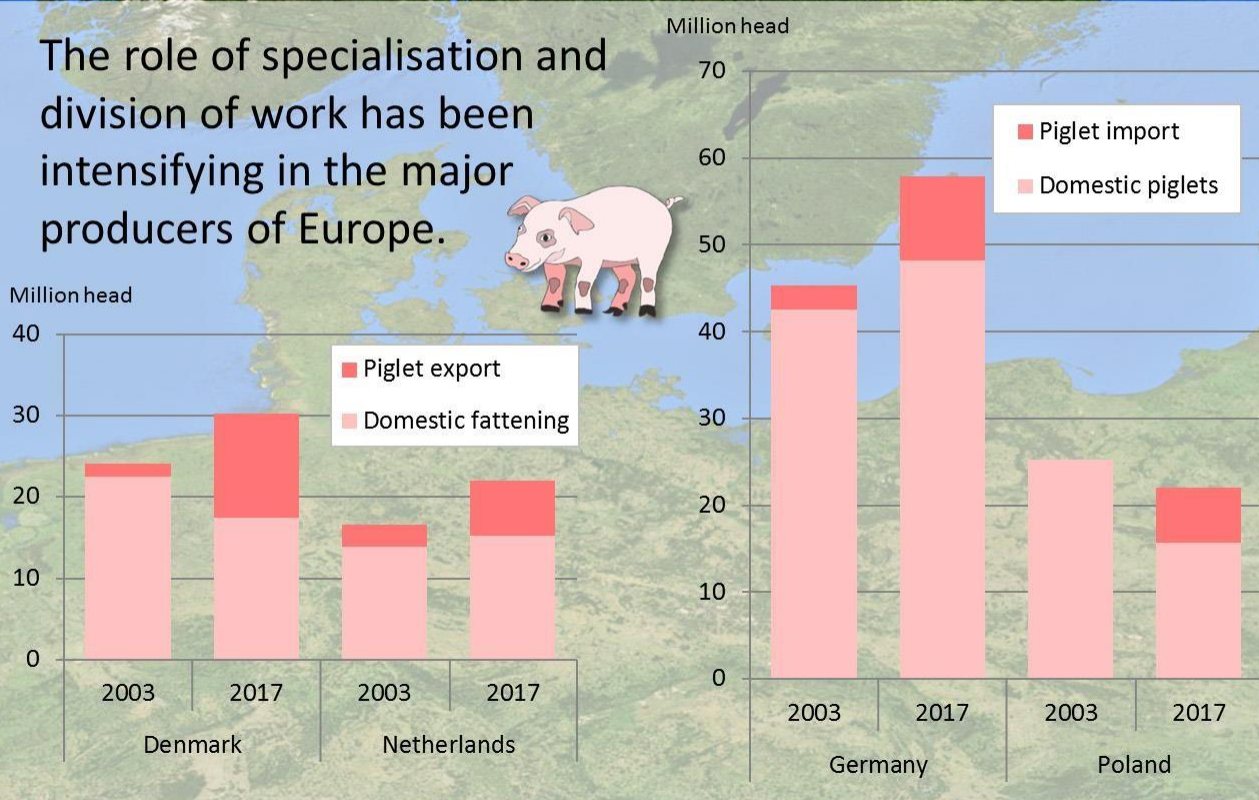
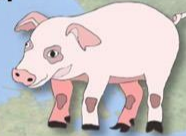
Piglet trade in Europe, 2017

