



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



Latvijas
Lauksaimniecības
universitāte

Russian Crisis and its Impact on Agriculture and the Food Industry in Latvia

Dr.oec. Irina Pilvere, Dr.oec. Aleksejs Nipers
Latvia University of Agriculture





Latvia University of Agriculture

It is the fourth largest higher education institution in Latvia with 8 faculties implementing unique study programs in **agriculture, forestry science, veterinary medicine, food technology and landscaping**

and offering studies in widespread study areas such as **information technologies, economics and social sciences, agricultural engineering, construction and pedagogy.**





The research aim and tasks

The research aim is to examine agricultural and food export indicators to identify the groups of goods impacted by Russia's embargo and their relation to the industry indicators.

The following specific research tasks were set:

- 1) to analyse the agricultural and food export indicators for Latvia;
- 2) to examine milk and milk product export indicators for Latvia and their relation to the key industry indicators.





The importance of the research

- ✓ The economic crisis affected many countries in a different way – companies bankrupted, incomes, demand and output decreased, capital, including investment, flows shrank and negatively influenced the output, world trade declined, in a number of world countries GDPs contracted etc.
- ✓ The sanctions imposed on Russia in 2014 by the European Union – and also by the United States, Australia and Norway – have led Russia to impose their own embargo in return - on European agricultural and food produce.
- ✓ In total, Latvia's exports account for approximately 60% of its GDP. The exports of goods to CIS countries, especially to Russia was very important.





Methodological approach

The information analysis was based on two levels of detail according to the Combined Nomenclature (CN) groups of goods in the range of 1-24:

- 1) *at 2-digit level* (01-live animals; 02-meat and edible meat offal; 03-fish and crustaceans, molluscs and other aquatic invertebrates; 04-dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included)
- 2) *at 4-digit level* (0401-milk and cream, not concentrated nor containing added sugar or other sweetening matter; 0402-milk and cream, concentrated or containing added sugar or other sweetening matter....)



Food security goals (FAO)

- ✓ Strengthening national food control regulatory frameworks, and enhancing member country participation in Codex
- ✓ Providing independent scientific advice through expert bodies to support the standard setting work of Codex
- ✓ Enhancing food safety management along food chains to prevent diseases and trade disruptions
- ✓ Promoting food safety emergency preparedness to build resilient agri-food chains
- ✓ Developing online platforms for global networking, databases for information sharing and tools to support food safety management





