



Geopolitical climate of Black Sea region

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World instability

WEF in Davos:

- ▶ 83% of respondents do not see the possibility to decrease probability of conflicts between nuclear powers
- ▶ 79% of respondents do not see the possibility to decrease probability of local conflicts

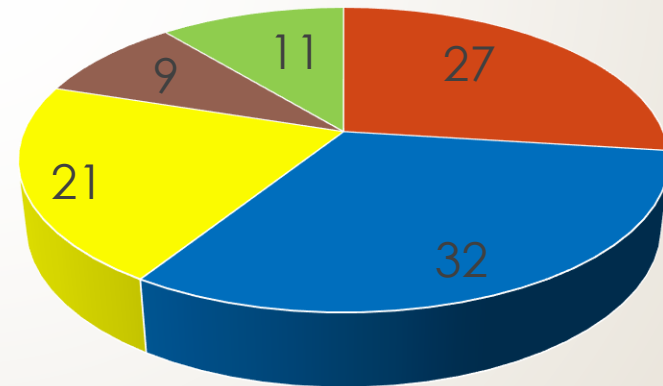
Possible conflicts

Region	Participants
North Korea	North Korea, USA, Japan, China
South China	USA, China, Taiwan, Vietnam, Filipinos, Malaysia, Brunei
India-Pakistan	India, Pakistan, USA, China, Russia, Iran
India-China	India, China, Pakistan, Iran, Afghanistan, Russia
Middle East	Saudi Arabia, Syria, Iran, Yemen, Iraq, Lebanon, Israel
Baltics	Russia, Estonia, Latvia, Lithuania, NATO
Eastern Europe	Russia, Ukraine, Moldova, Romania, Hungary, Slovakia, Turkey

Why conflicts develop?

Geopolitical instability is correlated with energy transition stages:

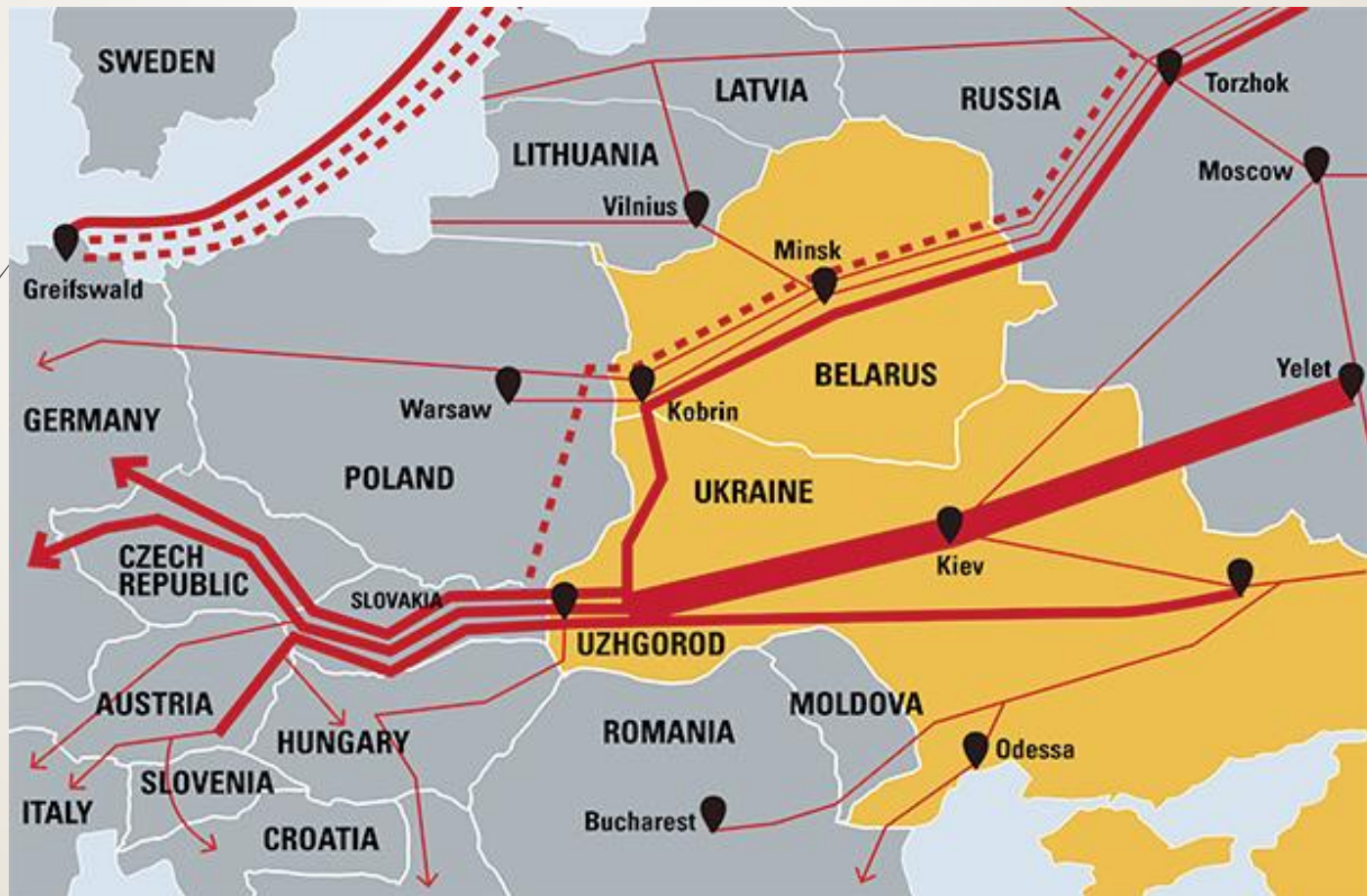
- 1) Coal stage
- 2) Oil stage
- 3) Gas stage
- 4) Renewable stage



