

MIAU – HU ISSN 141921652 – Special Edition 2020 Spring - Editorials: The papers in MIAU Nr.261 (2020.V) are products of a new education frame system “QuILT” (<https://miau.my-x.hu/mediawiki/index.php/QuILT>). The goals of QuILT are supporting/conducting Students on the way of KNUTH, who said (1992): Knowledge is, what can be transformed into source code, each other human activity is a kind of artistic performance. It also means we need to leave the world of the magic of words step by step. A solid evidence that we all are capable of going this way is: creating publications behind which the human expertise and the robotized knowledge (like online engines: <https://miau.my-x.hu/myxfree/coco/index.html> --- offering context free = quasi General-Problem-Solving force fields) can be integrated in case of a rational and relevant decision making scenario. The cyborg effects make possible to face the classic naïve and/or intuitive approaches and parallel the optimized approximations. This way can be realized without deep competences about mathematics, Excel (spreadsheets), statistics, etc. The new (inter/trans/multi-disciplinary) way just expects from us to be able and willing to co-operate with the best moments of the history – it means, with the already prepared robotized elements in order to build something creative one! Parallel, in the second QuILT-semester - https://miau.my-x.hu/mediawiki/index.php/QuILT2_parts - there are not only classic publication possibilities like robotizing the investigative journalism – there are further specific tasks too like 2DM-games, gamification in general, thinking experiments, etc.

Europe between 1960 and 1990

or what could derive a robot-historian about the second half of the cold war based on big-data?

Abstract: I am going to show how history changed during the cold war with numbers instead of words as we used to. I want to show how the numbers can speak about a piece of European history. The numbers generated by AI can speak about force fields like “Lebensraum”-driven, fortune/asset/wealth-protective motivations behind increasing military expenditures.

Keywords: history, numbers, big-data, new approaching, high school

Introduction

In my publication, I would like to show and make an understanding of how the European state's data were changing between 1960 and 1990. I was dealing with these countries: Austria, Belgium, Bulgaria, Denmark, Finland, France, Greece, Hungary, Ireland, Italy, Netherlands, Poland, Portugal, Spain, and Sweden. I have chosen these countries because I found only enough and believable information to work. Countries should be categorized: western: Austria, Belgium, France, Ireland; eastern: Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Slovakia, Slovenia; northern: Denmark, Estonia, Finland, Latvia, Lithuania, Luxembourg, Netherlands, Sweden; southern: Greece, Cyprus, Italy, Portugal, and Spain.

Objectives

I am dealing with democracy, history, emissions, male, female, birth, and actual political situation. My aim is to prove with the use of numbers that the numbers say to us the same history that we know.

Targeted groups

Exactly I mark the high school student because they are in front of further studies and I hope it will be helpful for them to prepare for the school-leaving exam and with it, they can get a simpler picture of an important piece of the history. So, I made this publication to the secondary school's teachers and students.

Benefits

During the writing part of the publication, I earned useful information on how I can earn data on different modes and learn how to calculate missing information.

Motivations

I would like to approach the history in that way to use only numbers without words. I think it is an unusual mode to write about the past.

Literature

At least one single publication about the cold war with declarations for the here and now involved countries.

Data assets

URL of the raw data: <https://clio-infra.eu/Countries/Austria.html#countries>

URL of the xls: https://miau.my-x.hu/miau/quilt/2020/coldwar_military_expenditure_project/

Armed Conflicts (International):

	1960	1990	Differences	Ranks
Austria	0	0	0	1
Belgium	1	0	1	13
Bulgaria	0	0	0	1
Denmark	0	0	0	1
Finland	0	0	0	1
France	0	0	0	1
Greece	0	0	0	1
Hungary	0	0	0	1
Ireland	0	0	0	1
Italy	0	0	0	1
Netherlands	1	0	1	13
Poland	1	0	1	13
Portugal	0	0	0	1
Spain	0	0	0	1
Sweden	0	0	0	1

We can say that this period was the peaceful side of European history, only Belgium had an armed conflict as we know it was the Congo Crisis. Therefore, it can be expected, that the decreasing of the number of conflicts will lead to decreasing the military expenditures from 1990-1960.