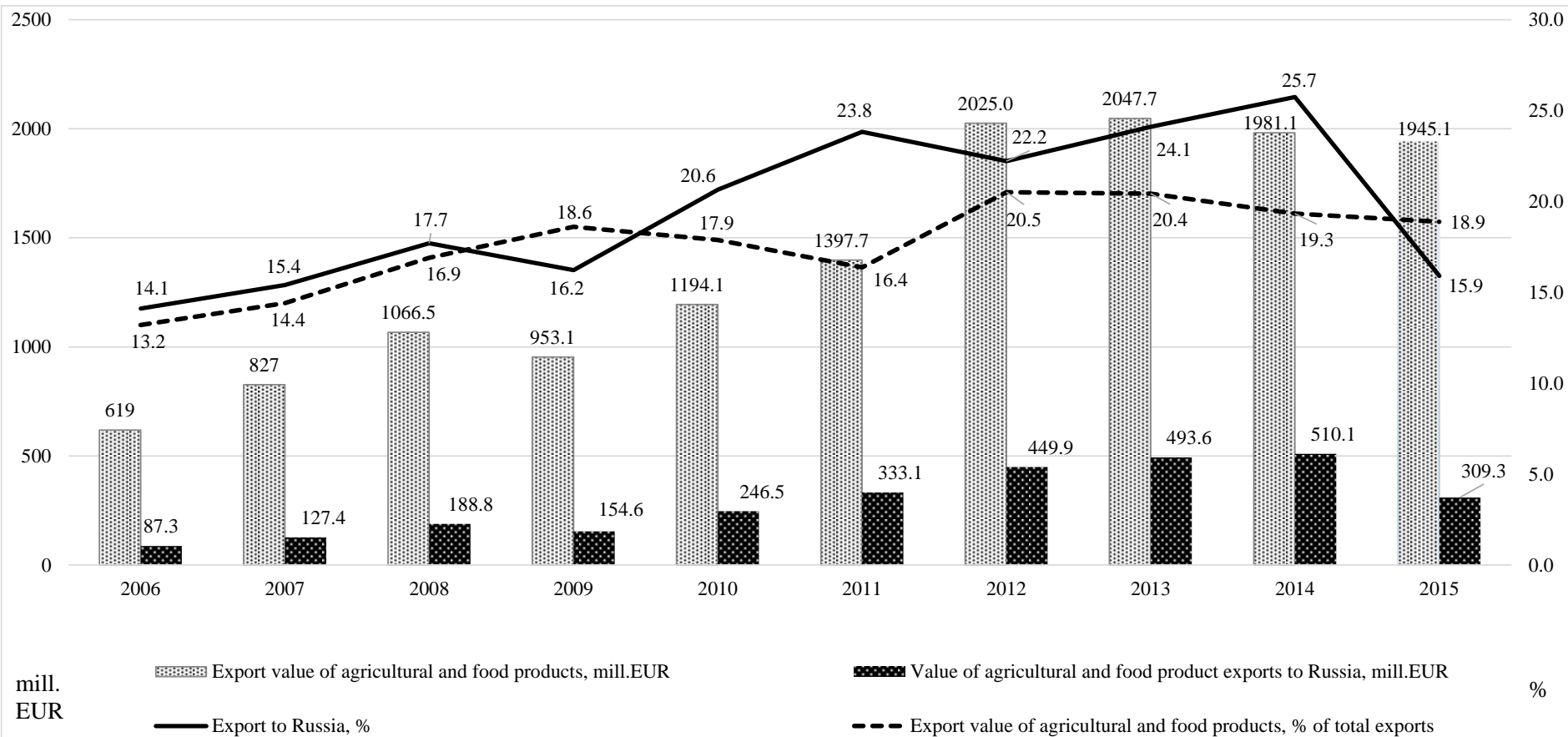
Research Results

1. Agricultural and food exports of Latvia





Latvia's total agricultural and food exports and exports to Russia





Characteristics of the total agricultural and food exports of Latvia

CN at 2-digit level	Percentage			+/- 2014/2013		+/- 2015/2014		+/- 2015/2013	
	2013	2014	2015	mill.EUR	Percentage	mill.EUR	Percentage	mill.EUR	Percentage
22	24.4	26.3	20.3	21.7	1.9	-125.9	-6.0	-104.3	-4.1
10	14.7	15.9	20.9	12.8	1.1	91.4	5.0	104.3	6.1
04	12.7	12.3	10.1	-17.0	-0.4	-46.8	-2.2	-63.8	-2.6
03	6.3	4.5	4.5	-39.8	-1.8	-2.2	0.0	-42.0	-1.8
16	5.9	5.9	5.4	-4.0	0.0	-11.5	-0.5	-15.5	-0.5
12	5.4	3.5	5.6	-40.5	-1.9	38.2	2.0	-2.2	0.2
02	3.5	3.2	3.0	-8.3	-0.3	-6.3	-0.3	-14.6	-0.6
19	3.5	4.0	4.4	8.1	0.5	5.0	0.3	13.2	0.9
23	3.5	3.9	3.2	6.3	0.4	-15.5	-0.7	-9.1	-0.3
08	2.8	2.8	4.0	-1.1	0.0	22.3	1.2	21.2	1.2
21	2.2	2.4	2.3	3.1	0.2	-2.5	-0.1	0.6	0.1
20	2.1	2.1	2.0	-1.2	0.0	-3.5	-0.1	-4.7	-0.1
17	2.0	1.0	0.8	-20.5	-1.0	-4.1	-0.2	-24.6	-1.2
15	1.7	1.7	1.3	-1.3	0.0	-9.0	-0.4	-10.3	-0.4
01	1.7	1.8	2.2	2.5	0.2	5.4	0.3	7.8	0.5
11	1.4	1.5	1.8	0.2	0.1	6.0	0.3	6.2	0.4
06	1.3	1.2	1.5	-2.2	-0.1	5.8	0.3	3.7	0.3
09	1.2	1.7	1.8	8.3	0.5	0.4	0.1	8.7	0.5
18	1.2	1.2	1.3	-0.5	0.0	2.7	0.2	2.2	0.2
07	1.1	1.3	1.8	1.5	0.1	10.2	0.5	11.7	0.7
24	1.0	1.1	1.5	0.3	0.1	8.2	0.4	8.5	0.5
05	0.1	0.2	0.1	2.0	0.1	-2.1	-0.1	-0.1	0.0
13	0.1	0.2	0.1	2.8	0.1	-2.4	-0.1	0.4	0.0