■ Coal ■ Oil ■ Gas ■ Electricity ■ Biomass

Russian influence

Stable trade routes create trade and political alliances



Russian gas pipelines

Main direction	Name	Capacity	Start
Russia-Germany	Nord Stream	55	2012
Russia-Germany	Nord Stream – 2 (under construction)	55	?
Russia-Belarus-Poland-Germany	Yamal–Europe	34,7	1999
Russia-Ukraine-Poland	Soyuz	26	1980
Russia-Ukraine-Eastern Europe	Urengoy–Pomary–Uzhgorod, Progress and other	104	1984
Russia-Turkey	Blue Stream	16	2003
Russia-Turkey	TurkStream (under construction)	32	?
Russia-Georgia* (occupied part)	Dzuarikau–Tskhinvali	0,25	2009 (2006 started)

Gas dependence

GEO/TIME	2007	2012	2013	2014	2015	2016
European Union	32,4%	28,3%	32,6%	29,8%	30,1%	35,8%
Bulgaria	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
Czech Republic	78,2%	100,0%	100,0%	90,4%	99,8%	100,0%
Germany	43,4%	36,9%	40,9%	41,4%	42,6%	60,3%
Estonia	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
Greece	77,5%	56,0%	66,6%	58,5%	61,6%	64,7%
Latvia	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
Hungary	75,3%	98,0%	95,0%	95,0%	95,0%	95,0%
Poland	67,7%	79,8%	77,1%	75,7%	72,5%	74,3%
Romania	91,3%	85,6%	91,7%	89,2%	90,1%	98,9%
Slovakia	99,2%	100,0%	100,0%	100,0%	100,0%	98,8%
Finland	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
Macedonia	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
Serbia	100,0%	54,5%	61,4%	97,8%	99,6%	100,0%
Turkey	63,5%	57,7%	57,9%	28,8%	55,3%	52,9%
Bosnia and Herzegovina	NA	NA	NA	100,0%	100,0%	100,0%
Moldova	NA	100,0%	100,0%	100,0%	99,9%	99,9%
Ukraine	0,0%	99,8%	92,4%	74,2%	37,3%	0,0%

