Charles University

Faculty of Social Sciences
Institute of Economic Studies

MASTER'S THESIS

Assessing Economic Linkages between the EU and the Eastern Europe Neighbours

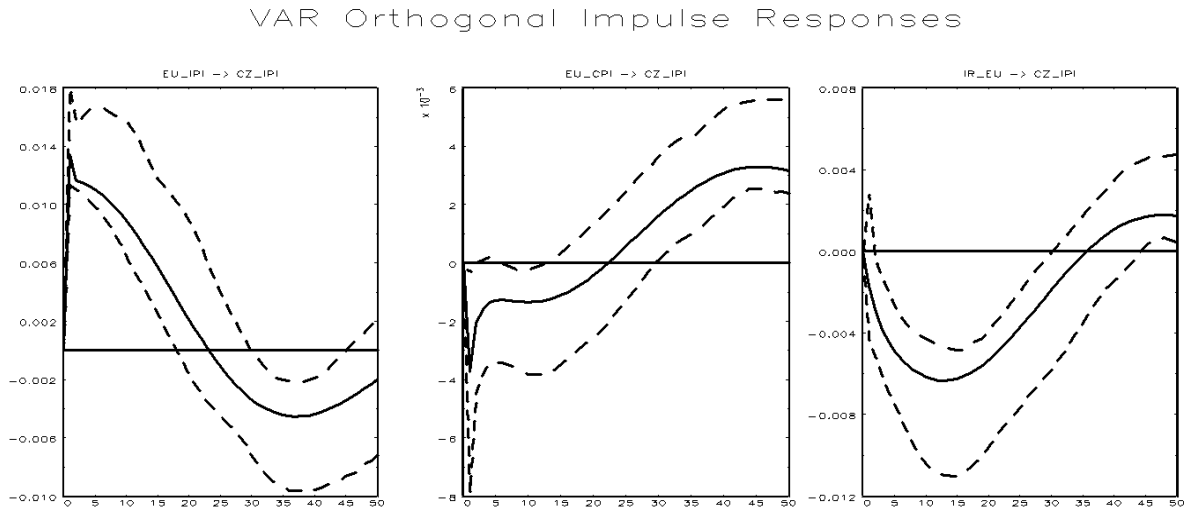Author: **Bc. DanielaMoisei**

Supervisor: **Prof. Roman Horváth, Ph.D.**

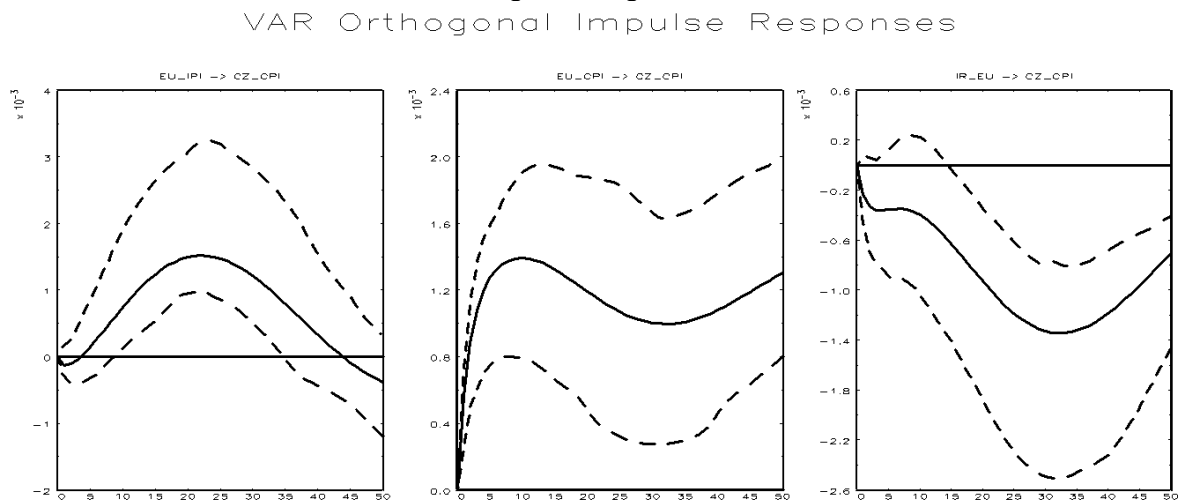Academic Year: **2017/2018**

APPENDICES

Appendix A – *Czech Republic*

Full sample model using IPI as economic indicator.

Figure A.1: The effect of the Euro area shocks on the Czech IPI, impulse responses

