

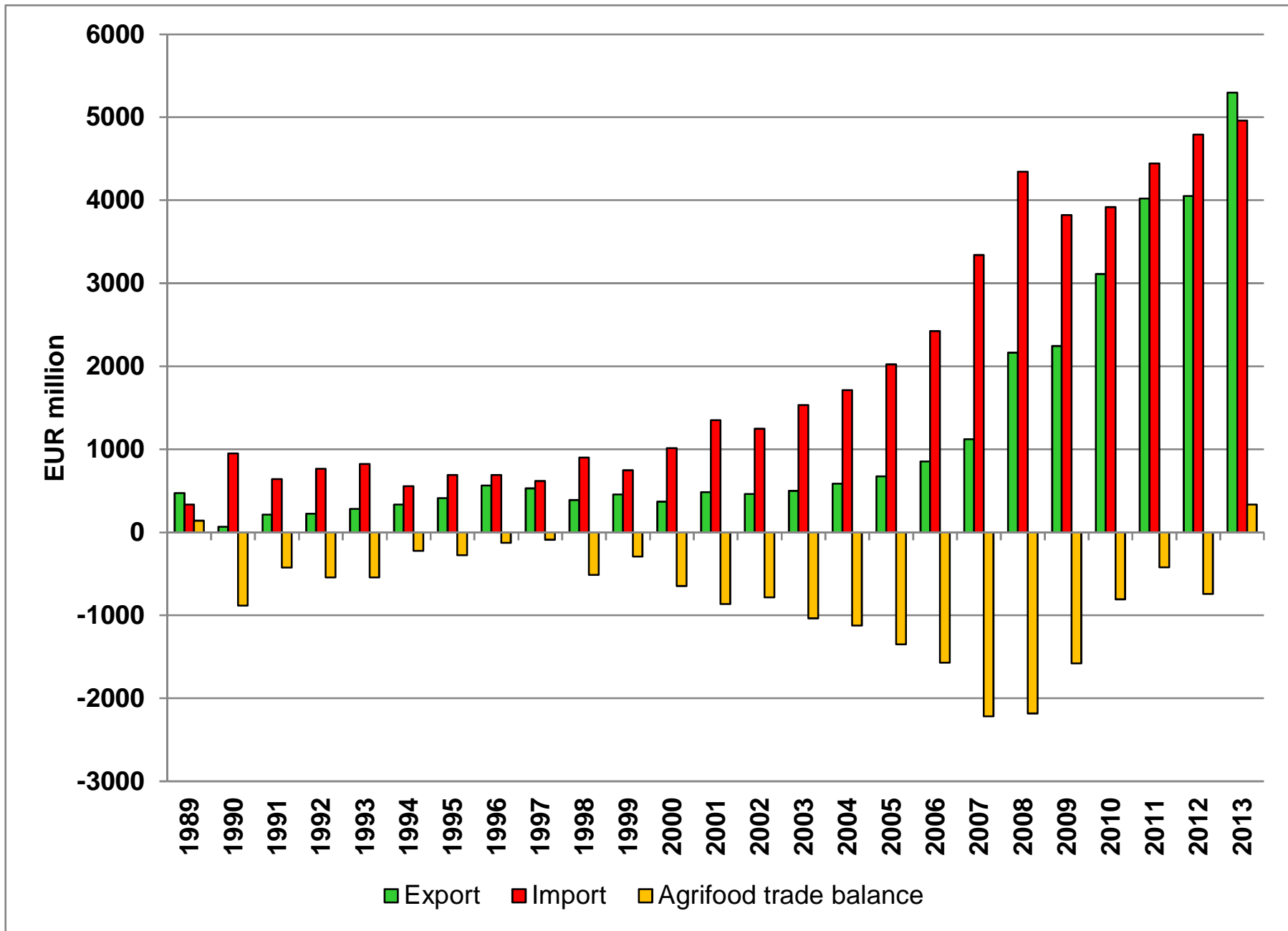
CHANGES IN THE AGRI-FOOD TRADE DYNAMICS AND COMPETITIVENESS IN THE POST-ACCESSION PERIOD – EVIDENCE FROM ROMANIA

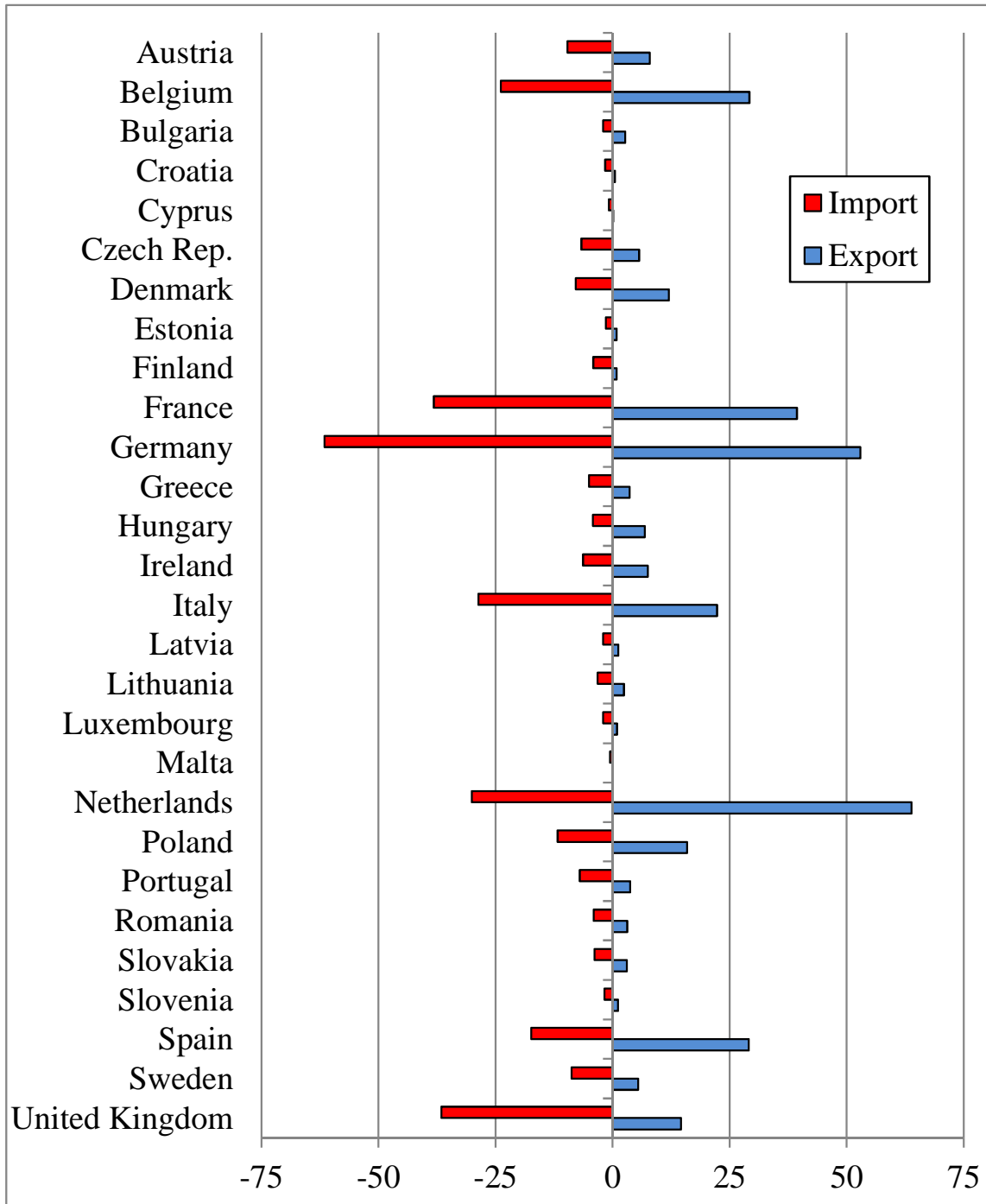


Camelia Gavrilescu
Institute of Agricultural Economics –
Romanian Academy

International Conference "The CAP and competitiveness of the Polish and European food sectors", 26-28 November 2014, Józefów, Poland