Oil dependence

Country	2010	2011	2012	2013	2014	2015	2016
European Union	25,9%	25,9%	25,5%	26,2%	25,6%	24,7%	25,9%
Bulgaria	76,7%	78,1%	79,9%	78,8%	76,7%	66,2%	63,0%
Czech Republic	47,5%	40,9%	45,4%	43,0%	38,9%	36,7%	34,1%
Germany	28,1%	30,2%	29,8%	27,8%	28,7%	29,6%	33,2%
Greece	33,2%	24,3%	32,2%	31,9%	29,0%	26,2%	20,8%
Hungary	81,2%	85,0%	81,1%	77,5%	69,5%	60,0%	54,9%
Poland	78,6%	77,7%	84,4%	84,6%	81,8%	77,9%	73,3%
Romania	33,4%	19,6%	22,7%	35,4%	34,5%	42,3%	41,6%
Slovakia	80,4%	82,5%	81,2%	81,3%	80,4%	78,2%	76,9%
Serbia	55,1%	48,5%	43,2%	37,6%	57,1%	56,6%	44,4%
Turkey	30,2%	15,2%	15,9%	15,6%	13,6%	17,6%	18,3%
Moldova	11,5%	19,6%	18,4%	16,1%	9,0%	11,6%	19,4%
Ukraine	55,3%	51,5%	26,5%	34,4%	21,8%	23,4%	22,1%

Solid fuels dependence

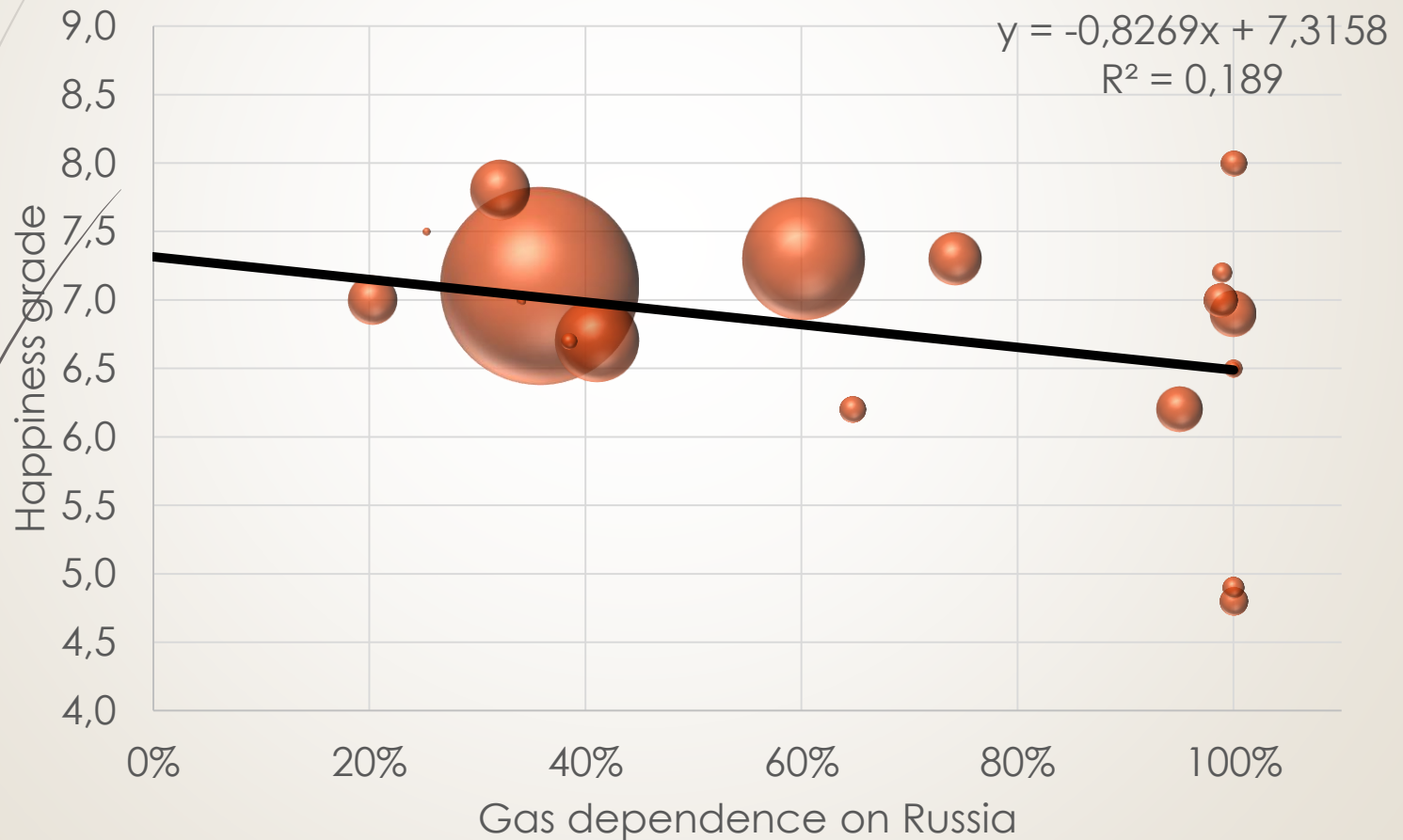