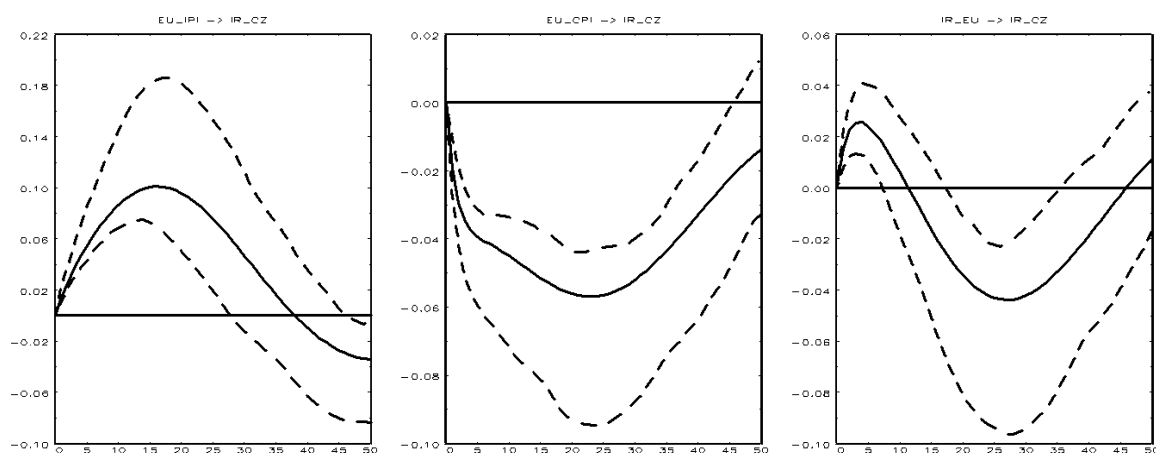*Source*: author's computations using JMulti software

Figure A.2: The effect of the external shocks on the Czech price level, impulse responses

Source: author's computations using JMulti software

Figure A.3: The effect of the foreign shocks on the Czech 3M PRIBOR,
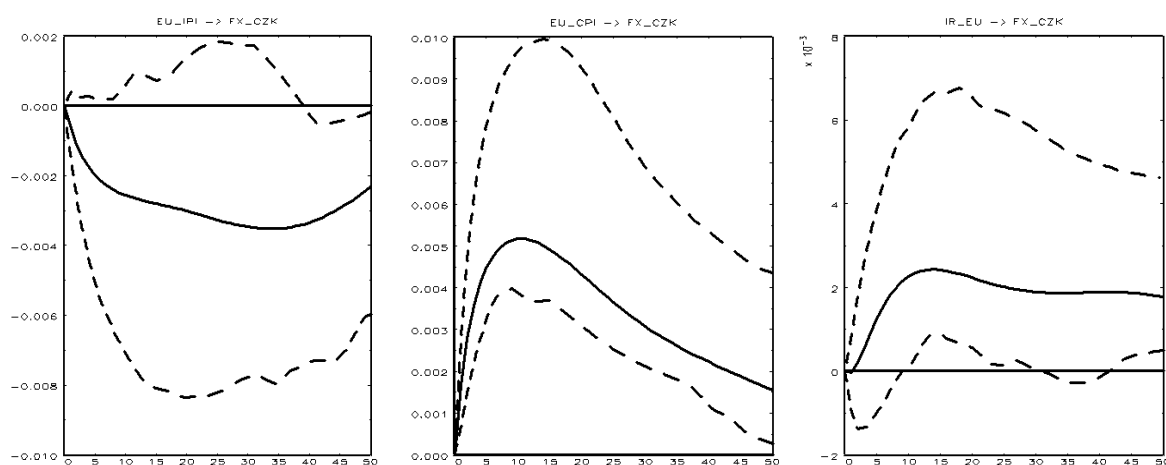***impulse responses***

VAR Orthogonal Impulse Responses

Source: author's computations using JMulti software

Figure A.4: The effect of the external shocks on the Czech FX rate, impulse responses

VAR Orthogonal Impulse Responses

Source: author's computations using JMulti software

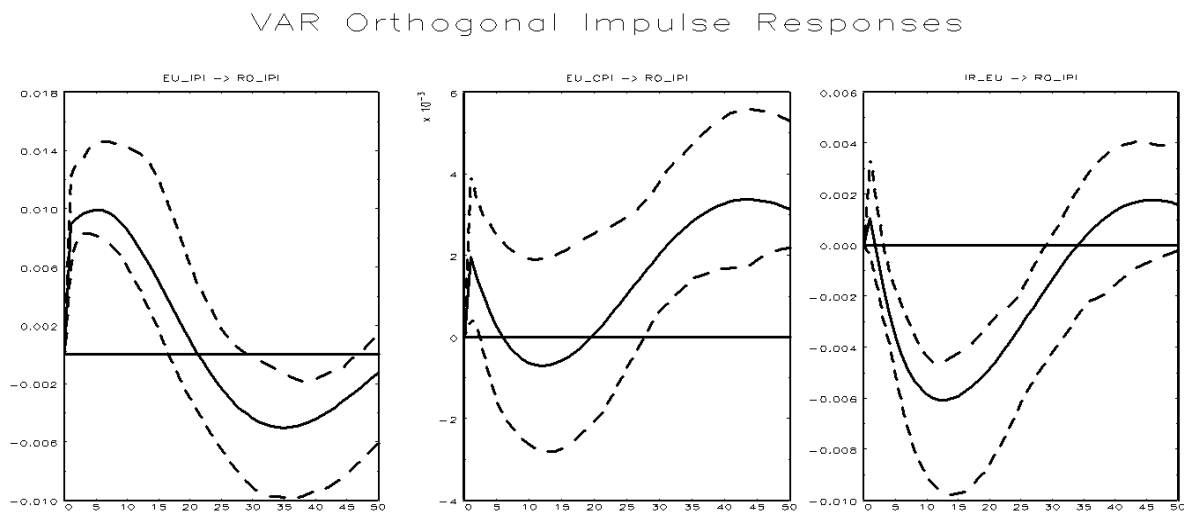**Table A.1: Variance decomposition of domestic vs. Euro area shocks in the Czech Republic**

Forecast horizon	IPI		CPI		IR		FX	
	D.S	E.S.	D.S.	E.S.	D.S.	E.S.	D.S.	E.S.
6	0.68	0.32	0.87	0.13	0.71	0.29	0.9	0.1
12	0.55	0.45	0.77	0.23	0.55	0.45	0.81	0.19
24	0.48	0.52	0.61	0.39	0.37	0.63	0.73	0.27
36	0.45	0.55	0.54	0.46	0.32	0.68	0.69	0.31
48	0.44	0.56	0.51	0.49	0.32	0.68	0.65	0.35

Source: author's computations using JMulti software

Appendix B – Romania

Full sample model using IPI as economic indicator.