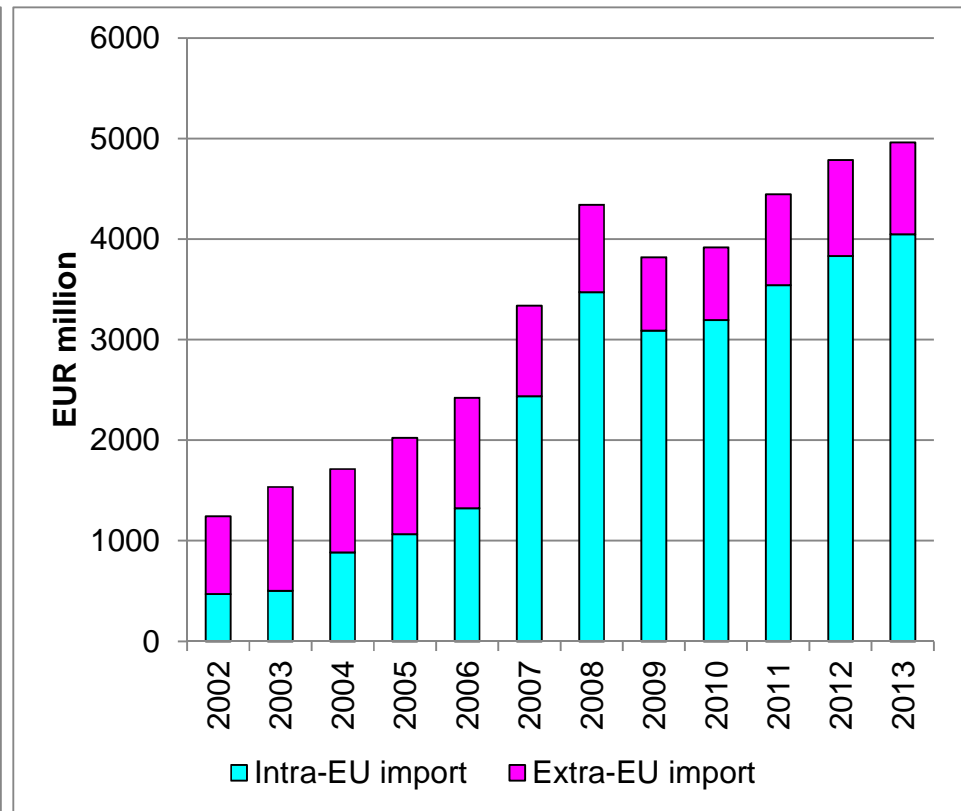
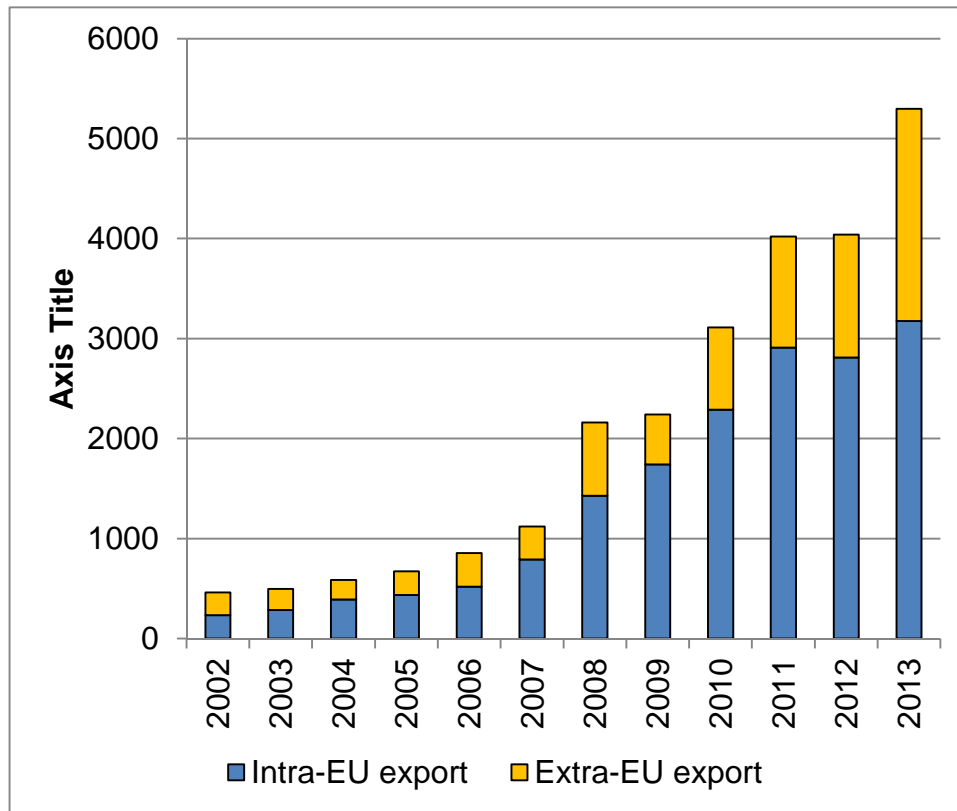
Romanian agrifood trade 1989-2013



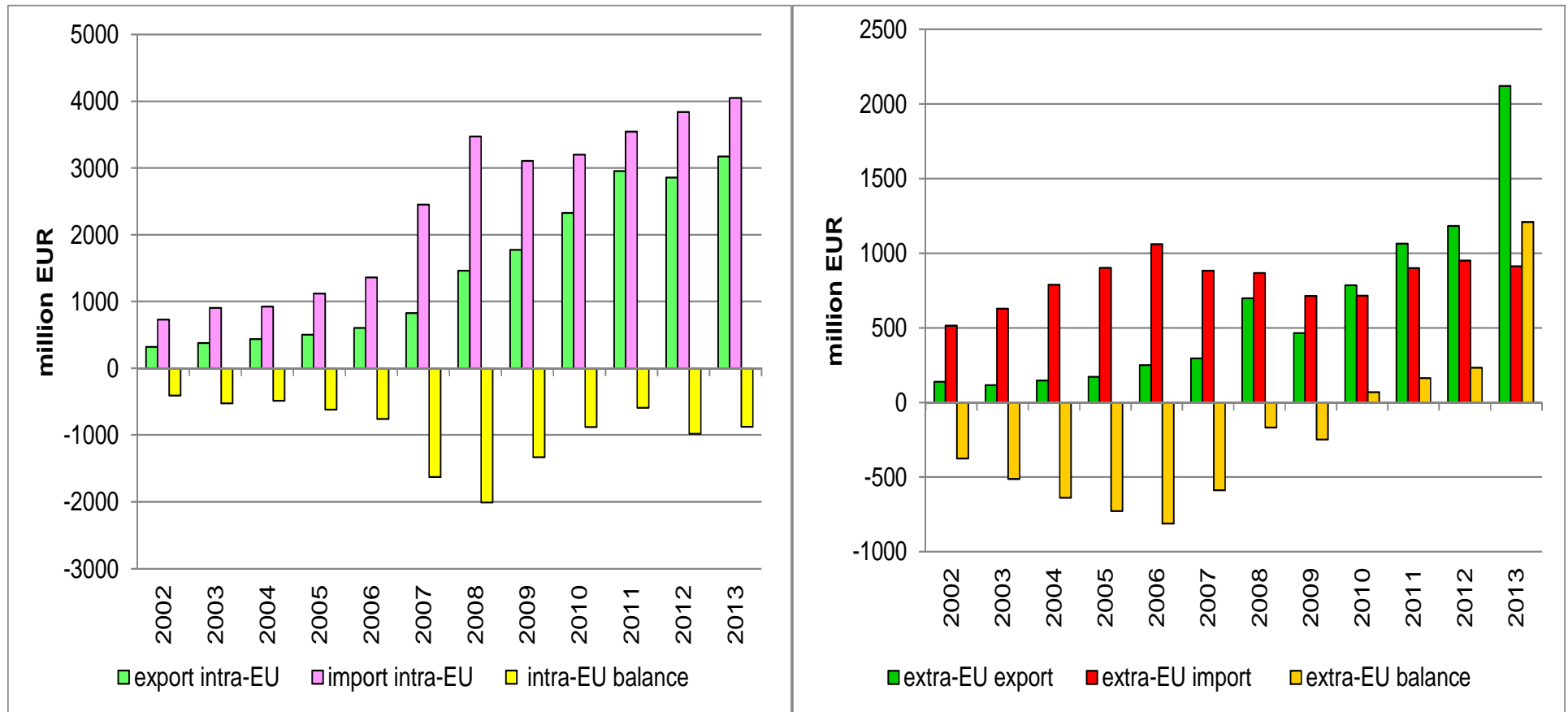


Intra-EU trade by Member State (2013)

Romanian agrifood trade intra-EU vs. extra-EU (2002-2013)