Biodiversity (definition here: <https://clio-infra.eu/Indicators/Biodiversitynaturalness.html>)

	1960	1990	Differences	Ranks
Austria	0,8	0,8	0,036277026	7
Belgium	0,7	0,7	0,017911319	9
Bulgaria	0,7	0,7	-0,000857792	13
Denmark	0,5	0,5	0,068200061	2
Finland	0,9	0,9	0,007370292	12
France	0,6	0,7	0,045041713	5
Greece	0,7	0,7	-0,025712542	15
Hungary	1,6	1,6	0,047628585	4
Ireland	0,7	0,7	0,042069395	6
Italy	0,6	0,6	0,135334415	1
Netherlands	0,6	0,7	0,015647656	10
Poland	1,2	1,2	0,048692299	3
Portugal	0,7	0,7	-0,015907392	14
Spain	0,6	0,6	0,02715137	8
Sweden	0,9	0,9	0,011973349	11

The per cents are the same, so the territory of the states is not changed but these numbers depend on how the military expenditure changed, therefore we see the differences column. Therefore, it can be expected, that the **decreasing** of the number of biodiversity will lead to **decreasing** the military expenditures from 1990-1960 (c.f. fortune-protective behaviour).

Book Titles per Capita

	1960	1990	Differences	Ranks
Austria	463,8	774,6	0,67032463	11
Belgium	509,1	989,4	0,943639677	10
Bulgaria	428,2	383,6	-0,104141709	14
Denmark	1020,7	2604,6	1,551658702	8
Finland	562,8	2036,1	2,61781918	3
France	254,9	717,2	1,814316573	4
Greece	189,1	459,1	1,42763249	9
Hungary	1564,1	2407,1	0,538979814	12
Ireland	81,2	383,6	3,723630663	1
Italy	161,6	441,8	1,734116055	5
Netherlands	1118,6	3041,3	1,71889424	6
Poland	493,8	537,4	0,088330829	13
Portugal	735,4	619,8	-0,157256792	15
Spain	198,6	920,9	3,637330183	2
Sweden	966,6	2483,0	1,568857645	7

As the numbers were growing the military expenditures were decreasing. The military expenditures spreadsheet is on the page 13. Therefore, it can be expected, that the **decreasing** of the number of book titles/capita will lead to **decreasing** the military expenditures from 1990-1960 (c.f. more freedom to be worth protecting it).

Cattle per Capita

	1960	1990	Differences	Ranks
Austria	0,3	0,3	0,014611857	7
Belgium	0,3	0,3	0,166115015	1
Bulgaria	0,2	0,2	0,094415662	5
Denmark	0,7	0,4	-0,412580932	14
Finland	0,4	0,3	-0,369527706	12
France	0,4	0,4	-0,06956706	8
Greece	0,1	0,1	-0,503122954	15
Hungary	0,6	0,5	-0,21922916	11
Ireland	1,5	1,7	0,115002672	4
Italy	0,2	0,2	-0,191696083	10
Netherlands	0,3	0,3	0,079144868	6
Poland	0,6	0,5	-0,101240789	9
Portugal	0,1	0,1	0,152029058	2
Spain	0,1	0,1	0,123424015	3
Sweden	0,3	0,2	-0,398934138	13

As the military expenditure is decreased as the cattle per capita in general decreased. Therefore, it can be expected, that the **decreasing** of the number of cattle/capita will lead to **decreasing** the military expenditures from 1990-1960 (c.f. more assets more need to protect them – or even less asset = less war).

CO₂ emissions per capita

	1960	1990	Differences	Ranks
Austria	1,2	2,2	0,815969051	8
Belgium	2,7	2,7	0,004087443	14
Bulgaria	0,8	2,3	2,017510725	5
Denmark	1,8	2,6	0,490288081	9
Finland	0,9	2,8	1,976246633	6
France	1,6	1,7	0,077063777	13
Greece	0,3	1,9	5,303438762	1
Hungary	3,7	4,7	0,277232301	12
Ireland	1,1	2,4	1,209636895	7
Italy	0,6	1,9	2,145744487	4
Netherlands	1,7	2,5	0,461166576	10
Poland	3,7	5,0	0,354086784	11
Portugal	0,3	1,2	3,57140341	2
Spain	0,4	1,5	2,39755528	3
Sweden	1,8	1,6	-0,121034784	15

As the companies working with making fume. The carbon dioxide is the by-product of oil recovery. Therefore, it can be expected, that the **increasing** of the number of CO₂-emission/capita will lead to **decreasing** the military expenditures from 1990-1960 (c.f. better environment = better Lebensraum).