Figure B.1: The effect of the Euro area shocks on the Romania's IPI, impulse responses

VAR Orthogonal Impulse Responses

Source: author's computations using JMulti software

**Figure B.2: The effect of the external shocks on the Romanian price level,
impulse responses**

VAR Orthogonal Impulse Responses

Source: author's computations using JMulti software

Figure B.3: The effect of the Euro area shocks on the Romanian 3M ROBOR,
impulse responses

VAR Orthogonal Impulse Responses

Source: author's computations using JMulti software

Figure B.4: The effect of the foreign shocks on the Romanian FX rate,
impulse responses

VAR Orthogonal Impulse Responses

Source: author's computations using JMulti software

Table B.1: Variance decomposition of domestic vs. Euro area shocks in Romania

Forecast horizon	IPI		CPI		IR		FX	
	D.S	E.S.	D.S.	E.S.	D.S.	E.S.	D.S.	E.S.
6	0.78	0.22	1	0	0.81	0.19	0.87	0.13
12	0.62	0.38	0.98	0.02	0.67	0.33	0.73	0.27
24	0.55	0.45	0.94	0.06	0.57	0.43	0.68	0.32
36	0.52	0.48	0.9	0.1	0.48	0.52	0.66	0.34
48	0.48	0.52	0.86	0.14	0.47	0.53	0.62	0.38

Source: author's computations using JMulti software
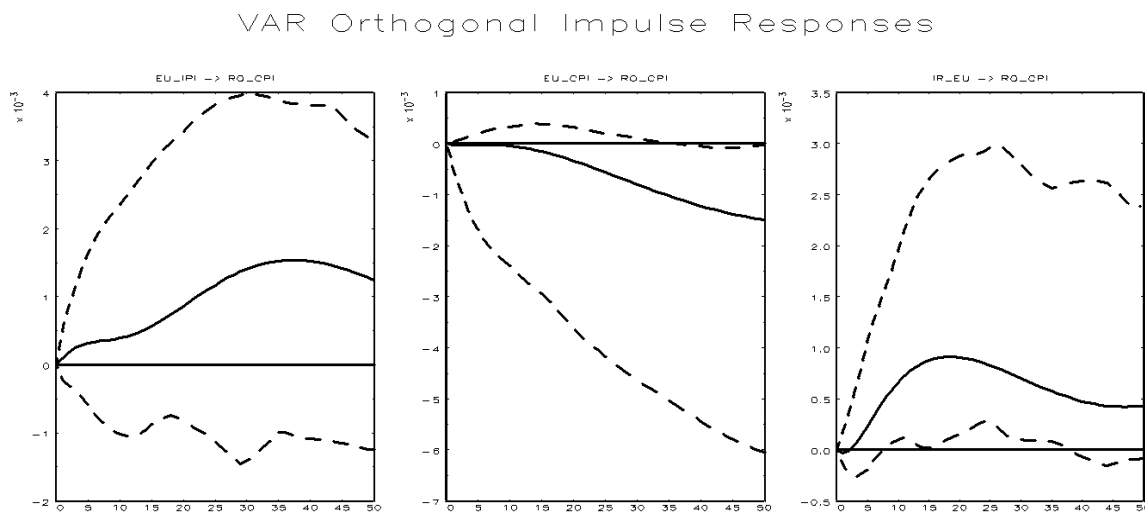
Appendix C – *Republic of Moldova*

Full sample model using IPI as economic indicator.