Characteristics of Latvia's agricultural and food exports to Russia

CN at 2-digit level	Percentage			+/- 2014/2013		+/- 2015/2014		+/- 2015/2013	
	2013	2014	2015	mill.EUR	Percentage	mill.EUR	Percentage	mill.EUR	Percentage
22	72.4	73.8	80.8	19.3	1.5	-126.7	7.0	-107.3	8.4
10	7.5	6.0	3.0	-6.3	-1.5	-21.3	-3.0	-27.7	-4.5
04	5.4	5.6	0.1	2.0	0.2	-28.4	-5.5	-26.4	-5.3
03	4.5	3.9	8.0	-2.1	-0.6	4.8	4.1	2.7	3.5
16	2.5	2.4	1.9	-0.3	-0.1	-6.3	-0.5	-6.7	-0.6
12	2.1	3.8	1.8	8.9	1.7	-13.9	-2.0	-5.0	-0.3
02	1.1	1.1	1.3	0.0	0.0	-1.3	0.3	-1.3	0.2
19	1.0	0.8	0.9	-0.9	-0.2	-1.2	0.1	-2.1	-0.1
23	0.7	0.8	0.2	0.5	0.1	-3.4	-0.6	-2.9	-0.5
08	0.6	0.1	0.0	-2.2	-0.4	-0.7	-0.1	-2.8	-0.6
21	0.5	0.2	0.2	-1.4	-0.3	-0.3	0.0	-1.7	-0.3
20	0.4	0.2	0.0	-0.6	-0.1	-1.2	-0.2	-1.9	-0.4
17	0.4	0.4	0.3	0.2	0.0	-0.9	0.0	-0.7	0.0
15	0.2	0.3	0.3	0.0	0.0	-0.4	0.0	-0.4	0.0
01	0.2	0.0	0.0	-0.8	-0.2	-0.1	0.0	-1.0	-0.2
11	0.2	0.2	0.1	0.0	0.0	-0.4	0.0	-0.4	0.0
06	0.2	0.1	0.4	0.0	0.0	0.5	0.2	0.5	0.2
09	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.1	0.1
18	0.1	0.1	0.1	0.1	0.0	-0.1	0.0	-0.2	0.0
07	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
24	0.0	0.1	0.3	0.2	0.0	0.7	0.2	0.8	0.3