Cropland per Capita

	1960	1990	Differences	Ranks
Austria	0,2	0,2	-0,212196929	6
Belgium	0,1	0,1	-0,310508639	12
Bulgaria	0,6	0,5	-0,19735768	5
Denmark	0,6	0,5	-0,186576421	4
Finland	0,6	0,5	-0,244436871	8
France	0,5	0,3	-0,279626176	9
Greece	0,4	0,4	-0,120627841	3
Hungary	1,7	1,5	-0,094291845	2
Ireland	0,6	0,3	-0,471551152	15
Italy	0,3	0,2	-0,333711347	14
Netherlands	0,1	0,1	-0,320068083	13
Poland	1,1	0,8	-0,291704379	10
Portugal	0,3	0,3	-0,086672115	1
Spain	0,7	0,5	-0,23697403	7
Sweden	0,5	0,3	-0,300003554	11

The spreadsheet shows, during the Cold War that cropland is decreased or increased. For example, it causes the cropland to become a construction site. Therefore, it can be expected, that the **decreasing** of the number of cropland/capita will lead to **decreasing** the military expenditures from 1990-1960 (less Lebensraum = less war).

Educational Inequality, Gini Coefficient

	1960	1990	Differences	Ranks
Austria	21,4	7,4	-0,653216887	15
Belgium	19,9	17,3	-0,133270876	7
Bulgaria	36,2	21,8	-0,397946707	12
Denmark	14,9	8,8	-0,412320662	13
Finland	12,6	16,3	0,300634014	1
France	19,1	18,9	-0,013432423	3
Greece	29,0	25,2	-0,130295089	6
Hungary	62,3	38,4	-0,383623026	10
Ireland	16,3	17,0	0,041886747	2
Italy	24,3	20,5	-0,156705208	8
Netherlands	16,9	16,0	-0,05354177	4
Poland	117,3	59,5	-0,492866835	14
Portugal	45,9	27,8	-0,395368477	11
Spain	22,8	20,1	-0,119361621	5
Sweden	16,7	12,2	-0,265806052	9

These numbers tell us, from 1960 to 1990, the inequality of the education sector on average is decreased. Except for Finland and Ireland when it is increased. Therefore, it can be expected, that the **decreasing** of the number of education problems will lead to **decreasing** the military expenditures from 1990-1960 (c.f. smarter people fight less).

Female life expectancy at Birth

	1960	1990	Differences	Ranks
Austria	71,9	78,9	0,096940195	6
Belgium	72,6	79,3	0,092235683	7
Bulgaria	70,9	74,8	0,054412179	13
Denmark	74,0	77,7	0,050547371	15
Finland	72,4	78,9	0,089653267	8
France	73,6	81,0	0,099837001	5
Greece	70,4	79,5	0,129582268	2
Hungary	210,5	221,3	0,051446487	14
Ireland	72,0	77,7	0,079594388	9
Italy	71,7	80,3	0,119559152	4
Netherlands	75,3	80,1	0,063338202	12
Poland	141,3	150,6	0,065836047	11
Portugal	66,9	77,7	0,161261396	1
Spain	71,7	80,5	0,123656664	3
Sweden	74,9	80,4	0,07386136	10

The female life expectancy at birth is improved. The average female life expectancy is 76. Therefore, it can be expected, that the **increasing** of the number of female life expectancy will lead to **decreasing** the military expenditures from 1990-1960 (c.f. longer life = smarter people = less war).

GDP per Capita

	1960	1990	Differences	Ranks
Austria	6519,0	16894,6	1,591590735	7
Belgium	6952,0	17197,0	1,473673763	8
Bulgaria	2912,0	5596,9	0,922012363	13
Denmark	8812,0	18452,4	1,094011575	10
Finland	6230,0	16866,4	1,707284109	6
France	7398,0	17647,0	1,385375777	9
Greece	3146,0	10015,4	2,183534647	3
Hungary	10947,0	19376,4	0,770021924	14
Ireland	4282,0	11817,7	1,759864549	5
Italy	5456,2	16313,1	1,989839064	4
Netherlands	8287,0	17262,1	1,083030047	11
Poland	6430,0	10226,8	0,59048367	15
Portugal	2956,0	10826,4	2,662516915	2
Spain	3072,0	12054,8	2,924091797	1
Sweden	8687,5	17608,9	1,026923041	12

It can show us the well-being changed during the Cold War. The biggest development was in Spain during the Francisco Franco dictatorship. Therefore, it can be expected, that the increasing of the number of GDP/capita will lead to decreasing the military expenditures from 1990-1960 (c.f. more money less war).

Latent Democracy Variable

	1960	1990	Differences	Ranks
Austria	1,2	1,1	-0,125610553	7
Belgium	1,2	1,1	-0,058544835	3
Bulgaria	-0,8	0,8	-1,95012036	12
Denmark	1,2	1,1	-0,105138174	5
Finland	1,3	1,1	-0,130947115	10
France	0,9	1,0	0,18137458	2
Greece	0,4	1,0	1,778256451	1
Hungary	-2,4	3,3	-2,385458483	15
Ireland	1,2	1,0	-0,129896284	9
Italy	1,2	1,1	-0,087831004	4
Netherlands	1,3	1,1	-0,127548839	8
Poland	-1,6	1,0	-1,616234173	11
Portugal	-0,9	1,0	-2,149436275	13
Spain	-0,8	1,1	-2,37216217	14
Sweden	1,2	1,1	-0,118649493	6

The chart consists of the data of how democracy is changed during the examined period. Clearly show us how the states' forms diversified. Therefore, it can be expected, that the decreasing of the number of latent democracy will lead to decreasing the military expenditures from 1990-1960 (c.f. more latent transparency more war).