GEO/TIME	2010	2011	2012	2013	2014	2015	2016
European Union	22,8%	22,9%	23,0%	25,7%	25,9%	25,6%	26,4%
Bulgaria	25,3%	28,4%	29,3%	49,5%	47,4%	77,6%	76,1%
Czech Republic	10,5%	6,3%	4,6%	1,8%	1,3%	2,4%	3,2%
Germany	22,3%	19,4%	20,4%	22,2%	24,6%	26,7%	28,0%
Greece	61,0%	16,6%	11,4%	16,1%	49,7%	64,2%	97,1%
Latvia	78,7%	53,2%	74,7%	94,4%	92,9%	100,0%	94,0%
Lithuania	81,7%	81,7%	76,7%	79,1%	79,7%	79,6%	74,8%
Hungary	13,7%	5,7%	3,2%	3,2%	2,6%	2,4%	2,0%
Poland	59,4%	61,4%	63,0%	60,1%	60,5%	57,4%	60,0%
Romania	26,3%	22,2%	16,2%	20,9%	21,0%	29,7%	35,1%
Slovakia	22,1%	22,0%	23,7%	22,9%	21,1%	27,8%	23,0%
Finland	59,7%	70,5%	61,7%	67,9%	66,5%	57,1%	60,6%
Turkey	44,4%	34,7%	33,3%	32,0%	28,7%	32,8%	33,8%
Moldova	50,8%	50,7%	8,6%	0,8%	43,9%	97,0%	86,9%
Ukraine	78,5%	69,9%	68,0%	69,5%	67,6%	51,8%	64,6%