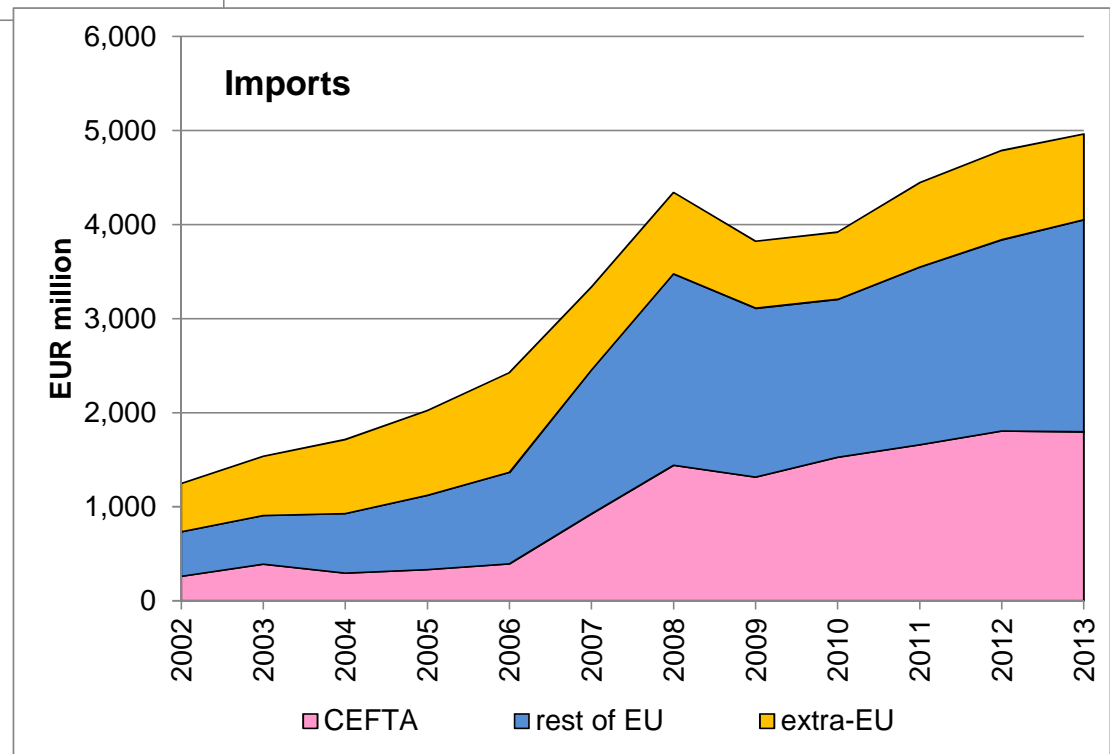
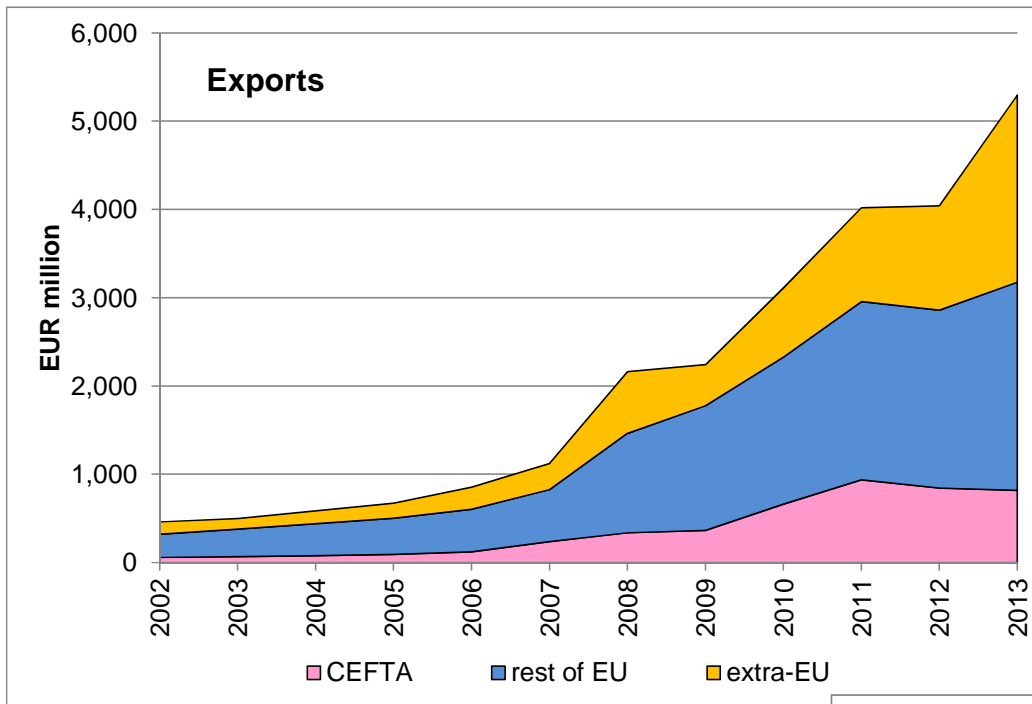
Romanian agrifood trade intra-EU vs. extra-EU (2002-2013)



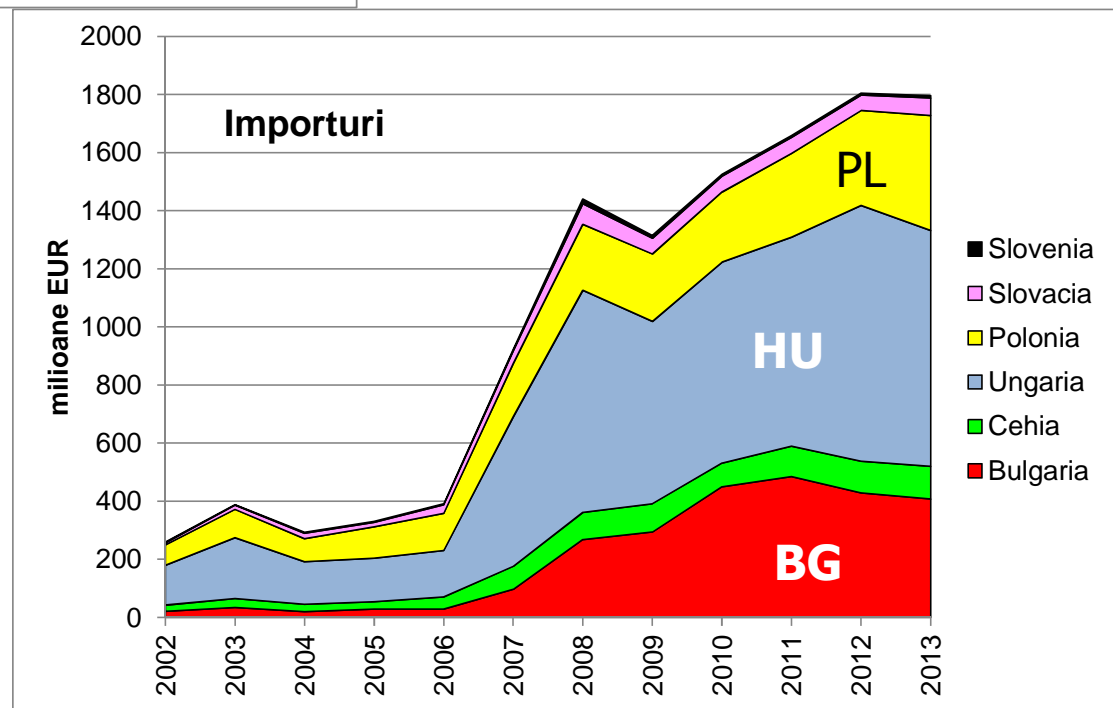
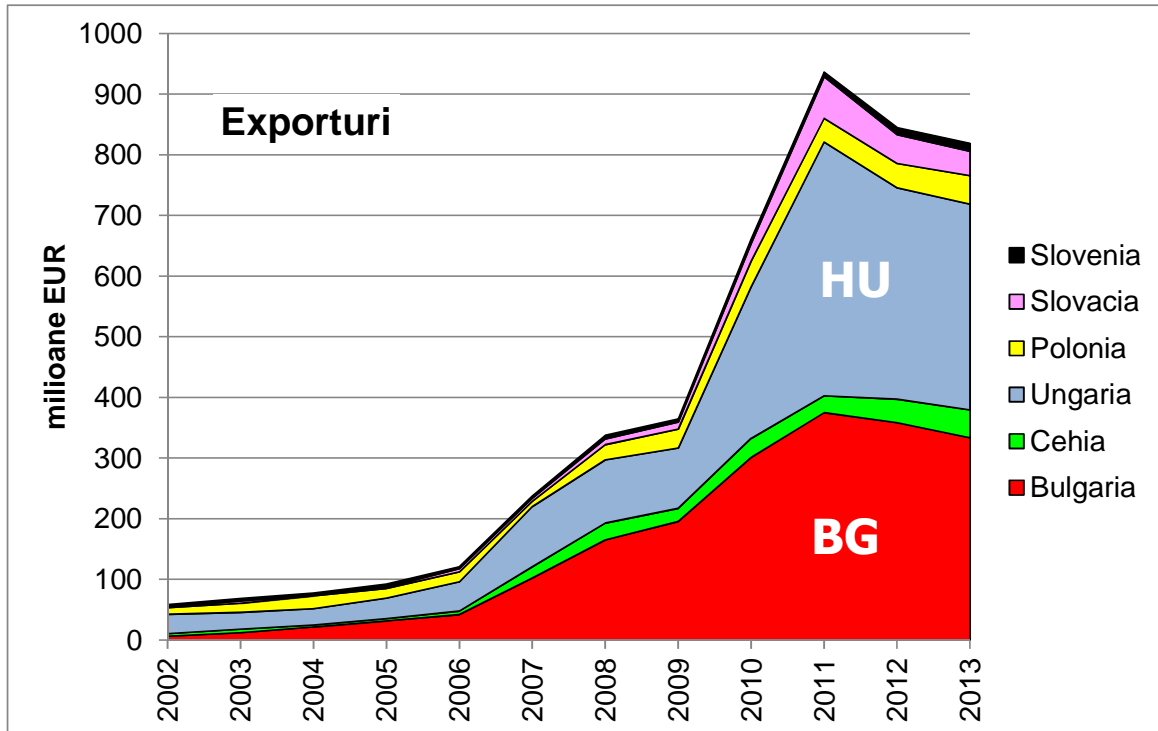
- Increasing dispatches
- slower increase of arrivals