Exporting country	Million
Denmark	12,8
The Netherlands	6,8
Germany	1,6

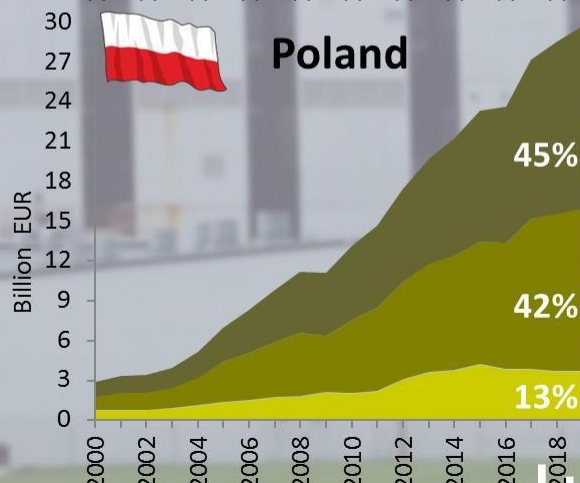
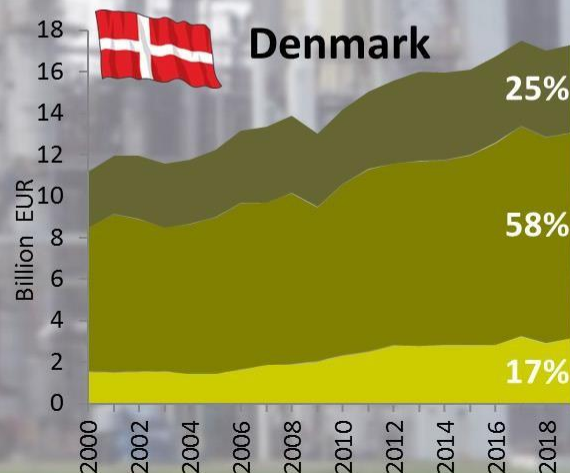
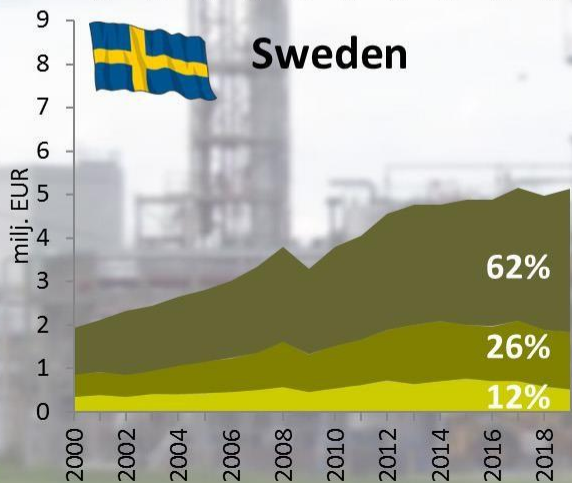
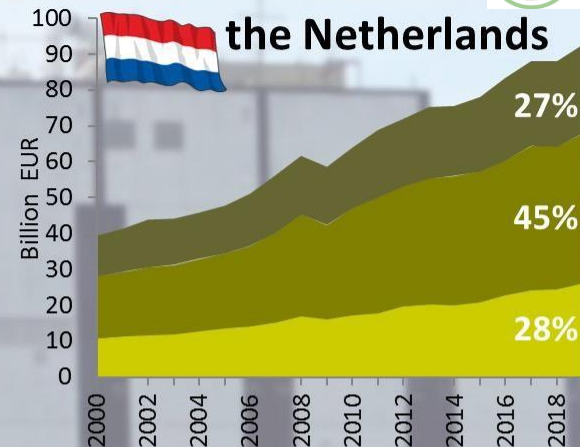
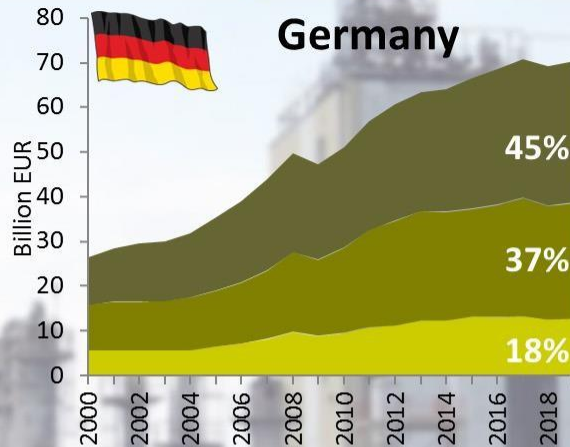
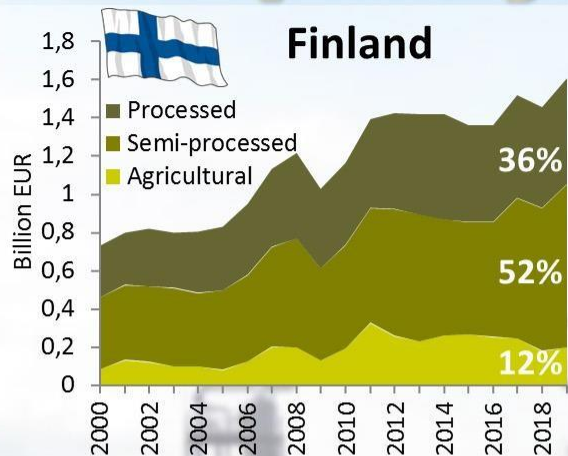