Market monopolization

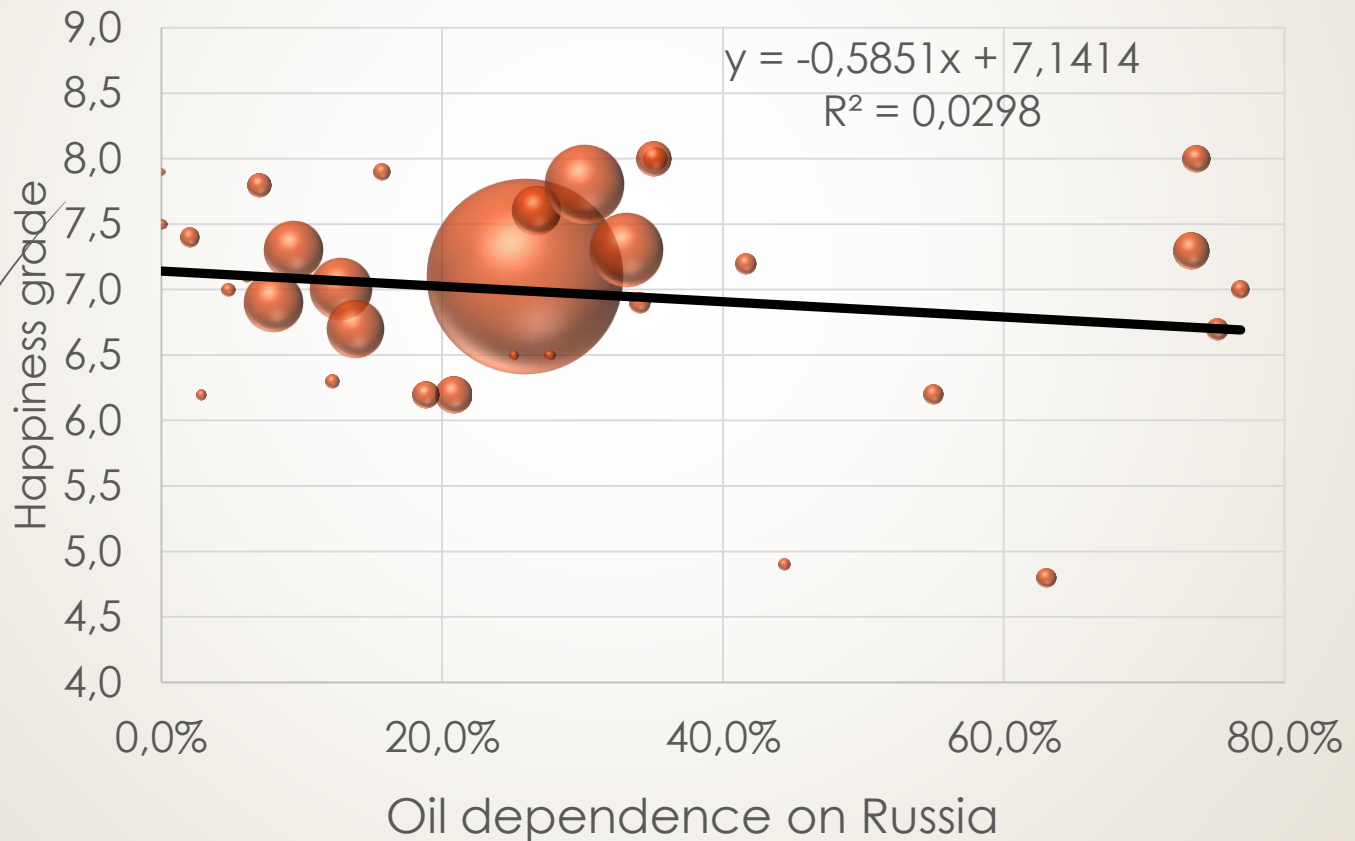
- Profitability decrease of renewable sources of energy
- Impact on energy and financial security

	RES in electricity production, %				Solar and wind energy in electricity production, %			
Year	1990	2000	2010	2016	1990	2000	2010	2016
World	19.74	18.79	19.91	24.38	0.35	0.56	2.10	5.66