- strong increase of exports
- certain diminishment of imports

Directions of agri-food exports and origins of imports



Trade with ex-CEFTA countries



Composition of the Romanian agri-food trade with the EU countries (2011-2013 averages)

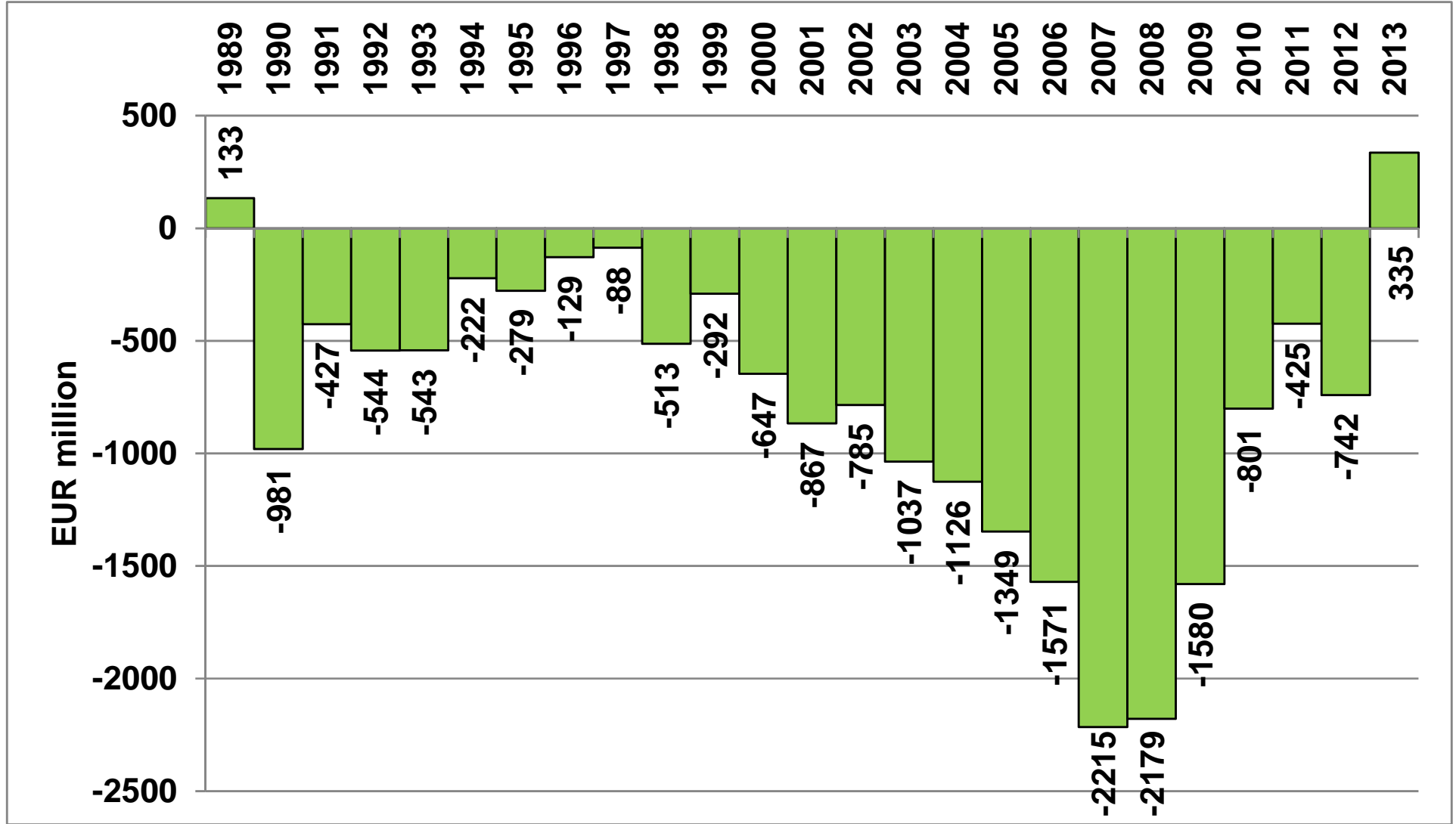
Exports to EU countries				Imports from EU countries			
HS code	Product group	Value (EUR billion)	% of the total value of exports	HS code	Product group	Value (EUR billion)	% of the total value of imports
10	Cereals	528.31	17.8	02	Meat and edible offal	468.56	12.3
12	Oilseeds	526.83	17.8	10	Cereals	314.55	8.3
24	Tobacco and tobacco products	466.77	15.7	04	Milk and dairy products; eggs; honey	268.02	7.0
02	Meat and edible offal	223.36	7.5	21	Miscellaneous edible preparations	240.30	6.3
15	Edible oils and fats	207.30	7.0	19	Bakery and pastry products	207.80	5.5
01	Live animals	142.71	4.8	22	Beverages	207.44	5.4
04	Milk and dairy products; eggs; honey	107.12	3.6	12	Oilseeds	193.01	5.1
17	Sugar and confectionery	94.21	3.2	15	Edible oils and fats	187.61	4.9
23	Animal feed	93.33	3.1	08	Fruits	182.63	4.8
16	Preparations of meat and fish	87.57	3.0	23	Animal feed	171.80	4.5
01-24	Total agri-food products	2966.09	100.0	01-24	Total agri-food products	3808.39	100.0
CR 5 (concentration ratio 5)			65.8	CR 5 (concentration ratio 5)			39.4
CR 10 (concentration ratio 10)			83.5	CR 10 (concentration ratio 10)			64.1



Competitiveness – measured by...

- Trade balances
- One-step CMS (Constant Market Share) model
- Ratio agricultural commodities / processed products

Romanian total agrifood trade deficit (1989-2013)



**Romanian
agrifood trade
balance by HS
01-24 codes
(EUR million)**

HS code	Item	2006	2012	2013
01	Live animals	115,79	164,43	149,40
02	Meat and edible offals	-503,62	-217,41	-261,40
03	Fish and seafood	-64,04	-95,03	-100,50
04	Milk and dairy products, eggs, honey	-19,91	-130,49	-149,20
05	Other products of animal origin	-23,89	-26,09	-9,60
06	Live plants, trees and flowers	-35,14	-90,73	-84,40
07	Vegetables	-40,04	-106,72	-104,90
08	Fruit	-125,26	-159,35	-214,40
09	Tea, coffee, spices	-94,03	-155,03	-153,10
10	Cereals	102,08	963,39	1657,50
11	Milling products	-46,14	-81,66	-96,10
12	Oilseeds	114,69	208,49	546,40
13	Lacs; gums, resins	-9,22	-20,43	-18,60
14	Other products of animal origin	2,01	0,47	0,20
15	Fats and oils	-16,98	-56,38	32,30
16	Meat and fish preparations	-7,81	-5,68	6,20
17	Sugar and confectionery	-174,04	-260,95	-210,20
18	Cocoa and cocoa products	-45,41	-107,57	-124,30
19	Bakery and pastry products	-55,34	-146,77	-166,30
20	Vegetables and fruit preparations	-98,81	-107,66	-130,20
21	Various food preparations	-137,75	-192,69	-186,20
22	Beverages	-64,51	-110,81	-124,40
23	Animal feed	-91,68	-225,23	-197,80
24	Tobacco and tobacco products	-251,71	217,83	270,50
01-24	TOTAL	-1570,75	-742,06	330,90



CMS – Constant Market Share Approach

- **Assumption:** at the same competitiveness level, the export share of a country remains unchanged
- **Change in export:** attributed to:
 - Change in destination market: mk size (1) + mk composition (2)
 - Residual factor (competitiveness) (3)



(1) Market size (structural effect)

- mk share (T1) = mk share (T2)
 - change due to import growth in destination country
- mk share = $s=q/Q$



(2) Residual effect (competitiveness)

- Change in ability to export on the destination market
 - positive = increased competitiveness
 - negative = decreased competitiveness