Male life Expectancy at Birth

	1960	1990	Differences	Ranks
Austria	65,4	72,3	0,106132436	3
Belgium	66,7	72,7	0,089941538	6
Bulgaria	67,5	68,1	0,009041055	14
Denmark	70,4	72,0	0,022430437	12
Finland	65,4	70,9	0,08470948	8
France	67,0	72,7	0,085036551	7
Greece	67,2	74,5	0,109456441	2
Hungary	197,8	195,5	- 0,011680825	15
Ireland	68,5	72,1	0,053300234	9
Italy	66,7	73,6	0,104094795	4
Netherlands	71,5	73,8	0,033170049	11
Poland	129,6	132,5	0,022373091	13
Portugal	61,3	70,6	0,152741514	1
Spain	66,7	73,3	0,100060006	5
Sweden	71,2	74,8	0,050259722	10

The highest male life expectancy is Hungary. Therefore, it can be expected, that the **increasing** of the number of male life expectancy will lead to **decreasing** the military expenditures from 1990-1960 (cf. longer life = smarter people = less war – see the same in cs of the female life expectancy).

Openness of Executive Recruitment (XROPEN)

	1960	1990	Differences	Ranks
Austria	4,0	4,0	0	1
Belgium	4,0	4,0	0	1
Bulgaria	4,0	4,0	0	1
Denmark	4,0	4,0	0	1
Finland	4,0	4,0	0	1
France	4,0	4,0	0	1
Greece	4,0	4,0	0	1
Hungary	12,0	12,0	0	1
Ireland	4,0	4,0	0	1
Italy	4,0	4,0	0	1
Netherlands	4,0	4,0	0	1
Poland	8,0	8,0	0	1
Portugal	4,0	4,0	0	1
Spain	0,0	4,0	0	1
Sweden	4,0	4,0	0	1

It shows how society is feudal. As we see almost the same in both years. Therefore, it can be expected, that the **decreasing** of the number of openness of executive recruitment will lead to **decreasing** the military expenditures from 1990-1960 (c.f. more transparency = less feudalism = more war – remark: the data did not change between 1960 and 1990).

Pasture per Capita

	1960	1990	Differences	Ranks
Austria	0,3	0,3	-0,146791982	9
Belgium	0,1	0,1	-0,019978414	6
Bulgaria	0,1	0,2	0,851276934	1
Denmark	0,1	0,0	-0,381371762	15
Finland	0,0	0,0	0,195113178	2
France	0,3	0,2	-0,168249753	10
Greece	0,6	0,6	-0,007712565	4
Hungary	0,4	0,4	-0,194920682	13
Ireland	1,4	1,6	0,131412909	3
Italy	0,1	0,1	-0,062554486	8
Netherlands	0,1	0,1	-0,182170197	11
Poland	0,3	0,3	-0,057834686	7
Portugal	0,1	0,1	-0,015477761	5
Spain	0,4	0,3	-0,200494835	14
Sweden	0,1	0,1	-0,185198041	12

Pasture importance is getting less important in the 20th century. Therefore, it can be expected, that the **decreasing** of the number of pasture/capita will lead to **decreasing** the military expenditures from 1990-1960 (c.f. more Lebensraum = more war – see also cropland/capita).

Pigs per Capita

	1960	1990	Differences	Ranks
Austria	0,4	0,5	0,160579753	13
Belgium	0,2	0,7	3,00738154	1
Bulgaria	0,3	0,5	0,713005569	6
Denmark	1,5	1,8	0,180049035	12
Finland	0,1	0,3	1,478901543	3
France	0,2	0,2	0,228364094	10
Greece	0,1	0,1	0,318668848	9
Hungary	1,6	2,2	0,377622711	8
Ireland	0,3	0,3	0,052464971	14
Italy	0,1	0,2	0,937793712	5
Netherlands	0,3	0,9	2,561180644	2
Poland	0,9	1,0	0,199896439	11
Portugal	0,2	0,3	0,529625475	7
Spain	0,2	0,4	1,21402493	4
Sweden	0,3	0,3	0,036314365	15

Pigs are very important if we researching about catering. Therefore, it can be expected, that the **increasing** of the number of pigs/capita will lead to **decreasing** the military expenditures from 1990-1960 (c.f. more asset = less war – see also cattle/capita, etc.).