Research Results

2. Milk and milk product exports of Latvia



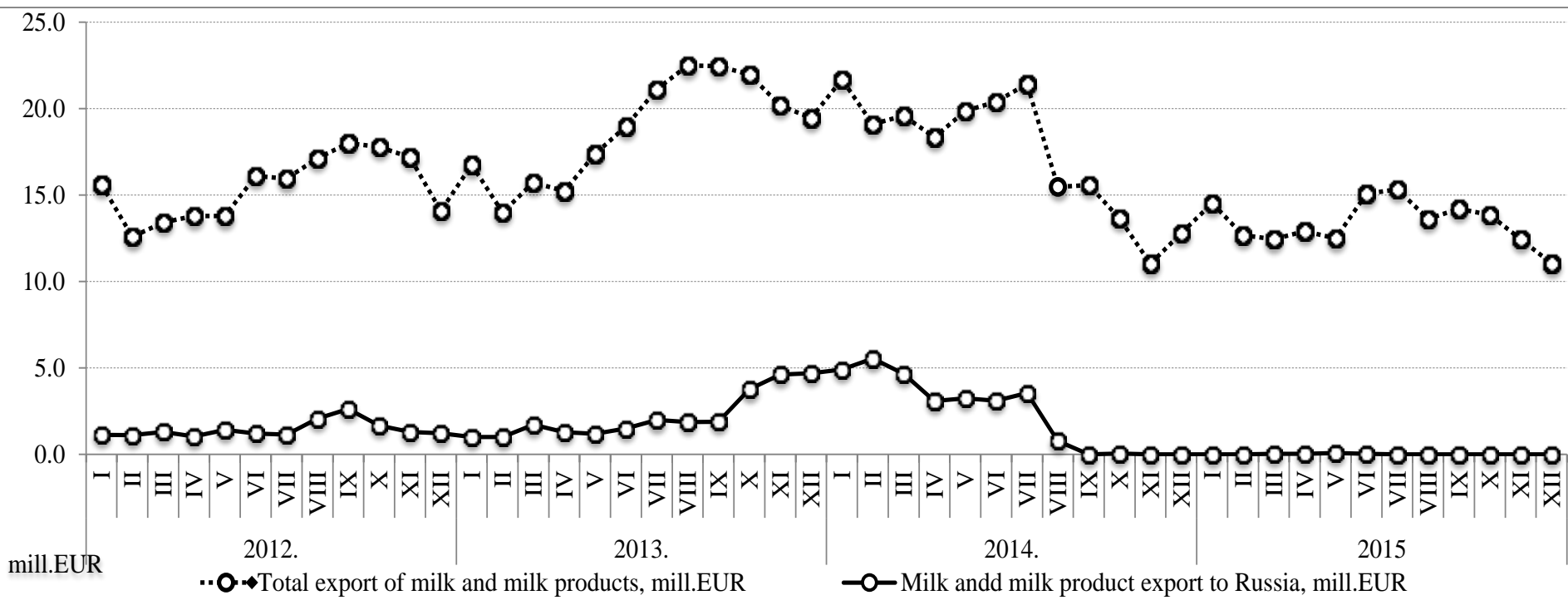


Characteristics of the milk and milk product exports of Latvia

CN at 4-digit level	Percentage			+/- 2014/2013		+/- 2015/2014		+/- 2015/2013	
	2013	2014	2015	thou.EUR	Percentage	thou.EUR	Percentage	thou.EUR	Percentage
Total exports									
0401	47.7	47.7	44.7	-5837	0.0	-30086	-3.0	-35923	-3.0
0402	13.2	15.3	10.1	2758	2.1	-16299	-5.1	-13541	-3.1
0403	5.6	6.0	6.2	64	0.4	-2839	0.2	-2776	0.6
0404	2.5	2.3	3.9	-638	-0.2	1333	1.6	696	1.4
0405	7.5	6.6	4.9	-2810	-0.9	-6226	-1.7	-9036	-2.6
0406	23.5	22.1	30.2	-5931	-1.4	1341	8.1	-4590	6.7
Total	100	100	100	-12395	0.0	-52776	0.0	-65171	0.0
Exports to Russia									
0401	4.7	16.0	95.2	3325	11.3	-4383	79.2	-1058	90.5
0402	15.4	16.2	0.0	538	0.8	-4636	-16.2	-4098	-15.4
0403	2.8	2.0	4.0	-153	-0.7	-572	1.9	-725	1.2
0404	0.4	0.3	0.0	-18	-0.1	-77	-0.3	-96	-0.4
0405	18.9	27.4	0.0	2814	8.5	-7819	-27.4	-5005	-18.9
0406	57.9	38.1	0.8	-4504	-19.8	-10861	-37.2	-15365	-57.1
Total	100	100	100	2002	0.0	-28348	0.0	-26346	0.0