Piglet trade in Europe

The role of specialisation and division of work has been intensifying in the major producers of Europe.



Food exports by level of processing

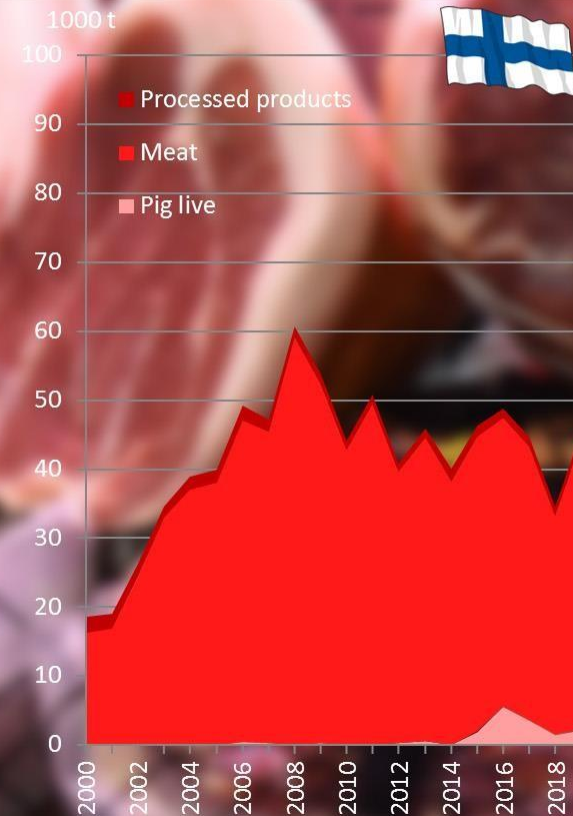
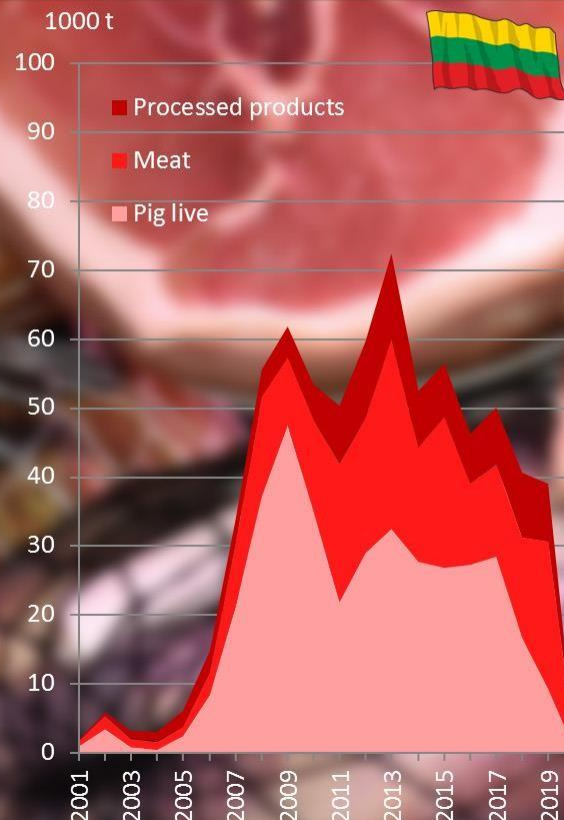
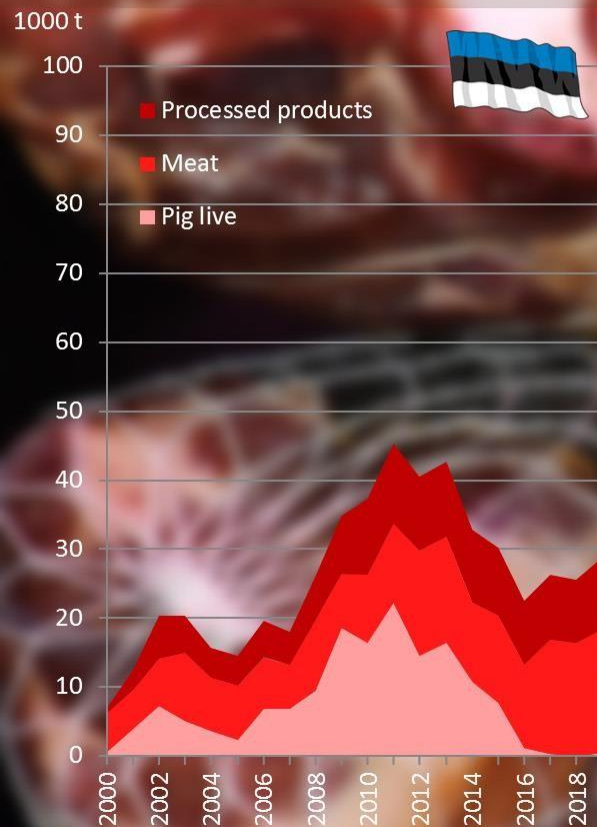