Political Competition

	1960	1990	Differences	Ranks
Austria	55,8	58,5	0,048387097	10
Belgium	53,5	70,0	0,308411215	4
Bulgaria	0,0	47,3	0	11
Denmark	57,9	62,6	0,081174439	9
Finland	70,0	64,0	-0,085714286	15
France	50,8	65,6	0,290354331	5
Greece	58,0	53,1	-0,084482759	14
Hungary	3,0	210,0	69	1
Ireland	51,7	55,9	0,081237911	8
Italy	57,6	65,9	0,144097222	6
Netherlands	68,4	64,7	-0,054093567	13
Poland	3,2	88,2	26,5625	2
Portugal	23,8	49,0	1,056722689	3
Spain	0,0	60,4	0	11
Sweden	52,2	56,8	0,088122605	7

Absolutely, we examine that the time passed the actual political system was getting changed in Europe. Finally, democracy won against the dictatorship and communism. Therefore, it can be expected, that the **increasing** of the number of political competition will lead to **decreasing** the military expenditures from 1990-1960 (c.f. more transparency = less war).

Political Participation

	1960	1990	Differences	Ranks
Austria	62,2	61,0	-0,020565553	13
Belgium	58,6	62,2	0,061955965	10
Bulgaria	68,1	68,1	0,000881575	11
Denmark	53,1	63,0	0,18700565	5
Finland	44,5	60,5	0,359955006	3
France	22,8	48,9	1,142982456	2
Greece	55,0	66,5	0,208030523	4
Hungary	197,2	143,5	-0,272174045	14
Ireland	42,5	47,1	0,110221385	9
Italy	60,3	67,1	0,112972794	8
Netherlands	52,9	59,9	0,132803632	6
Poland	118,9	82,2	-0,308610831	15
Portugal	11,4	57,4	4,028021016	1
Spain	0,0	52,2	0	12
Sweden	57,1	63,7	0,115216249	7

We cannot say, all inhabitants took part in the politic. But the big differences are in the socialist countries. Therefore, it can be expected, that the **decreasing** of the number of political participation will lead to **decreasing** the military expenditures from 1990-1960 (less transparency = less war).

Polyarchy

	1960	1990	Differences	Ranks
Austria	34,7	35,7	0,026778002	13
Belgium	31,4	43,6	0,389154705	5
Bulgaria	0,0	32,2	0	14
Denmark	30,7	39,5	0,283669486	6
Finland	31,1	38,7	0,243251928	8
France	11,6	32,0	1,76597582	4
Greece	31,9	35,3	0,105889724	11
Hungary	2,0	100,5	49,74242424	1
Ireland	22,0	26,4	0,200455581	10
Italy	34,7	44,2	0,273329493	7
Netherlands	36,2	38,7	0,071349558	12
Poland	1,3	54,0	39,93939394	2
Portugal	2,7	28,1	9,334558824	3
Spain	0,0	31,6	0	14
Sweden	29,8	36,2	0,213686682	9

The polyarchy is a government form when the power is shared in two on more people. The big differences are in the socialist countries and the Western driven countries. Therefore, it can be expected, that the **decreasing** of the number of polyarchy will lead to **decreasing** the military expenditures from 1990-1960 (less centralism = less war).

Regulation of Participation (PARREG)

	1960	1990	Differences	Ranks
Austria	5,0	5,0	0	5
Belgium	5,0	5,0	0	5
Bulgaria	4,0	2,0	-0,5	14
Denmark	5,0	5,0	0	5
Finland	5,0	5,0	0	5
France	5,0	5,0	0	5
Greece	4,0	5,0	0,25	1
Hungary	12,0	15,0	0,25	1
Ireland	5,0	5,0	0	5
Italy	5,0	5,0	0	5
Netherlands	5,0	5,0	0	5
Poland	8,0	4,0	-0,5	14
Portugal	4,0	5,0	0,25	1
Spain	4,0	5,0	0,25	1
Sweden	5,0	5,0	0	5

It means how strict is the participation in politics. Therefore, it can be expected, that the **increasing** of the number of regulation of participation will lead to **decreasing** the military expenditures from 1990-1960 (c.f. more regulation = less freedom = less war).