Monthly changes in the value of milk and milk product exports from Latvia



●●● Total export of milk and milk products, mill.EUR

—○— Milk and milk product export to Russia, mill.EUR





Export destinations for dairy produce (group 04) in Latvia

Countries/indicators	mill.EUR			Percentage			+/- 2015/2013
	2013	2014	2015	2013	2014	2015	mill.EUR
LT - Lithuania	112.0	106.0	75.8	42.9	43.4	38.4	-36.2
DE - Germany	39.1	24.1	23.8	15.0	9.9	12.1	-15.3
RU - Russia	26.5	28.5	0.2	10.2	11.7	0.1	-26.3
EE - Estonia	21.1	18.9	21.9	8.1	7.7	11.1	0.8
NL - Netherlands	10.9	7.9	13.7	4.2	3.2	6.9	2.7
BE - Belgium	9.4	3.7	0.4	3.6	1.5	0.2	-9.1
PL - Poland	7.2	15.9	17.9	2.8	6.5	9.1	10.7
AZ - Azerbaijan	7.0	7.6	6.0	2.7	3.1	3.0	-1.0
CZ - Czech Republic	6.2	5.7	5.4	2.4	2.3	2.7	-0.9
SK - Slovakia	2.7	1.0	0.9	1.0	0.4	0.5	-1.8
Other countries	18.9	24.8	31.2	7.2	10.2	15.9	12.3
Total	261.0	244.1	197.2	100.0	100.0	100.0	-63.8
Number of export countries	45	57	58	x	x	x	x
Number of new export countries	x	16	9	x	x	x	x