Source: own calculations using Eurostat Comext database, CN01-24, Projection for 2019 based on January-August figures.

Export of pigs and pig meat products



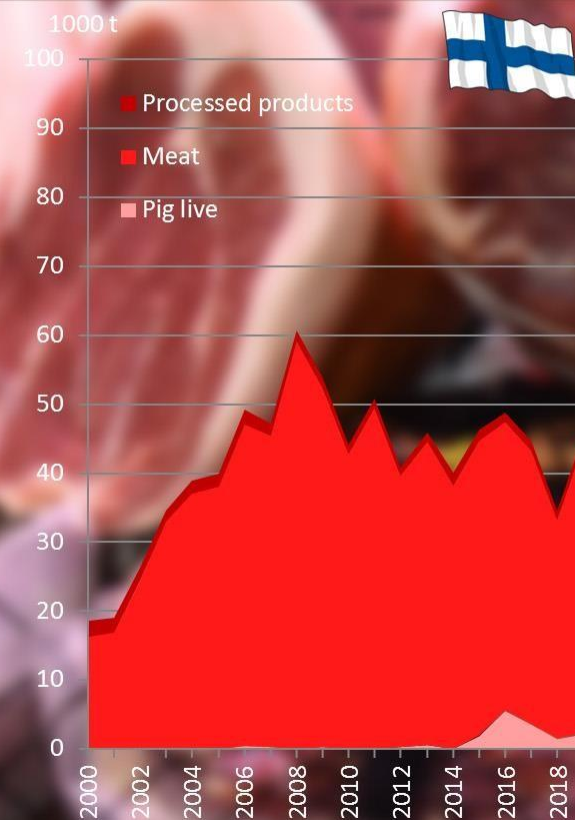
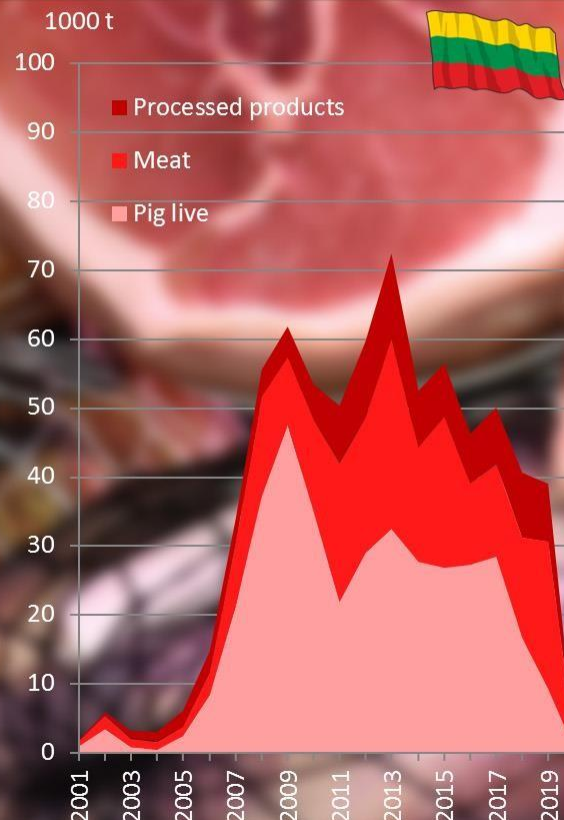
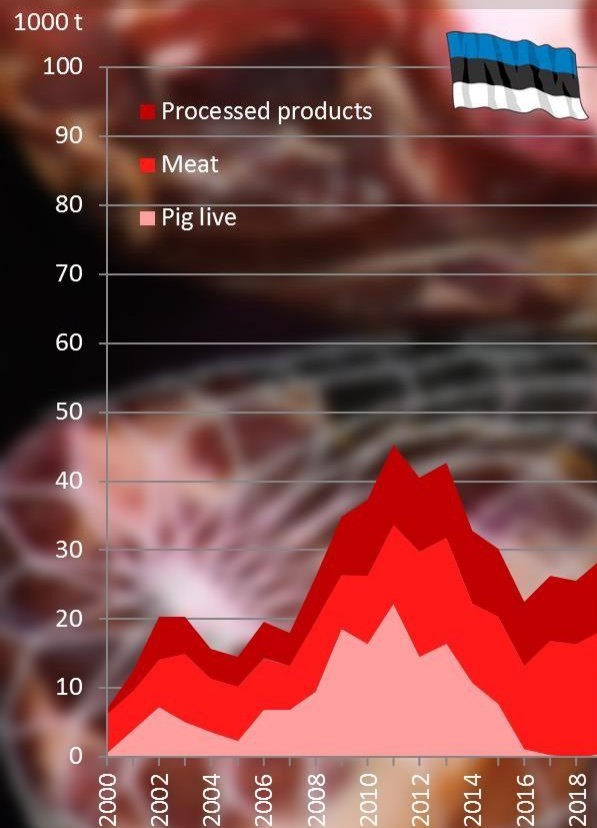