Sheep per Capita

	1960	1990	Differences	Ranks
Austria	0,0	0,0	-0,070025914	2
Belgium	0,1	0,1	-0,361477873	15
Bulgaria	0,5	0,5	-0,095540866	5
Denmark	0,2	0,2	-0,09031047	4
Finland	0,0	0,0	-0,08800448	3
France	0,6	0,5	-0,182954578	11
Greece	0,2	0,2	-0,172527622	10
Hungary	0,2	0,2	-0,022893139	1
Ireland	0,4	0,3	-0,153673666	9
Italy	0,1	0,1	-0,122550104	8
Netherlands	0,1	0,0	-0,210693111	13
Poland	0,1	0,0	-0,21153051	14
Portugal	0,2	0,2	-0,101949228	6
Spain	0,5	0,4	-0,209439794	12
Sweden	0,2	0,2	-0,104745566	7

These dates are not much changed. Therefore, it can be expected, that the **decreasing** of the number of sheep/capita will lead to **decreasing** the military expenditures from 1990-1960 (c.f. less asset = less war – see also cattle and/or pigs / capita).

SO₂ Emissions per Capita

	1960	1990	Differences	Ranks
Austria	0,0	0,0	-0,796227761	14
Belgium	0,1	0,0	-0,667101775	12
Bulgaria	0,1	0,2	2,314508122	3
Denmark	0,1	0,0	-0,509888405	11
Finland	0,1	0,0	-0,434537836	10
France	0,0	0,0	-0,424977982	9
Greece	0,0	0,0	2,521094345	2
Hungary	0,4	0,3	-0,346834033	8
Ireland	0,0	0,1	0,548856095	5
Italy	0,0	0,0	0,086878758	7
Netherlands	0,1	0,0	-0,77712442	13
Poland	0,1	0,2	0,479851153	6
Portugal	0,0	0,0	2,714332527	1
Spain	0,0	0,1	1,723012233	4
Sweden	0,1	0,0	-0,876239574	15

The air pollution was not significant. Therefore, it can be expected, that the **decreasing** of the number of SO₂ emission/capita will lead to **decreasing** the military expenditures from 1990-1960 (c.f. less emission = less war).

Military expenditure (Y)

	1960	1990	Differences	Correlation USD
Austria	1,5	2,4	-0,178082192	821917
Belgium	3,4	3,8	-0,305882353	694117
Bulgaria	6,4	2,0	-0,401290312	598709
Denmark	2,7	1,6	-0,285714286	714285
Finland	1,8	1,6	-0,118644068	881355
France	6,5	3,3	-0,482972136	517027
Greece	4,9	3,8	-0,218106996	781893
Hungary	4,6	2,6	-0,445966174	554033
Ireland	1,3	1,2	-0,097744361	902255
Italy	3,1	2,1	-0,307189542	692810
Netherlands	3,7	2,4	-0,359459459	640540
Poland	4,8	2,6	-0,461491772	538508
Portugal	3,4	2,4	-0,278106509	721893
Spain	2,3	2,3	0,017777778	1017777
Sweden	3,8	2,6	-0,32010582	679894

The most militarized country was in 1960 is France and in 1990 it was Belgium and Greece. Each former expectation about more/less X and more/less Y is the opinion of the author. The data-driven relationships (correlations) can be seen in the annex (Figure Nr.2) where the explored relationships (see Figure Nr.1) can also be compared to the expectations and correlations. In ideal case: the expectations = correlations = explorations. This could lead to a positive Turing-test in case of the Robot-Historian.

Methodology

Firstly, I searched for countries for basic pieces of information. Secondly, I tried to look for a data site where all state documents are. The above-interpreted data should be processed in frame of a solver-based online engine (<http://miau.my-x.hu/cocostd>). The OAM (where the objects are the countries and the attributes are the phenomena of the country profile) makes possible to derive a complex production function with a doubled set of the X-attributes. It is necessary because I wanted to explore what kind of relationships between the changes of the X-attributes (from 1960 to 1990) and the changes of the Y-values (1960-1990) can be existing?

A robot-historian is namely then realistic, if the Turing-test can be absolved.

The expected relationships between X_i and Y could be seen below the tables about the raw data. The results will demonstrate whether the expectation could be confirmed and what kind of reasons can be derived behind the unexpected connections?

Finally, I made an excel file to organize the data and figured out the missing places.