Figure C.1: The effect of the Euro area shocks on the Moldova's IPI, impulse responses
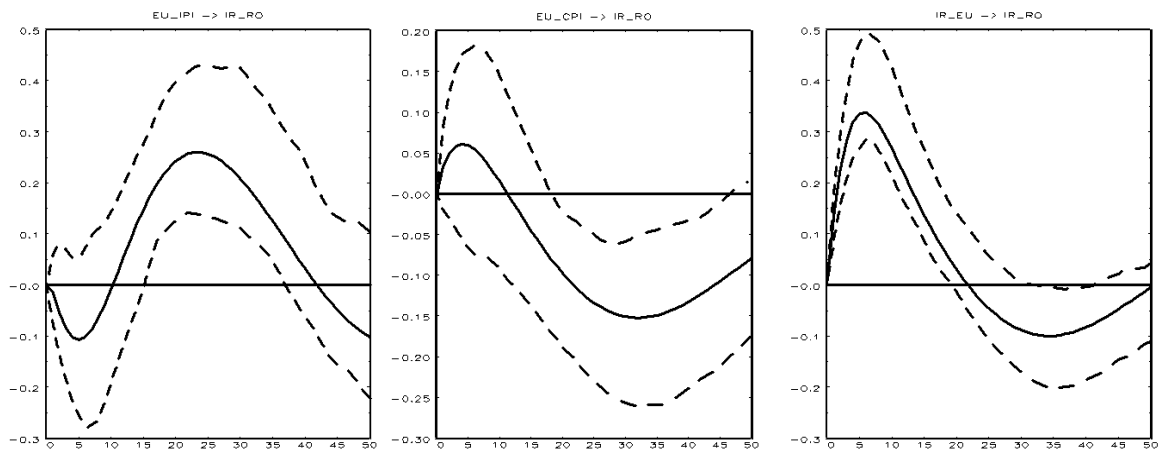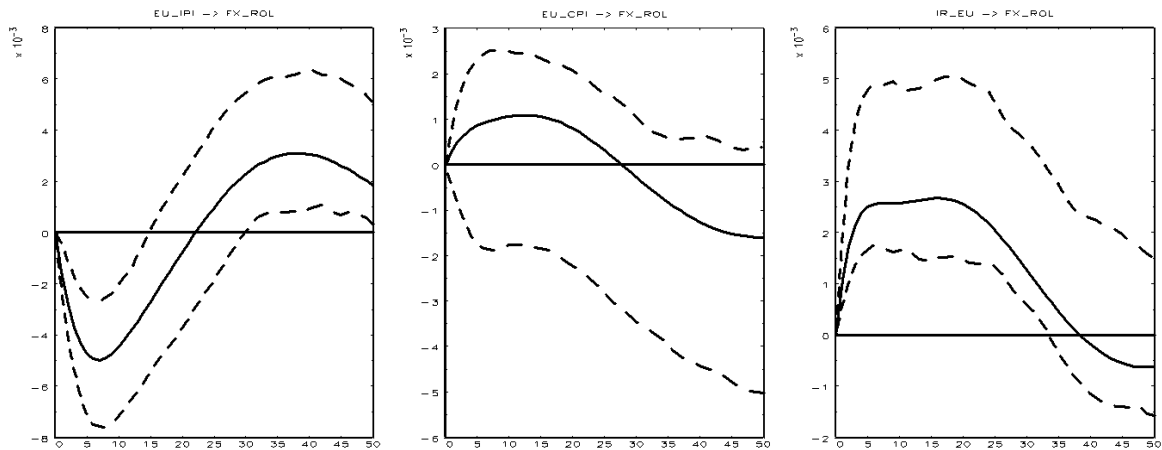

Source: author's computations using JMulti software

Figure C.2: The effect of the Euro area on the price level in Moldova, impulse responses

Source: author's computations using JMulti software

Figure C.3: The effect of the external shocks on the 3M CHIBOR, impulse responses

VAR Orthogonal Impulse Responses

Source: author's computations using JMulti software

Figure C.4: The effect of the foreign shocks on the Moldova's FX, impulse responses

VAR Orthogonal Impulse Responses

Source: author's computations using JMulti software

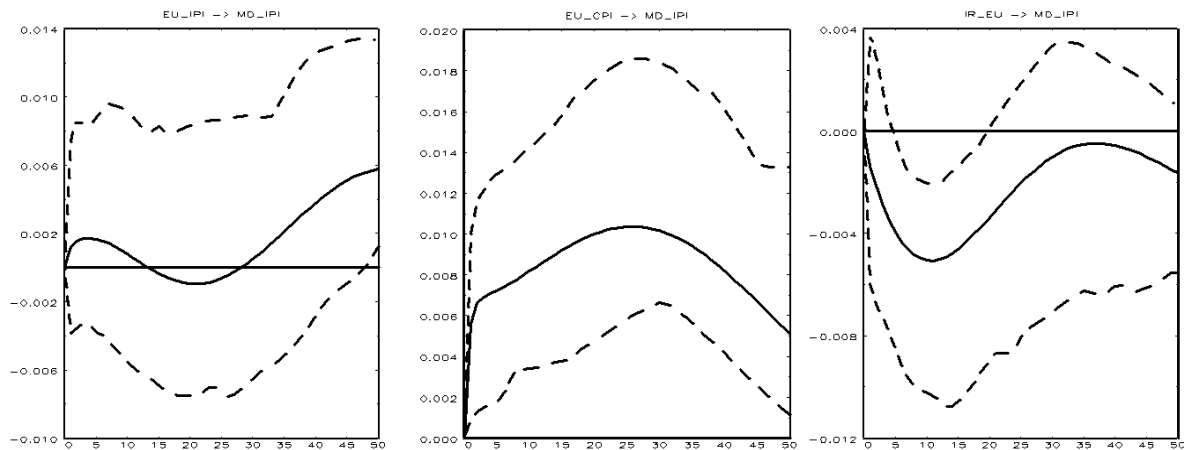**Table C.1: Variance decomposition of domestic vs. Euro area shocks in Moldova**

Forecast horizon	IPI		CPI		IR		FX	
	D.S	E.S.	D.S.	E.S.	D.S.	E.S.	D.S.	E.S.
6	0.96	0.04	0.98	0.02	0.97	0.03	0.97	0.03
12	0.91	0.09	0.93	0.07	0.9	0.1	0.9	0.1
24	0.82	0.18	0.77	0.23	0.74	0.26	0.74	0.26
36	0.75	0.25	0.61	0.39	0.66	0.34	0.62	0.38
48	0.7	0.3	0.48	0.52	0.64	0.36	0.55	0.45