Export volume



Export of pigs and pig meat products



Export volume



African Swine Fever

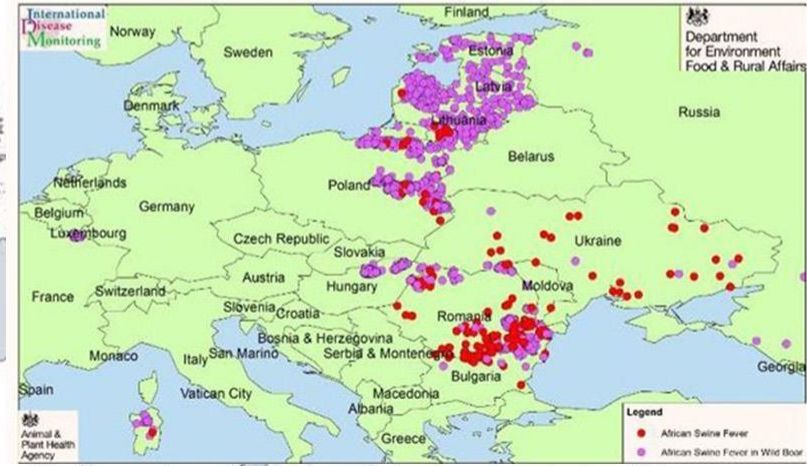
ASF expanded to Asia and became a worldwide plague from 2017 on

In Europe altogether 19 countries has been affected, cases of Belgium, Czech R.