(3) Market composition effect

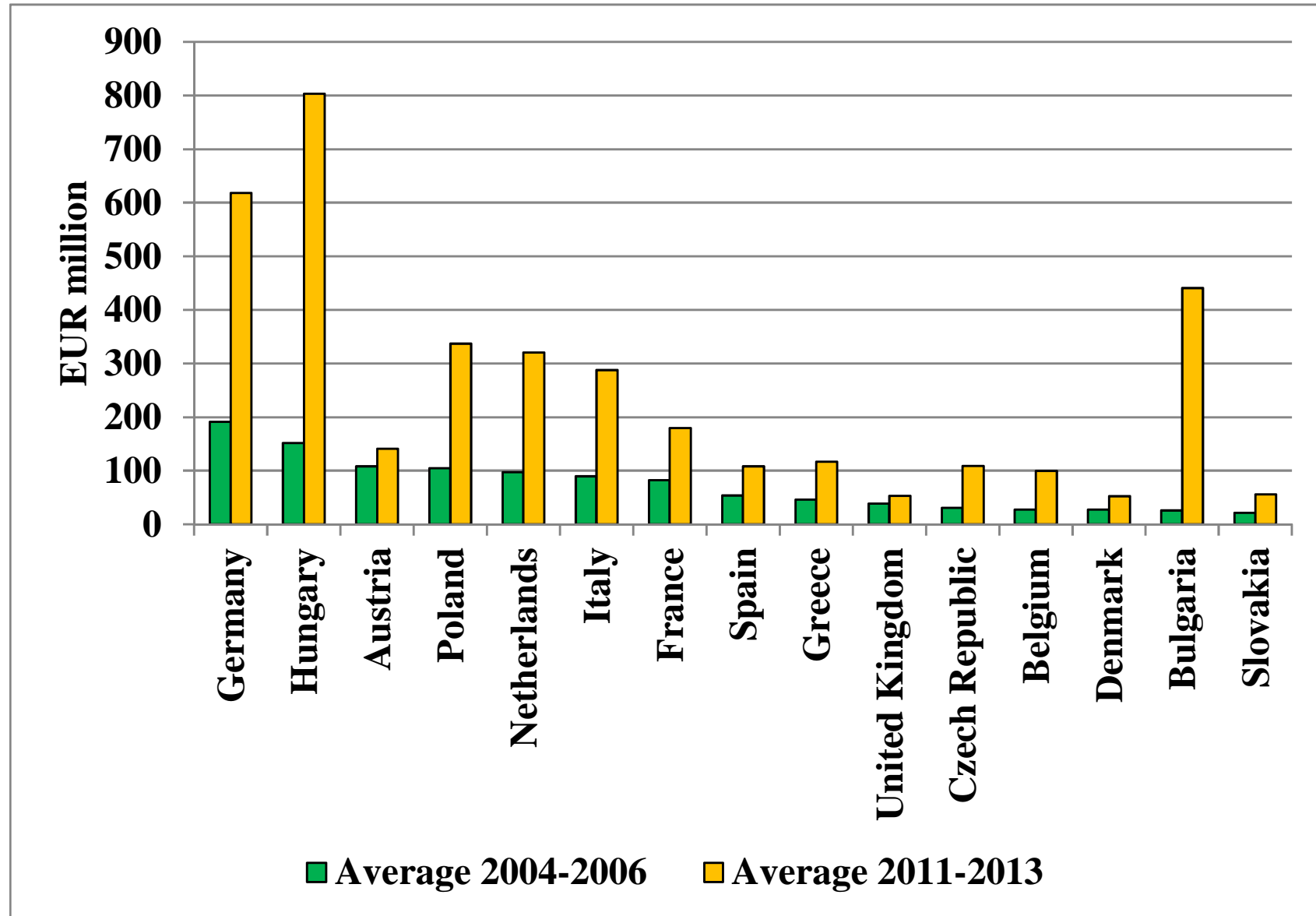
- captures the relation between structural and residual effects
- combination of changing import demand and export supply
- $\Delta q = S^0 \Delta Q + Q^0 \Delta S + \Delta Q \Delta S$
- $\Delta q = \sum_i S_i^0 \Delta Q + \sum_i Q_i^0 \Delta S_i + \sum_i \Delta Q_i \Delta S_i$



Our calculations

- Compared periods:
 - 2004-2006 (avg) vs. 2011-2013 (avg)
- Data sources: Eurostat, CN
- Aggregation level: 2 digits (HS 01-24)
- Top 8 destination markets in the EU for the Romanian agri-food exports: IT, GER, GR, ESP, HU, BG, NL, FR
 - 76.6% in the total Romanian exports to the EU (in 2004-06)
 - 81.5% in 2011-13

Romanian agri-food exports to top 15 EU partners





Results of CMS model

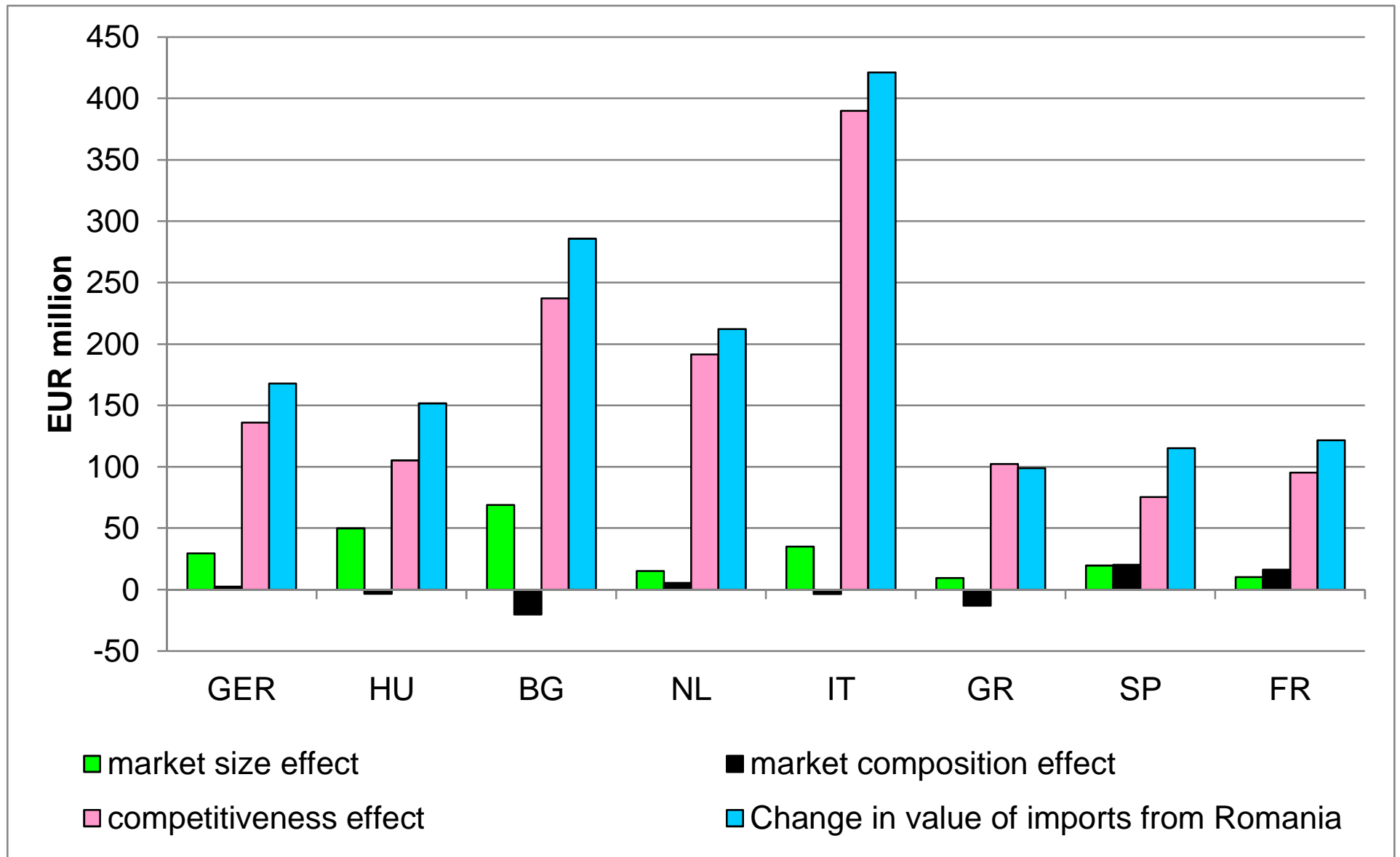
- export growth of RO to EU-28: EUR million 1970.3:
 - structural (market size) effect: 14.4%
 - competitiveness effect: 56.1%
 - market composition effect: 29.4%
- **country** level: all 3 types of effects: +
- **product groups** level (HS 01-24): differentiation:
 - prevalent positive competitiveness effect: HS-24 (tobacco)
 - prevalent positive market composition effect: HS-12 (oilseeds)
 - negative competitiveness effect: HS-01 (live animals)
 - negative market composition effect: HS-07 (vegetables)