Source: author's computations using JMulti software
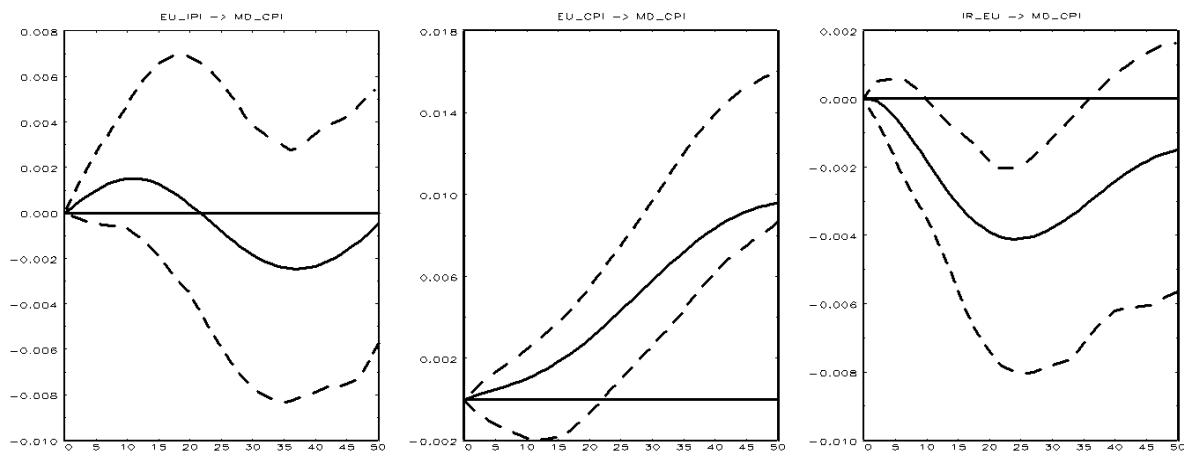
Appendix D – *Georgia*

Full sample model using IPI as economic indicator.

Figure D.1: The effect of the Euro area shocks on the Georgia's IPI, impulse responses

VAR Orthogonal Impulse Responses

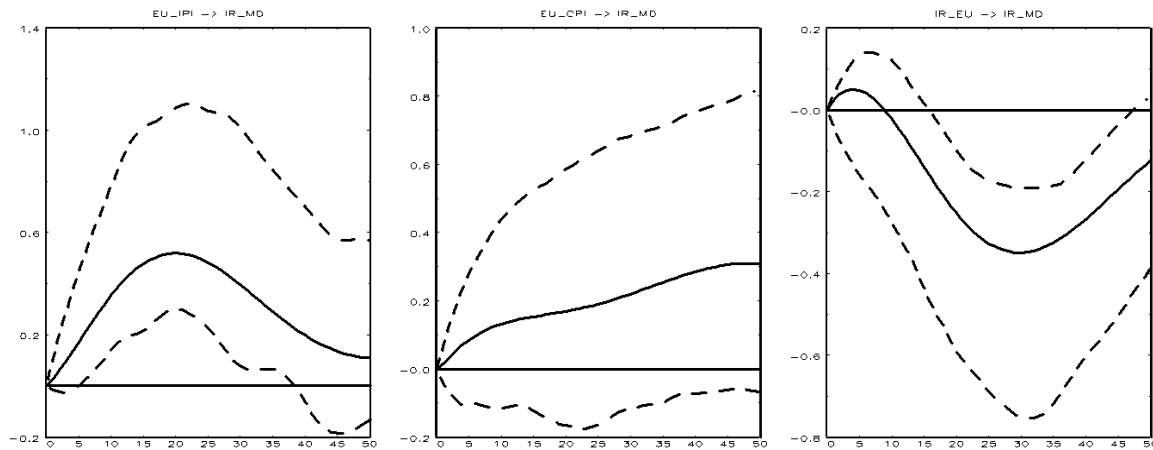

Source: author's computations using JMulti software

***Figure D.2: The effect of the external shocks on the price level in Georgia,
impulse responses***

VAR Orthogonal Impulse Responses

Source: author's computations using JMulti software

Figure D.3: The effect of the foreign shocks on the 3M TIBR, impulse responses
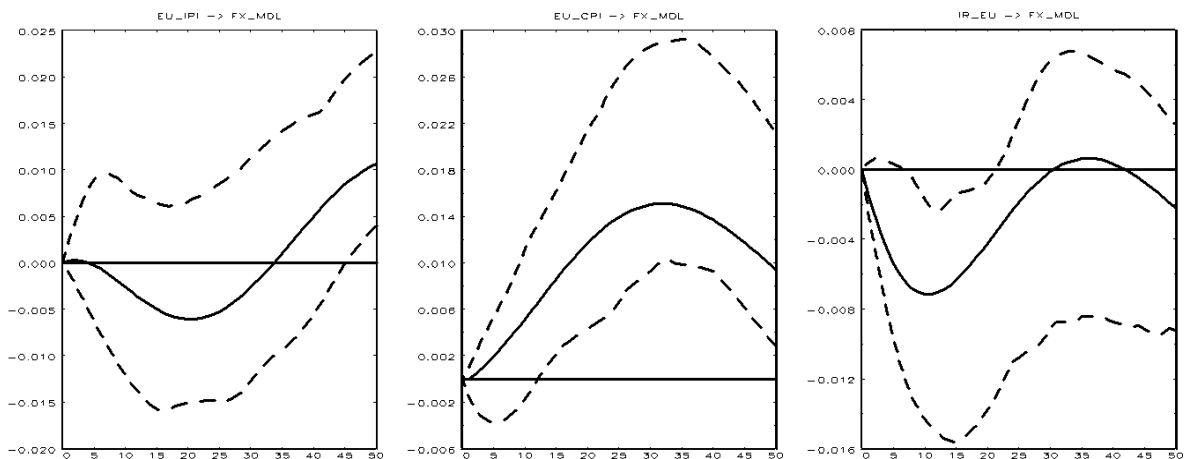
VAR Orthogonal Impulse Responses