Results

The OAM can be seen in the annex (see Figure Nr ...) where the two raw OAM for 1960 and 1990 makes possible to derive the changes.

directly proportional	0%	10%	5%	4%	1%	0%	0%	3%	0%	5%	1%	0%	7%	6%	0%	0%	4%	24%	2%	6%	0%	0%	2%	0%	0%	0%	0%	0%	11%	0%	10%	
inversely proportional	0%	7%	12%	0%	16%	0%	0%	2%	19%	8%	0%	2%	5%	0%	10%	0%	0%	0%	9%	0%	8%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	
questions (1990-1960)	How to Armed Conflicts (International) react to the changing at the military expenditure?	How to biodiversity naturalness react to the changing at the military expenditure?	How to book titles per capita react to the changing at the military expenditure?	How to cattle per capita react to the changing at the military expenditure?	How to co2 emissions per capita react to the changing at the military expenditure?	not useful for us	not useful for us	not useful for us	How to complain per capita react to the changing at the military expenditure?	How to educational inequality react to the changing at the military expenditure?	not useful for us	How to female life expectancy react to the changing at the military expenditure?	How to GDP per capita react to the changing at the military expenditure?	How to gross per capita react to the changing at the military expenditure?	How to life expectancy at birth react to the changing at the military expenditure?	How to male life expectancy at birth react to the changing at the military expenditure?	How to mean of chief executive officer react to the changing at the military expenditure?	How to political participation react to the changing at the military expenditure?	How to political participation react to the changing at the military expenditure?	How to polyarchy react to the changing at the military expenditure?	How to regulation of labor market react to the changing at the military expenditure?	How to regulation of labor market react to the changing at the military expenditure?	How to sheep per capita react to the changing at the military expenditure?	How to soil emissions per capita react to the changing at the military expenditure?	How to unified democracy react to the changing at the military expenditure?	How to unified democracy react to the changing at the military expenditure?	How to unified democracy react to the changing at the military expenditure?	How to unified democracy react to the changing at the military expenditure?	How to unified democracy react to the changing at the military expenditure?	How to unified democracy react to the changing at the military expenditure?	How to unified democracy react to the changing at the military expenditure?	How to unified democracy react to the changing at the military expenditure?
max(1990/1960)	0%	14%	37%	17%	53%	20%	40%	33%	9%	30%	60%	16%	25%	100%	17%	14%	13%	0%	85%	30%	100%	40%	15%	40%	20%	25%	2%	27%	21%			
min(1990/1960)	-10%	-3%	-18%	-50%	-12%	0%	0%	41%	-47%	-45%	0%	5%	5%	-81%	-29%	2%	-1%	0%	-38%	4%	-9%	-31%	-24%	0%	0%	-30%	-36%	-88%	-29%			
variables	Armed Conflicts (International)	Biodiversity naturalness	Book Titles per Capita	Cattle per Capita	CO2 Emissions per capita	HARMS	Competitiveness of Participations (PARCOP)	Composite Measure of Wellbeing	Complained per capita	Educational Inequality Gini Coefficient	Executive Coefficient (EXCOEFF)	Female life expectancy at birth	GDP per Capita	Gross per capita	Life Expectancy at Birth (Total)	Male life expectancy at birth	Mean of Chief Executive Officer (CEO)	Political Participation	Political Participation	Polyarchy	Polyarchy	Regulation of Labor Market (RML)	Regulation of Labor Market (RML)	Soil Emissions per Capita	Unified Democracy (UD)							

Figure Nr.1 – The explored relationships between each X and the Y variables (source: own presentation)

This is the spreadsheet that I used to make this publication. We can see together data on how changed. In this picture, the numbers speak instead of the word. As we can see in the spreadsheet that different kinds of numbers, I could represent European history.

Discussions

For me, it would be easier if I don't use spreadsheets because I prefer the written statements and I do not like dealing with numbers instead of the words.

Conclusions

As I see, the results as numbers are correct, I see the historical fact behind the numbers. I have started to write this publication to prove or not to we can get real information to the high school student and teachers. I think I could do this.