- Active outbreaks
- Outbreaks reported June 2018-July 2019

Outbreaks of ASF in Europe between January-July 2019

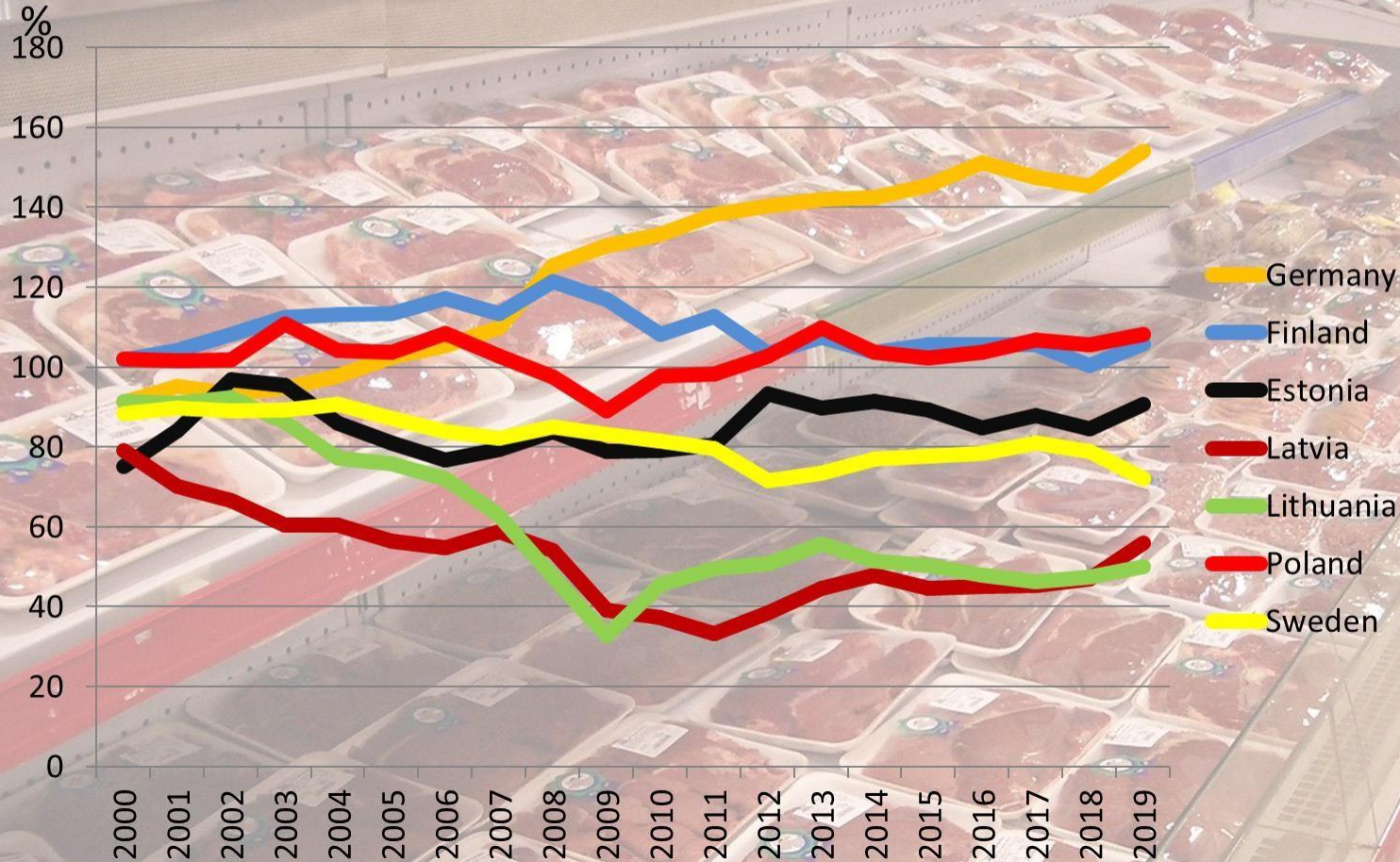


<http://www.pig-world.co.uk/news/polands-pork-production-hit-by-asf.html#prettyPhoto>

https://www.upi.com/Top_News/US/2019/08/14/African-swine-fever-continues-relentless-spread-through-Asia-and-Europe/6191565729073/