Source: author's computations using JMulti software

Figure D.4: The effect of the external shocks on the Georgian FX rate,
impulse responses

VAR Orthogonal Impulse Responses

Source: author's computations using JMulti software

Table D.1: Variance decomposition of domestic vs. Euro area shocks in Georgia
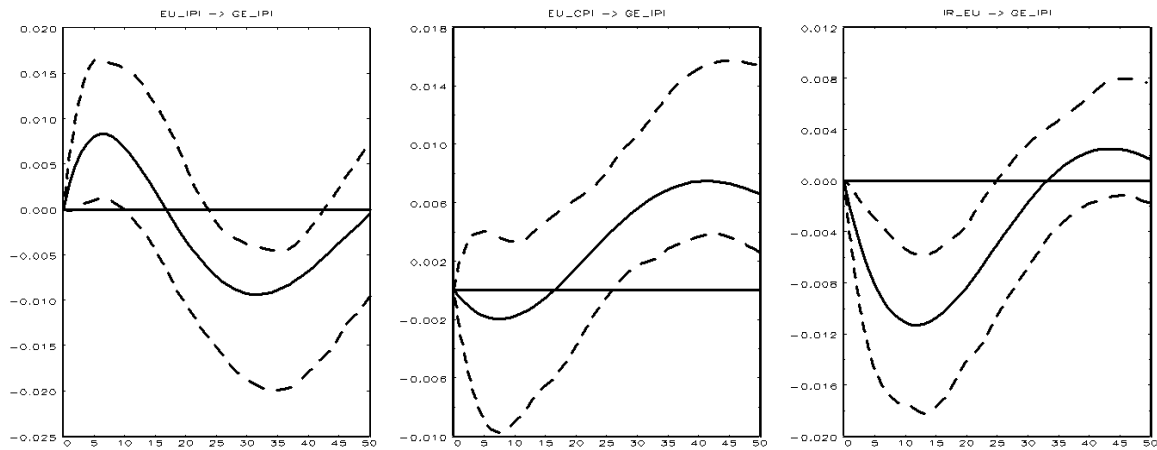
Forecast horizon	IPI		CPI		IR		FX	
	D.S.	E.S.	D.S.	E.S.	D.S.	E.S.	D.S.	E.S.
6	0.91	0.09	0.91	0.09	0.96	0.04	0.97	0.03
12	0.76	0.24	0.78	0.22	0.86	0.14	0.94	0.06
24	0.63	0.37	0.69	0.31	0.62	0.38	0.91	0.09
36	0.54	0.46	0.66	0.34	0.48	0.52	0.83	0.17
48	0.47	0.53	0.64	.36	0.45	0.55	0.79	0.21