Results of the constant market share model calculations at country level (compared periods: 2004-06 and 2011-13)

Country	Structural (market size) effect (%)	Competitiveness (residual) effect (%)	Market composition (second order) effect (%)	Change in value of imports from Romania (average 2011-13 versus average 2004-06)	
				EUR Million	%
EU-28	14.4	56.1	29.4	1,970.29	462.55
Italy	8.3	68.7	23.0	421.05	503.20
Germany	17.6	53.3	29.1	167.90	410.92
Greece	9.6	78.5	11.8	98.89	256.69
Spain	17.0	61.3	21.7	115.05	308.50
Hungary	32.9	35.9	31.2	151.71	363.53
Bulgaria	24.1	24.3	51.6	285.69	978.97
Netherlands	7.2	54.0	38.8	212.20	1,102.14
France	8.3	63.0	28.6	121.59	645.27

Results of the constant market share model calculations at country level (compared periods: 2004-06 and 2011-13)

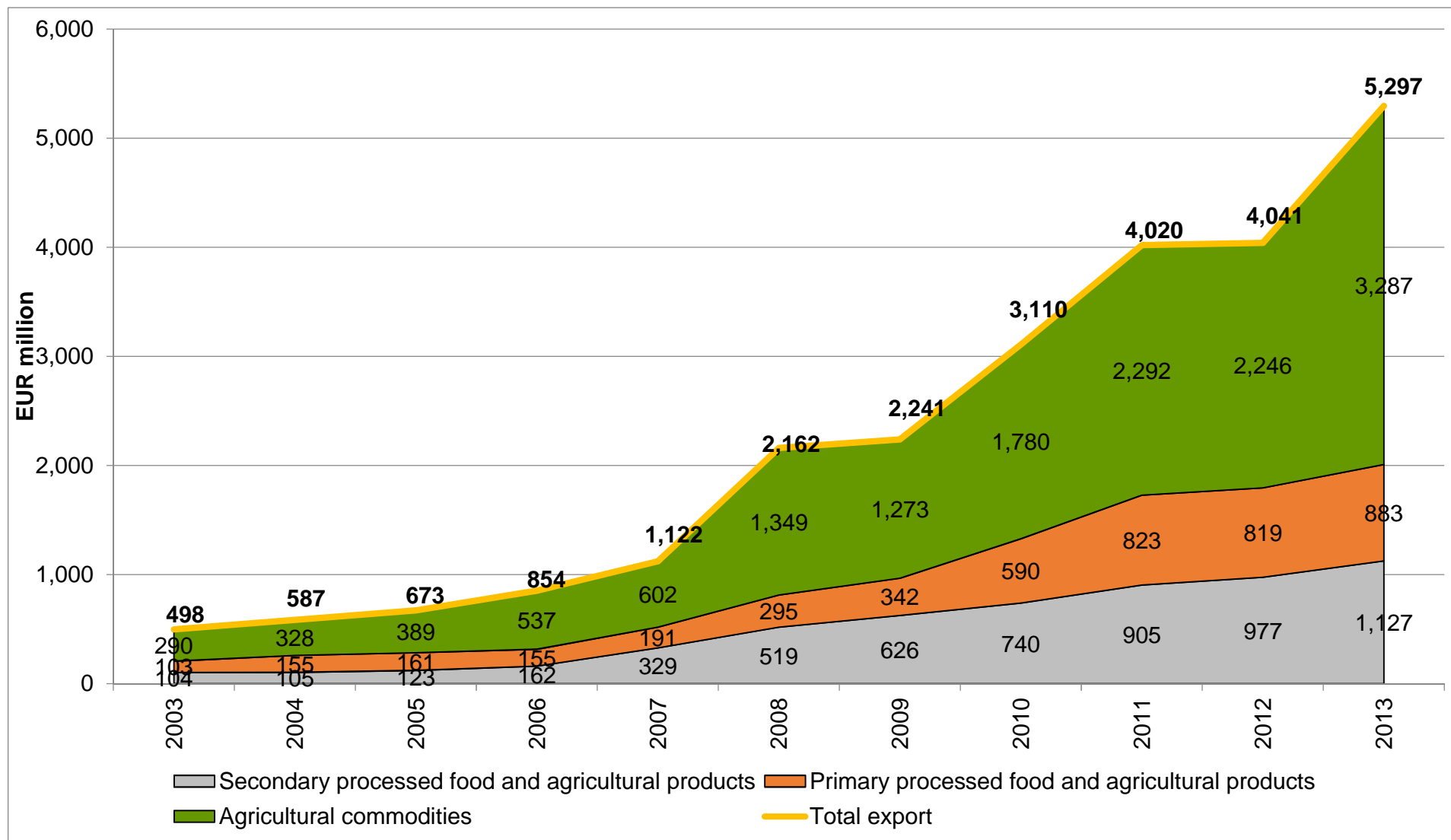




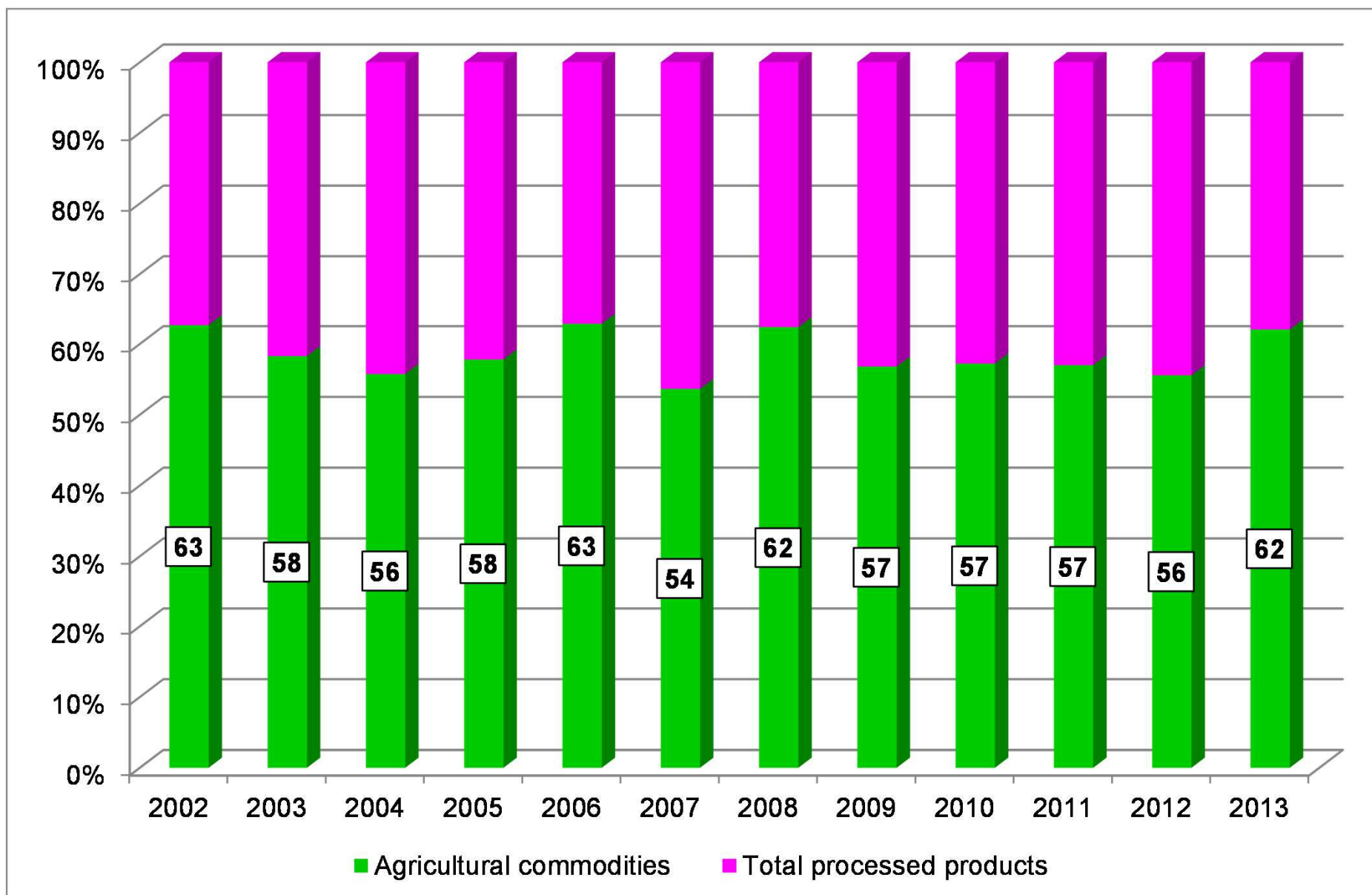
Ratio agricultural commodities / processed products