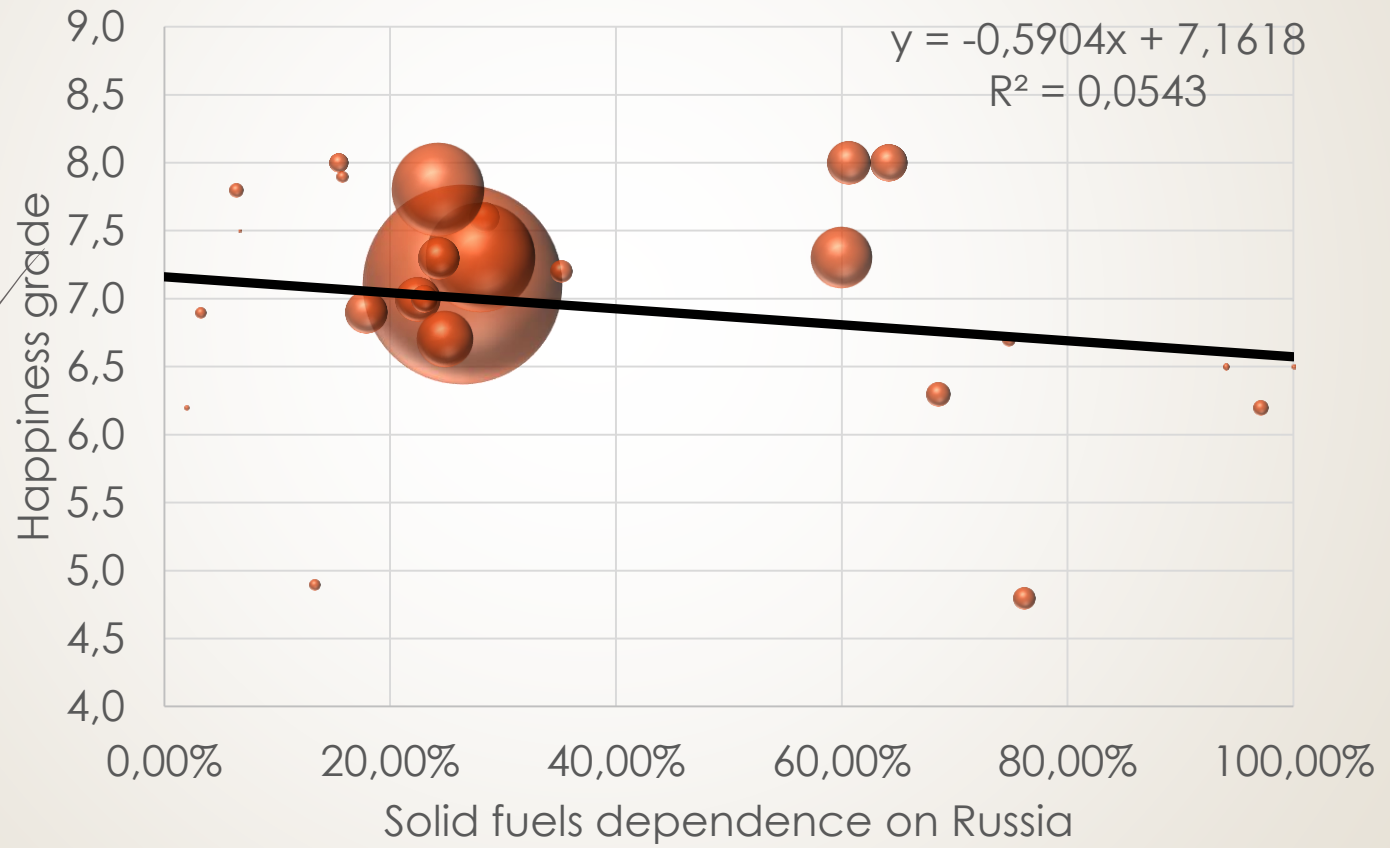
Gas dependence vs Happiness



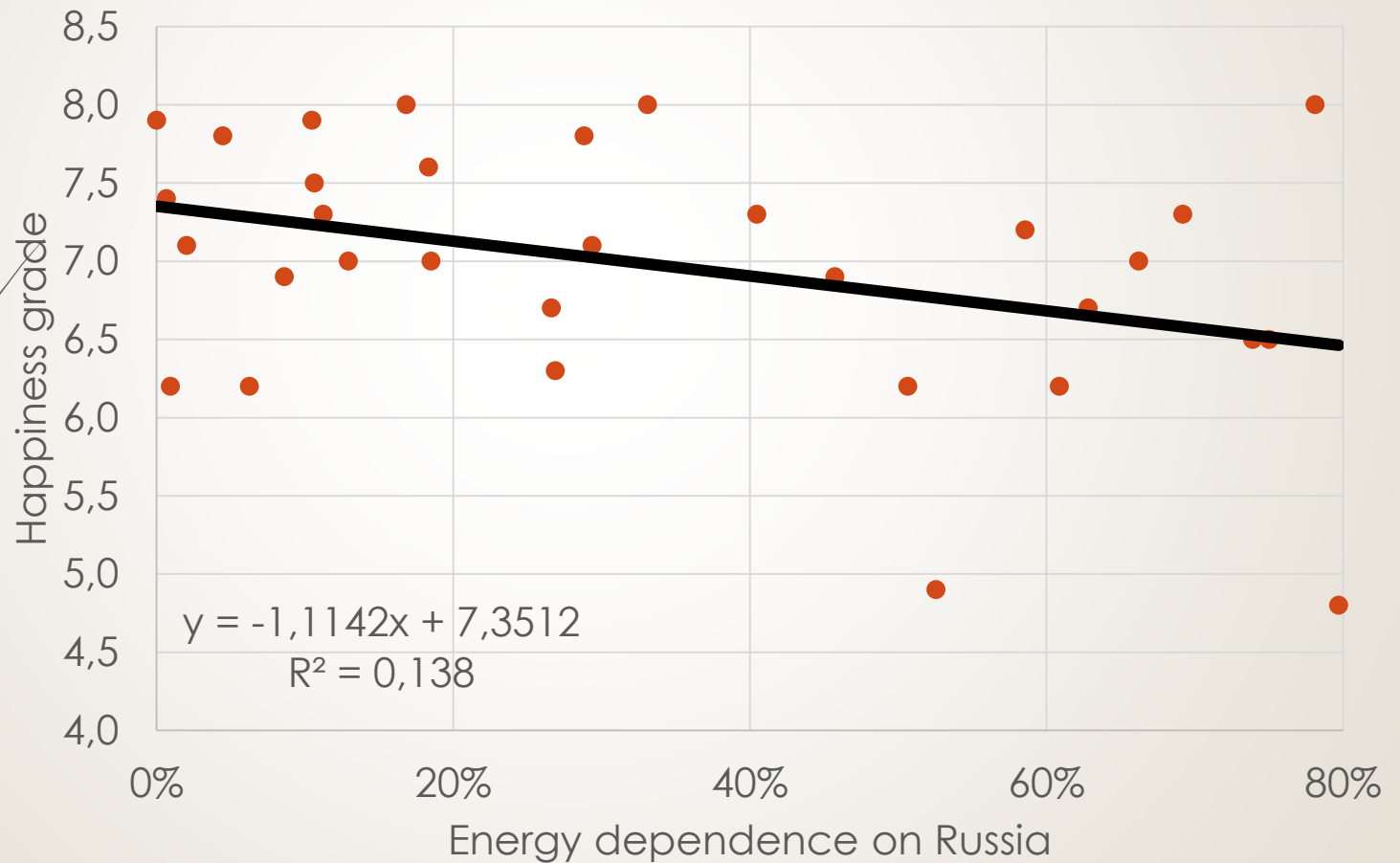
Oil dependence vs Happiness



Solid fuels dependence vs Happiness



Energy dependence vs Happiness





Income inequality

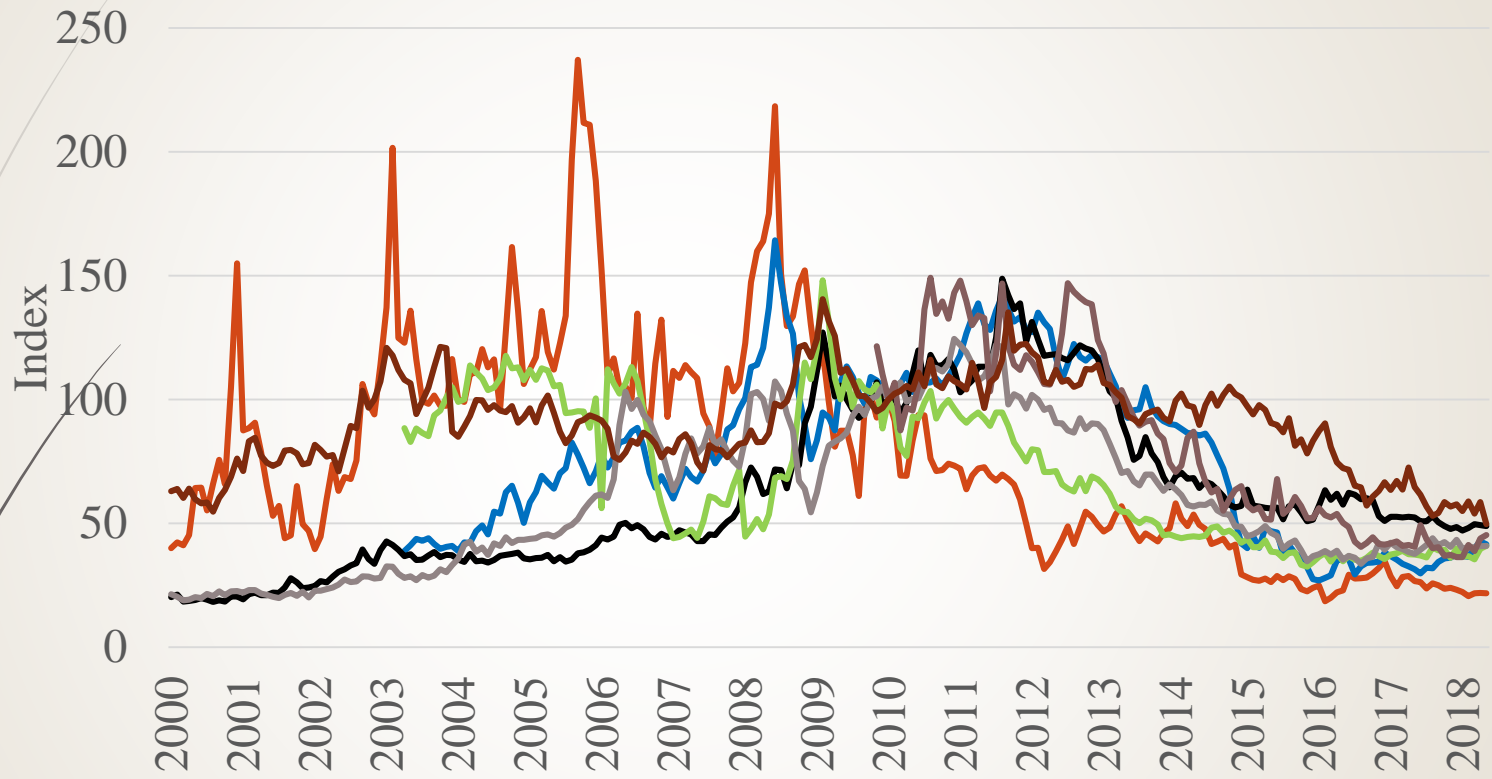
Country	Average Gini index
Bulgaria	33.52
Czech Republic	25.09
Germany	28.78
Greece	33.81
Hungary	26.92
Poland	31.50
Romania	34.28
Slovakia	25.21
Turkey	41.91
Ukraine	25.00*
Russia	37.72
Moldova	26.35*



Russian interfere

- Czech Republic (the President)
 - Hungary (the Prime-Minister)
 - Germany (former Chancellor)
 - Italy (regional level)
 - Serbia
 - Bulgaria
 - Moldova (the President)
 - France
 - Turkey
- 

Technology vs energy



- Natural Gas
- Brent Oil
- Gold
- Alluminium
- Cooper
- Grain
- Live cattle

Geopolitical forecast

- Creation and supporting a safety belt around Russia
- Stronger media and political intervention using loyal citizens
- Information confrontation
- Further attempts to destabilize Middle East to keep high energy prices





Policy recommendations

- ▶ Countries should pay much more attention to the energy sector as the driving force of all future and current conflicts.
- ▶ The security of BSR highly depends on European decisions, therefore new gas pipelines should not shift energy balance in Eastern European countries.
- ▶ It's recommended to create independent European Energy security center, which can decrease the energy dependence on one country.
- ▶ Countries should stimulate development of RES as it is a guarantee of their security.
- ▶ Political attention should be payed to Turkey, which can provide great instability in case of convergence with Russia and unrest inside country.
- ▶ Relations between the EU and Turkey will have a significant impact on BSR security.
- ▶ Military bases with USA presence must be placed in Eastern Europe to avoid hybrid wars in the nearest future.



Future research questions

- If EU countries are ready to new arms race?
- If EU and BSR countries can resist cyber activity of Russia?
- If BSR countries can demonstrate real unity taking into account their energy dependence?
- If Turkey can remain a united country?
- How to boost economic growth in BSR to stimulate RES?



Thank you for your attention!

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