Source: author's computations using JMulti software
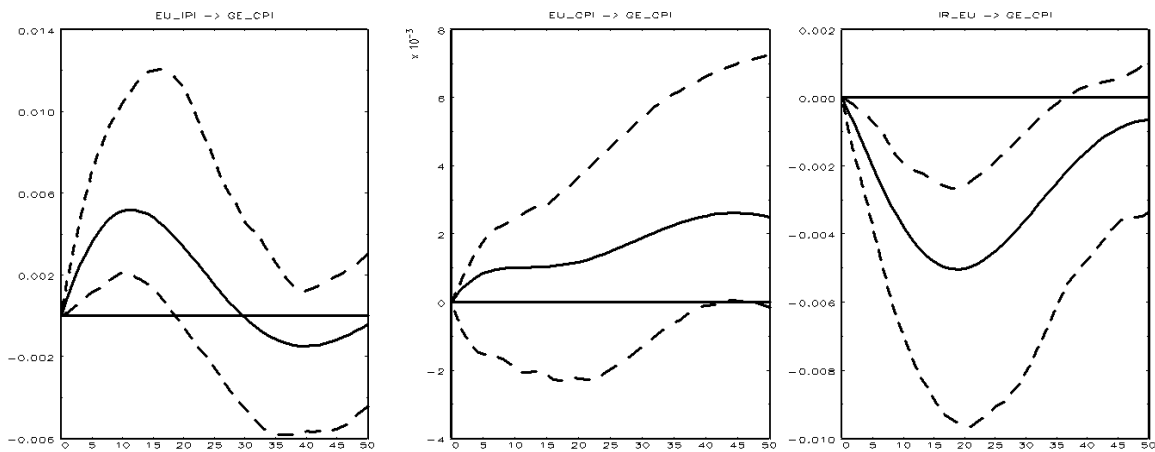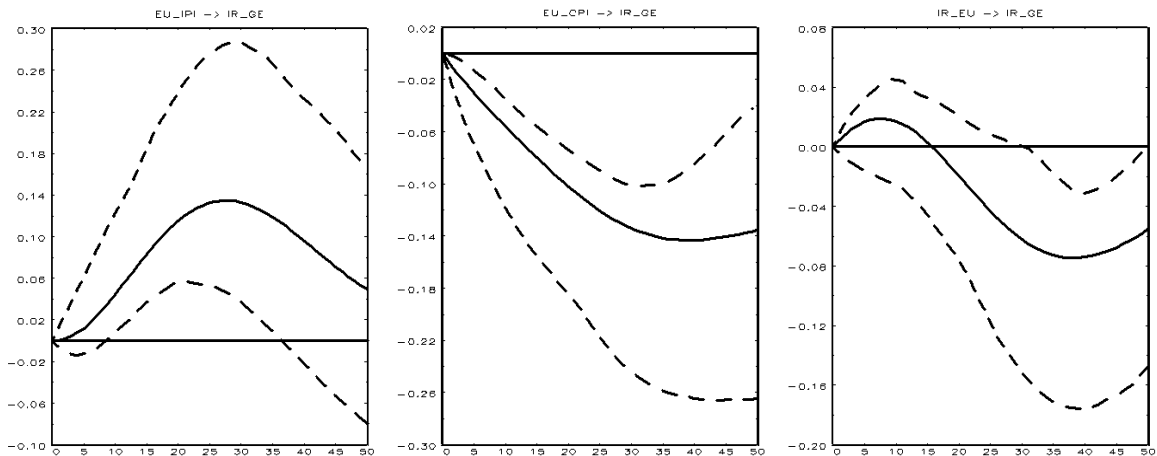
Appendix E – *Ukraine*

Full sample model using IPI as economic indicator.

Figure E.1: The effect of the Euro area shocks on the Ukrainian IPI, impulse responses

VAR Orthogonal Impulse Responses

Source: author's computations using JMulti software

Figure E.2: The effect of the Euro area shocks on the price level in Ukraine, impulse responses

VAR Orthogonal Impulse Responses
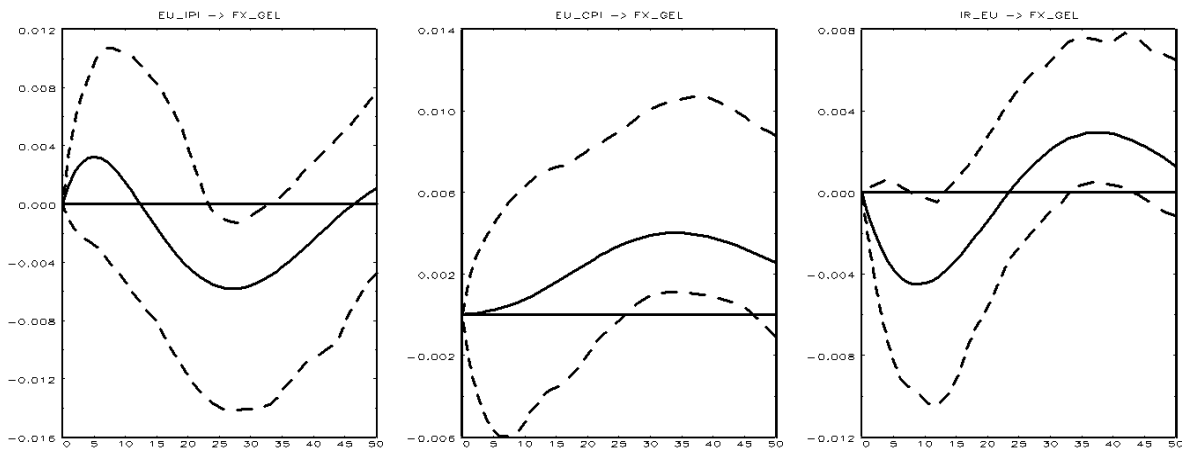

Source: author's computations using JMulti software

Figure E.3: The effect of the foreign shocks on the 3M interbank rate in Ukraine, impulse responses

VAR Orthogonal Impulse Responses

Source: author's computations using JMulti software

Figure E.4: The effect of the external shocks on the Ukrainian FX rate, impulse responses

VAR Orthogonal Impulse Responses

Source: author's computations using JMulti software

Table E.1: Variance decomposition of domestic vs. Euro area shocks in Ukraine

Forecast horizon	IPI		CPI		IR		FX	
	D.S.	E.S.	D.S.	E.S.	D.S.	E.S.	D.S.	E.S.
6	0.96	0.04	0.92	0.08	0.95	0.05	0.95	0.05
12	0.92	0.08	0.83	0.17	0.86	0.14	0.89	0.11
24	0.78	0.22	0.68	0.32	0.68	0.32	0.76	0.24
36	0.62	0.38	0.57	0.43	0.59	0.41	0.63	0.37
48	0.56	0.44	0.51	0.49	0.58	0.42	0.56	0.44