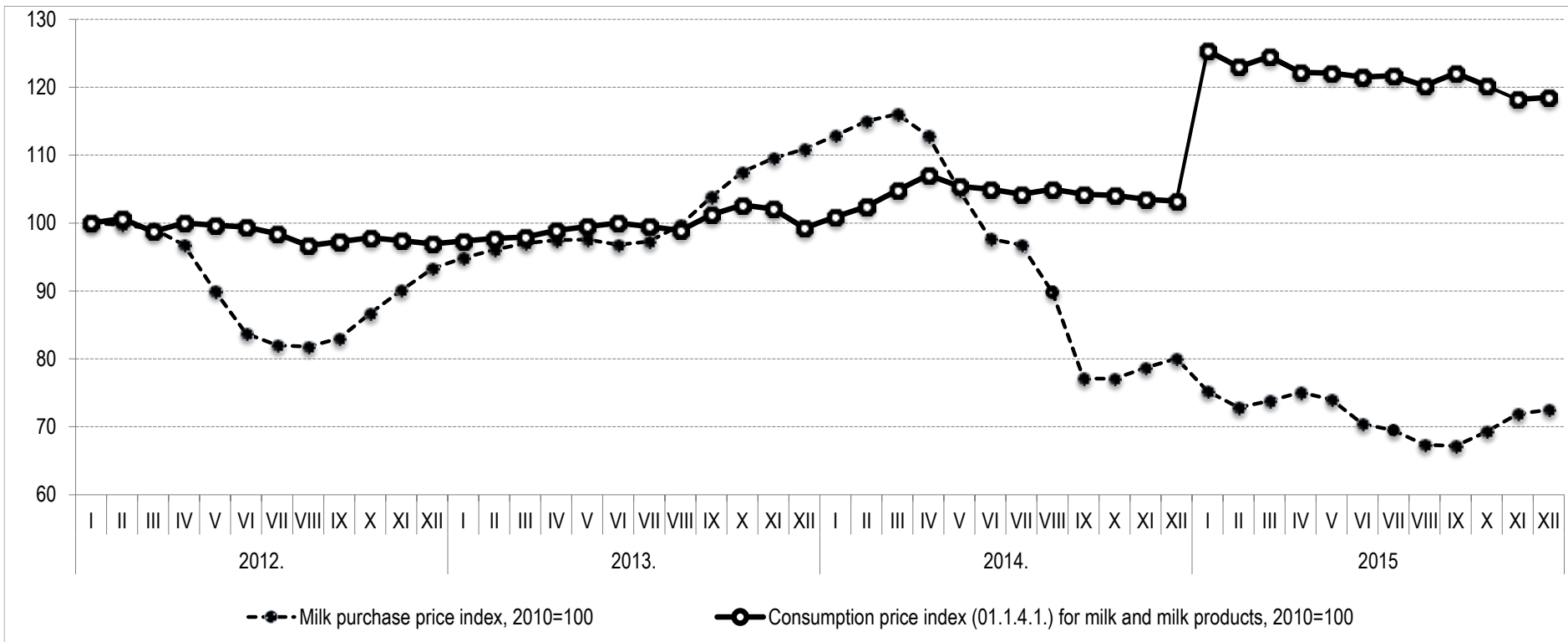
Research Results

3. Effects of milk and milk product exports on the other indicators of the dairy industry in Latvia





Monthly changes in the index of purchase and consumption prices for milk and milk products in Latvia





Strong and medium-strong relationships between the various indicators of foreign trade in Latvia in the months of 2012-2015

Indicators		Foreign trade indicators/ correlation coefficient value r	
		Total export value of milk and milk products, mill.EUR	Value of milk and milk product exports to Russia, mill.EUR
		Y_1	Y_2
Total export value, mill.EUR	X_1	x	0.78
0401 export value, mill.EUR	X_2	0.32	0.74
0401 export price EUR per 1 kg	X_3	0.72	0.82
0402 export value, mill.EUR	X_4	0.76	0.57
0402 export price EUR per 1 kg	X_5	0.65	0.56
0403 export value, mill.EUR	X_6	0.61	0.74
0403 export amount, kg	X_7	0.66	0.70
0405 export value, mill.EUR	X_8	0.82	-0.35
0405 export amount, kg	X_9	0.78	0.71
0405 export price EUR per 1 kg	X_{10}	0.43	0.51
Milk purchase, EUR per 1 t	X_{11}	0.70	0.85
Value of purchased milk, mill.EUR	X_{12}	0.86	0.69



Conclusions (I)

- ✓ Agricultural and food products play a significant role in the foreign trade of Latvia, as the exports of the products rose 3.1 times in the period 2006-2015, reaching the highest export value in 2013, more than EUR 2 billion, which accounted for almost a fifth of the total value of the country's exports
- ✓ In the period 2006-2014, the agricultural and food exports to Russia rose 5.8 times, reaching EUR 510 mill. and accounting for 26% of the total exports.
- ✓ Owing to Russia's embargo, the export value of agricultural and food products decreased by 39% in 2015.
- ✓ In the total value of Latvia's exports, three groups of goods – 22-beverages, spirits and vinegar, 10-cereals and 04-dairy produce; birds' eggs; natural honey – made up half of the total export value, while the determinant role in trade with Russia was played by goods group 22- beverages, spirits and vinegar, comprising 81% of the total exports in 2015.
- ✓ Due to Russia's embargo policy, the largest decline in the total exports in 2015 compared with 2013 was in goods group 04, EUR 64 mill., of which a decrease of EUR 26 mill. or 41% related to the milk and milk product exports to Russia.



Conclusions (II)

- ✓ In the composition of milk and milk product exports to Russia in 2013, goods groups 0402, 0405 and 0406 were the most significant, accounting for 92% of the total export value.
- ✓ The diversification of the market takes place – new export markets are sought for in African and Middle East countries and exports are increased to some European Union Member States and other traditional markets.
- ✓ In 2016 the prices are still the lowest in the European Union, causing a long crisis in the dairy industry in Latvia, which resulted in a decrease in the number of dairy herds and dairy cows in Latvia.
- ✓ The total export value of milk and milk products has a strong correlation with the export value of goods group 0405 and the value of purchased milk, while the value of milk and milk product exports to Russia has a strong correlation with the export price of goods group 0401 and the milk purchase price.



Latvijas
Lauksaimniecības
universitāte

Thank you!



www.ilu.lv