Self sufficiency rates of pork



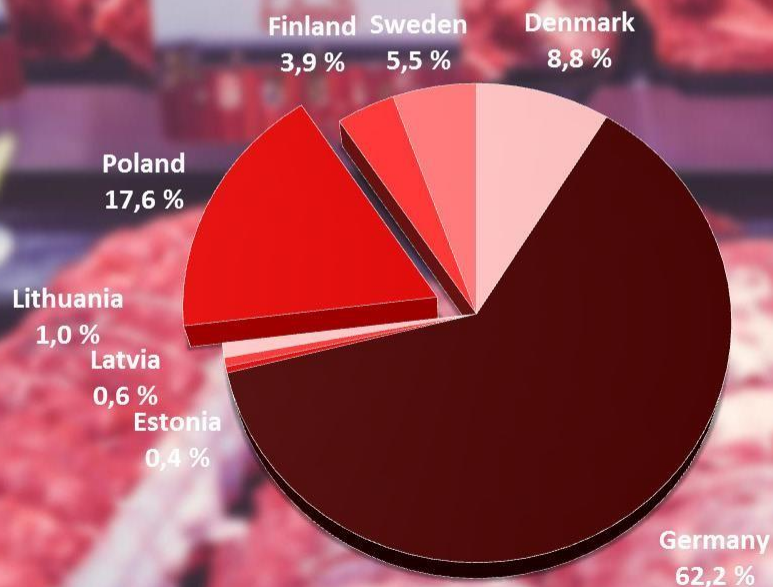
Self sufficiency rates of pork



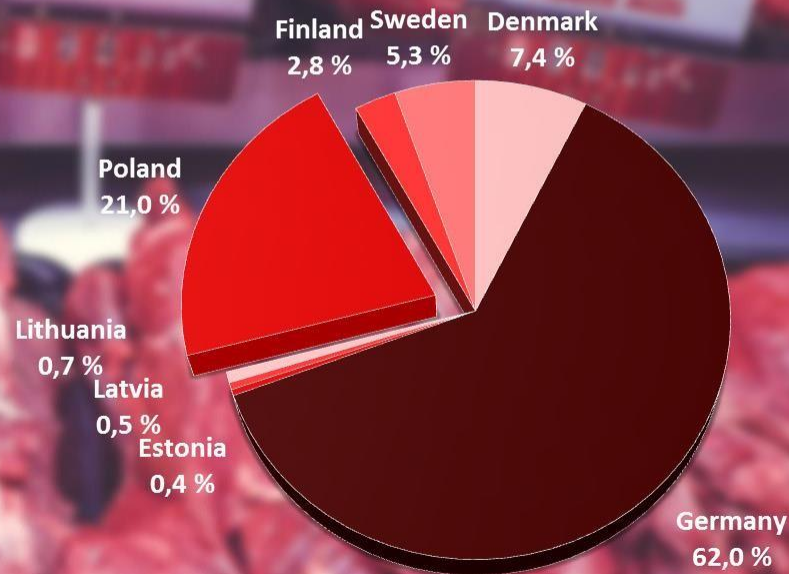
Growth in the meat industry

The shares of meat industry around the Baltic Sea by country
(based on aggregated sales revenues of the industry, %)