Source: author's computations using JMulti software

Appendix F

Table F.1: Trade between the EU and Moldova by product group, 2016

Standard International Trade Classification (Rev.3) product group	EU-28 exports to and imports from Moldova					
	Exports			Imports		
	Value (million EUR)	(% of EU-28 exports)	Rank	Value (million EUR)	(% of EU-28 imports)	Rank
0: Food and live animals	175.8	8.7	6	301.3	22.9	2
1: Beverages and tobacco	30.6	1.5	8	43.8	3.3	6
2: Crude materials (inedible) except fuels	49.8	2.5	7	121.5	9.2	5
3: Mineral fuels, lubricants and related materials	316.7	15.7	3	3.1	0.2	9
4: Animal and vegetable oils, fats and waxes	2.9	0.1	10	36.8	2.8	7
5: Chemicals and related products n.e.s.	287.5	14.2	4	17.6	1.3	8
6: Manufactured goods	411.5	20.4	2	175.0	13.3	4
7: Machinery and transport equipment	549.9	27.2	1	238.1	18.1	3
8: Miscellaneous manufactured articles	181.5	9.0	5	379.1	28.8	1
9: Commodities and transactions not classified elsewhere	9.2	0.5	9	1.4	0.1	10
Total	2 021.9	100.0	–	1 317.7	100.0	–

Note: as reported by EU Member States.
Source: Eurostat (online data code: DS-018995)

Table F.2: Trade between the EU and Georgia by product group, 2016

Standard International Trade Classification (Rev.3) product group	EU-28 exports to and imports from Georgia					
	Exports			Imports		
	Value (million EUR)	(% of EU-28 exports)	Rank	Value (million EUR)	(% of EU-28 imports)	Rank
0: Food and live animals	146.2	7.5	6	144.7	26.7	1
1: Beverages and tobacco	48.7	2.5	7	34.1	6.3	7
2: Crude materials (inedible) except fuels	22.6	1.2	8	143.5	26.5	2
3: Mineral fuels, lubricants and related materials	354.2	18.1	3	34.4	6.4	6
4: Animal and vegetable oils, fats and waxes	18.5	0.9	9	1.9	0.4	10
5: Chemicals and related products n.e.s.	360.8	18.4	2	50.7	9.3	4
6: Manufactured goods	171.0	8.7	5	82.3	15.2	3
7: Machinery and transport equipment	582.6	29.7	1	4.8	0.9	8
8: Miscellaneous manufactured articles	236.1	12.0	4	35.7	6.6	5
9: Commodities and transactions not classified elsewhere	16.7	0.8	10	4.5	0.8	9
Total	1 961.4	100.0	–	542.3	100.0	–

Note: as reported by EU Member States.
Source: Eurostat (online data code: DS-018995)

Table F.3: Trade between the EU and Moldova by product group, 2016

Standard International Trade Classification (Rev.3) product group	EU-28 exports to and imports from Ukraine					
	Exports			Imports		
	Value (million EUR)	(% of EU-28 exports)	Rank	Value (million EUR)	(% of EU-28 imports)	Rank
0: Food and live animals	1 060.6	6.4	5	2 347.2	17.8	2
1: Beverages and tobacco	232.9	1.4	8	18.5	0.1	10
2: Crude materials (inedible) except fuels	470.2	2.9	7	2 287.0	17.4	3
3: Mineral fuels, lubricants and related materials	1 034.4	6.3	6	544.9	4.1	7
4: Animal and vegetable oils, fats and waxes	37.4	0.2	10	1 112.0	8.5	5
5: Chemicals and related products n.e.s.	3 438.7	20.8	2	396.5	3.0	8
6: Manufactured goods	2 448.3	14.8	3	3 631.9	27.6	1
7: Machinery and transport equipment	5 994.1	36.3	1	1 586.4	12.1	4
8: Miscellaneous manufactured articles	1 525.2	9.2	4	790.2	6.0	6
9: Commodities and transactions not classified elsewhere	161.2	1.0	9	29.4	0.2	9
Total	16 497.0	100.0	–	13 159.2	100.0	–

Note: as reported by EU Member States.
Source: Eurostat (online data code: DS-018995)

Table F.4: Tariff rate quotas applied by EU in framework of DCFTAs

Description of broad category	Ukraine	Georgia	Moldova
Beef meat	YES	NO	NO
Pork meat	YES	NO	NO
Sheep meat	YES	NO	NO
Poultry meat and poultry meat preparations	YES	NO	NO
Milk cream, condensed milk and yogurts	YES	NO	NO
Butter and dairy spreads	YES	NO	NO
Eggs and albumins	YES	NO	NO
Honey	YES	NO	NO
Garlic	YES	YES	YES
Sugars	YES	NO	NO
Sugar syrups	YES	NO	NO
Common wheat, flours and pellets	YES	NO	NO
Barley, flour and pellets	YES	NO	NO
Oats	YES	NO	NO
Barley groats and meal, cereal grains	YES	NO	NO
Malt and wheat gluten	YES	NO	NO
Starches	YES	NO	NO
Mushrooms	YES	NO	NO
Processed tomatoes	YES	NO	NO
Grape juice	YES	NO	YES
Apple juice	YES	NO	NO
Fermented – milk processed products	YES	NO	NO
Processed butter products	YES	NO	NO
Sweet corn	YES	NO	NO
Cigars and Cigarettes	YES	NO	NO

Source: author's compilation from Association Agreements EU-Georgia, EU-Moldova, EU-Ukraine