- 3 categories of agrifood products (196 sub-groups at 4-digit level CN):
 - **Agricultural commodities**: live animals, live plants (trees, flowers), fresh fish, eggs, fresh vegetables, fresh fruit, cereals, oilseeds, tobacco leaves
 - **Primary processed products**: meat, milk, cereal flour, edible oil, sugar, coffee, tea, dried fruit, frozen vegetables, animal feed (soya cakes)
 - **Secondary processed products**: yoghurt, butter, cheese, chocolate, wine, processed food, pet food

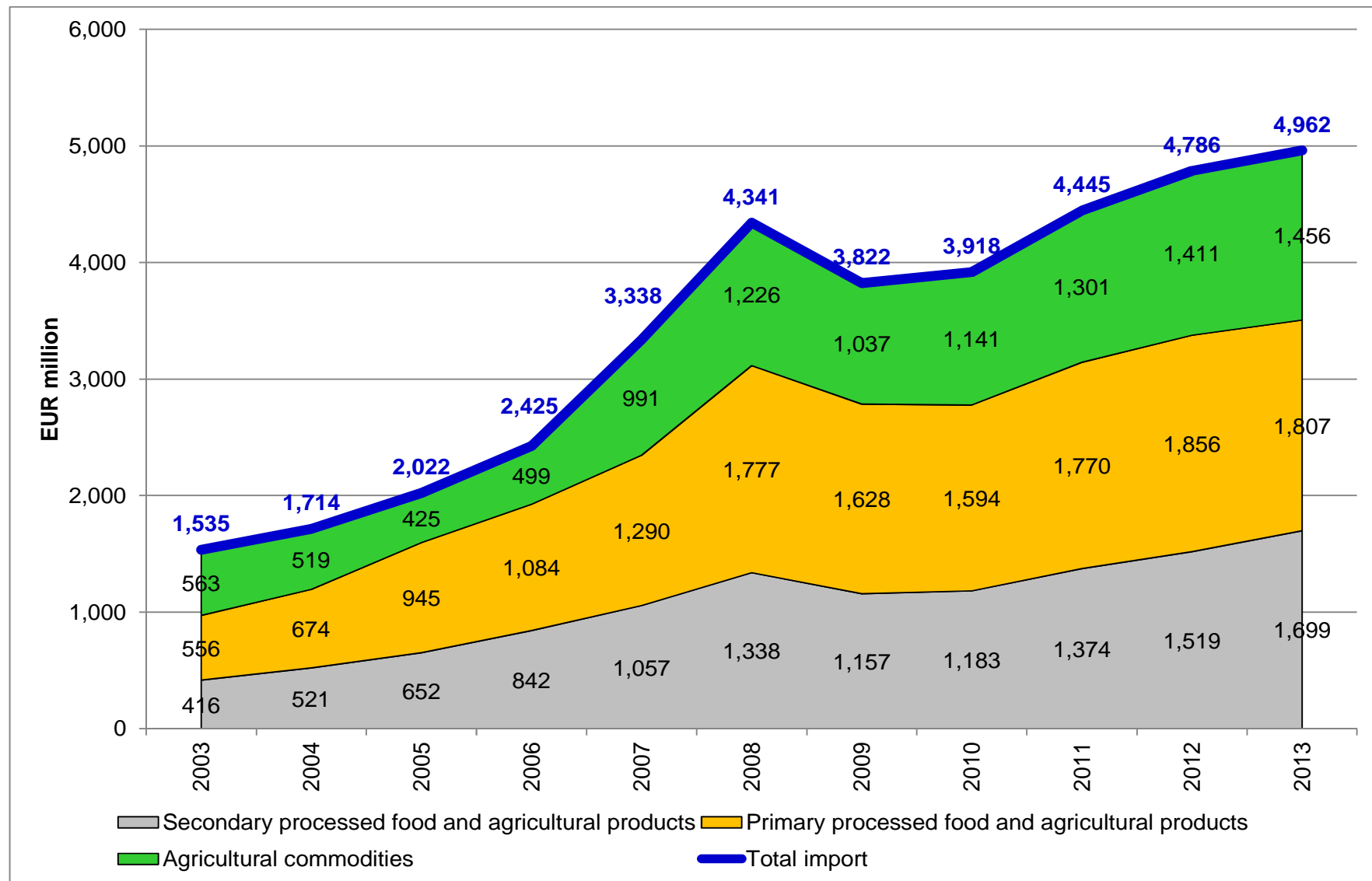
The structure of the Romanian agri-food EXPORT according to the stage of processing, 2003-2013



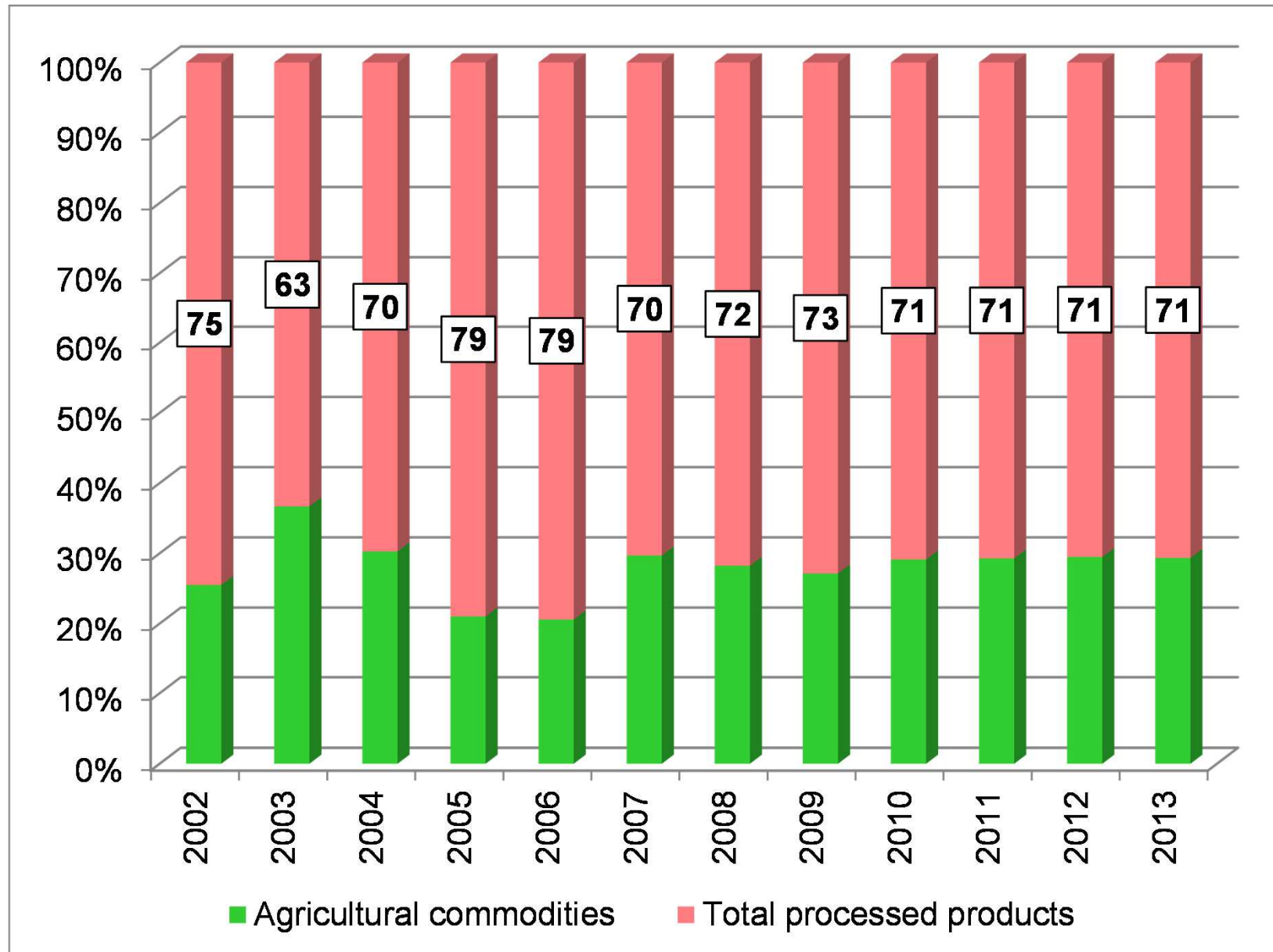
Ratio agricultural commodities / processed products in EXPORTS



The structure of the Romanian agri-food IMPORT according to the stage of processing, 2003-2013