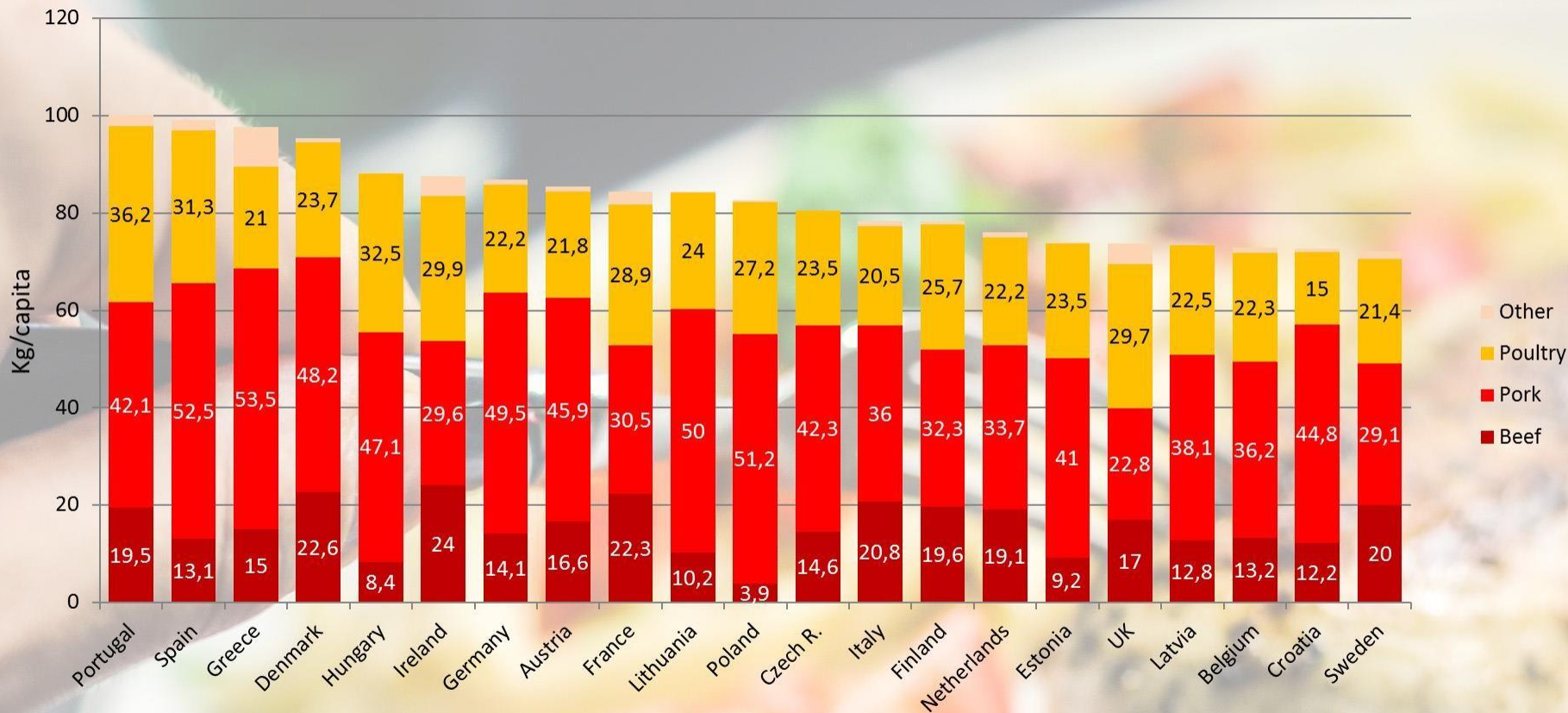
2008



2017



Meat consumption in Europe, 2018



Source: Lihatiedotus

Meat sector in the Baltic countries



Low self sufficiency

Polarised farms structure

Excess capacity of slaughtering capacity

Relatively weak meat industry (imports, food retail)

Russian ban and ASF have deteriorated export prospects



Soft factors of competitiveness



Environmental considerations

Carbon footprint, use of production resources such as water and soil, effects of soya use, protein feed alternatives

Animal welfare

The principles and criteria of Welfare Quality®

Health conditions

Use of antibiotics, microbial resistance

Hygienic conditions, safety

Bacteria, epidemics

Production methods and conditions

Cost efficient mass production, differentiation

Consumer awareness?

Health and welfare indicators

antibiotics, tails etc.