Ratio agricultural commodities / processed products in IMPORTS





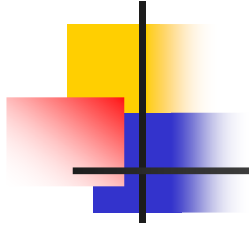
Conclusions

- All 3 methods of competitiveness assessment yielded basic similar results
- Trade balance method shows the overall competitiveness measured yearly and evolution in time by product groups
- CMS model shows:
 - the inner drivers of changes in exports, and the changes in competitiveness
 - breakdown at product level provides details of the picture
 - limitation of the model: sensitivity to base period choice and aggregation level
- Analysis of trade structure according to the stage of processing shows the ratio between agricultural commodities and processed products:
 - in Romanian exports, maximum 46% processed products
 - in Romanian imports, minimum 63% processed products

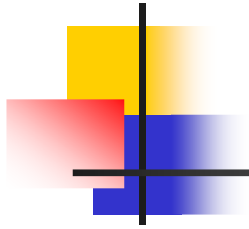


Conclusions (2)

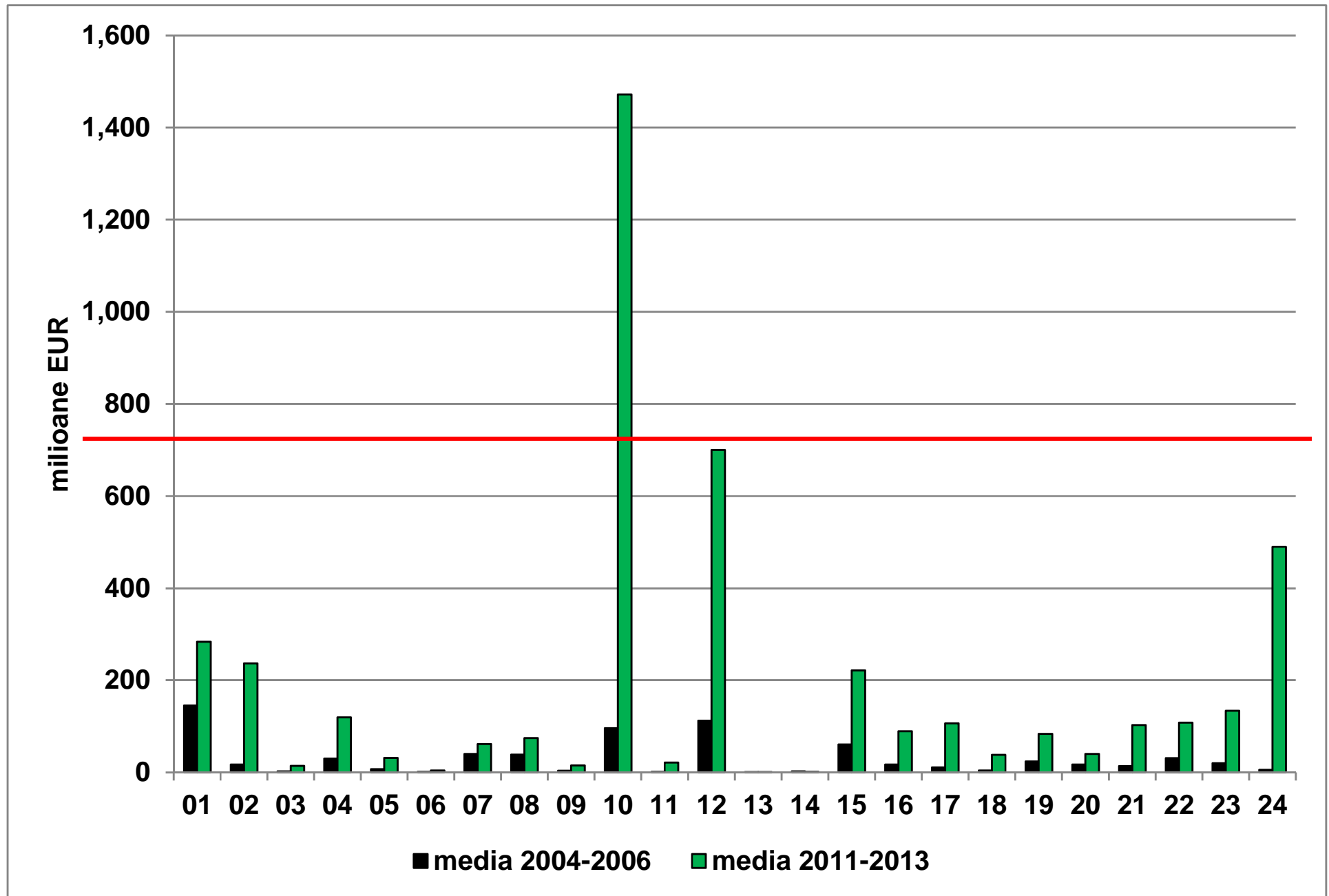
- Main pillars of exports
 - Oilseeds, cereals, live animals
 - Few processed products: cigarettes, edible oils, chicken
- Imports
 - Processed products
 - Products for which we are not self-sufficient: sugar, pork
- Positive evolutions:
 - Increased exports
 - Improvement in processing
 - Endangered by veterinary disease alerts
 - Endangered by the ripples of the Russian embargo



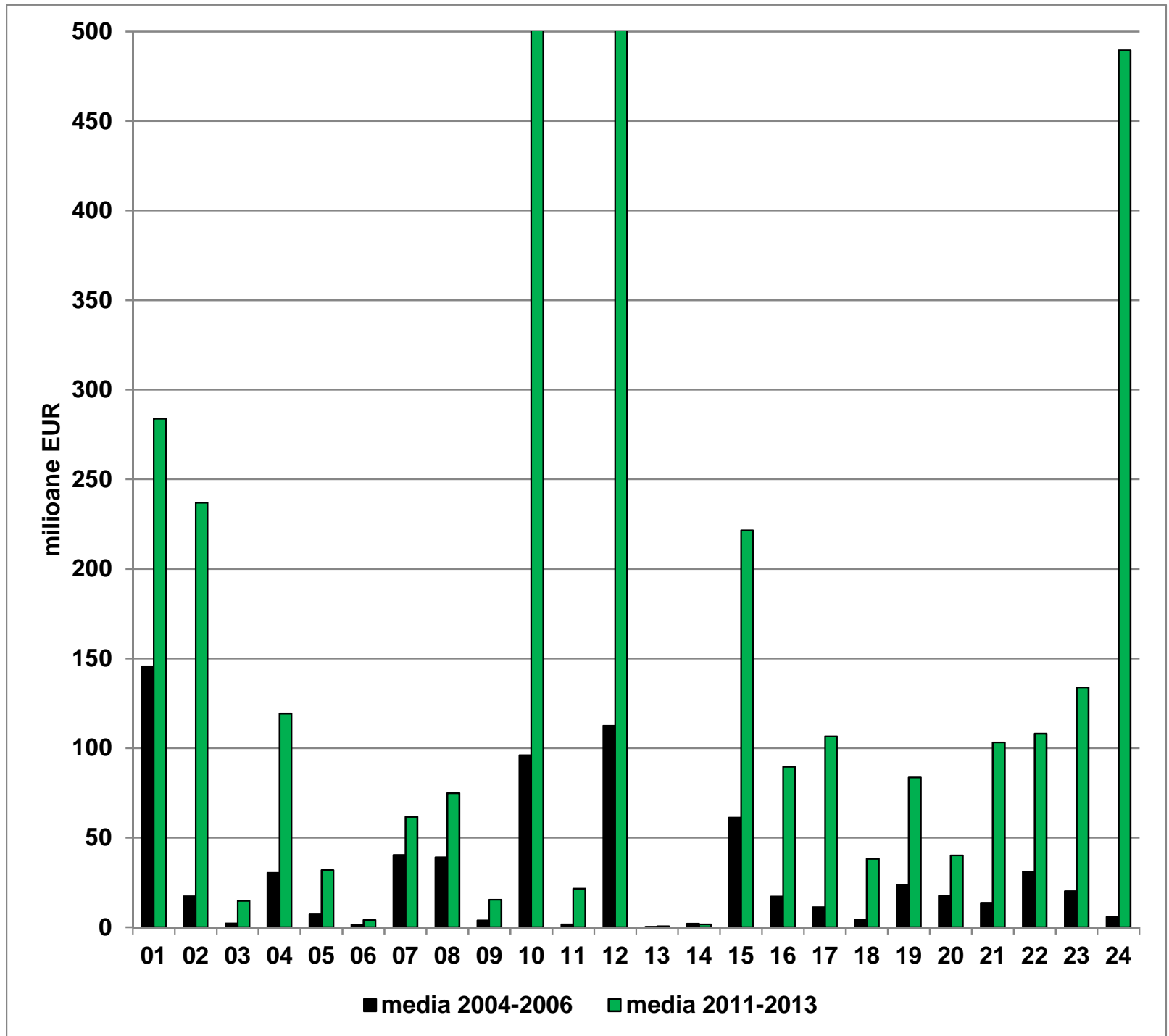
Thank you for your attention!



Evolution of agri-food exports



**Increase of
Romanian
agri-food
exports**



Evolution of agri-food imports