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year	1990														max	min	avg	
Összeg / value	Összeváltók																	
Sorszámok	Austria	Belgium	Bulgaria	Denmark	Finland	France	Greece	Hungary	Ireland	Italy	Netherlands	Poland	Portugal	Spain	Sweden			
Armed conflicts (Internal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Armed Conflicts (International)	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.1
Biodiversity - naturiness	0.8	0.7	0.7	0.5	0.9	0.7	0.7	1.6	0.7	0.6	0.7	0.6	0.7	0.6	0.9	1.6	0.5	0.8
Book Titles per Capita	774.6	989.4	383.6	2004.6	2036.1	717.2	459.1	2407.1	441.8	3041.3	537.4	619.8	920.9	2483.0	3041.3	717.2	459.1	2407.1
Cables per Capita	18.3	63	0.2	0.4	0.3	0.4	0.1	0.5	1.7	0.2	0.3	0.5	0.1	0.1	0.2	1.7	0.1	0.4
CO2 Emissions per Capita	2.2	2.7	2.3	2.6	2.8	1.7	1.9	4.7	2.4	3.9	2.5	3.0	3.2	1.5	1.6	5.0	1.2	2.5
Competitiveness of Executive Recruitment (XRCOMP)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.5
Competitiveness of Participations (PARCOMP)	5.0	5.0	3.0	5.0	5.0	5.0	5.0	15.0	5.0	5.0	5.0	8.0	5.0	5.0	5.0	15.0	3.0	5.7
Composite Measure of Wellbeing	2.7	2.7	2.0	3.0	2.7	2.8	2.2	6.3	2.4	2.5	2.7	3.4	1.6	2.2	2.8	6.3	1.6	2.8
Cropland per Capita	0.2	0.1	0.5	0.5	0.5	0.3	0.4	1.5	0.3	0.2	0.1	0.8	0.3	0.5	0.3	1.5	0.1	0.4
Educational Inequality Gini Coefficient	7.4	17.3	21.8	8.8	16.3	18.9	25.2	38.4	17.0	20.5	16.0	59.5	27.8	20.1	12.3	59.5	7.4	21.8
Executive Constraints (XCONST)	7.0	7.0	7.0	7.0	7.0	6.0	7.0	21.0	7.0	7.0	7.0	6.0	7.0	7.0	7.0	21.0	6.0	7.9
Female life expectancy at Birth	78.9	79.3	74.8	77.7	78.9	81.0	79.1	221.3	77.7	80.3	80.1	150.6	77.7	80.5	80.4	221.3	74.8	81.2
GDP per Capita	16894.6	17197.0	5596.9	18452.4	18866.4	17647.0	10015.4	19376.4	11817.7	16313.1	17262.1	10226.8	10826.4	12054.8	17059.9	19376.4	5596.9	18452.4
Isats per Capita	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Latent Democracy Variable	1.1	1.1	0.8	1.1	1.1	1.0	1.0	3.3	1.0	1.1	1.1	1.0	1.0	1.1	1.1	3.3	0.8	1.2
Life Expectancy at Birth (Total)	75.7	76.1	71.3	74.6	75.0	76.8	77.1	208.1	74.9	77.0	77.0	141.4	74.2	76.9	77.6	208.1	71.3	80.9
Male Life Expectancy at Birth	72.3	72.7	68.1	72.0	70.9	72.7	74.5	195.5	72.1	73.6	73.8	132.5	70.4	73.3	74.8	195.5	68.1	84.6
Openness of Executive Recruitment (XROPEN)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	12.0	4.0	4.0	4.0	8.0	4.0	4.0	4.0	12.0	4.0	4.8
Pasture per Capita	6.3	6.1	6.2	6.0	6.0	6.2	6.6	6.4	1.6	6.1	6.1	6.3	6.1	6.3	6.1	1.6	6.0	6.3
Pigs per Capita	0.5	0.7	0.5	1.8	0.3	0.2	0.1	3.2	0.3	0.2	0.9	1.0	0.3	0.4	0.3	3.2	0.1	0.6
Political Competition	58.5	70.0	47.3	62.6	64.0	66.6	53.1	210.0	55.9	65.9	64.7	88.2	60.0	60.4	56.8	210.0	47.3	71.5
Political Participation	61.0	62.2	68.1	63.0	60.5	48.9	66.5	143.5	47.1	67.1	59.9	82.2	57.4	52.2	63.7	143.5	47.1	66.9
Polity2 Index	16.0	10.0	8.0	10.0	10.0	9.0	10.0	30.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	30.0	8.0	11.1
Polyarchy	35.7	41.6	32.2	39.5	38.7	32.0	35.3	100.5	26.4	44.2	38.7	54.0	28.1	31.6	36.2	100.5	26.4	41.1
Regulation of Chief Executive Recruitment (XREG)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.5
Regulation of Participations (PARREG)	5.0	5.0	2.0	5.0	5.0	5.0	5.0	15.0	5.0	5.0	5.0	4.0	5.0	5.0	5.0	15.0	2.0	5.4
Sheep per Capita	0.0	0.1	0.5	0.2	0.0	0.5	0.2	0.2	0.3	0.1	0.0	0.0	0.2	0.4	0.2	0.5	0.0	0.2
SO2 Emissions per Capita	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.2	0.0	0.1	0.0	0.3	0.0	0.1
Total Cattle	2562.4	3257.0	1575.1	2239.0	1363.0	21394.0	653.9	4792.8	5969.1	8745.9	4926.0	20097.8	1392.0	5187.0	1718.4	21394.0	653.9	5724.9
Total CO2 Emissions	16624.0	27036.0	20563.0	13581.0	13799.0	99142.0	19713.0	49211.0	8338.0	108002.0	38129.0	189740.0	11525.0	57918.0	14890.0	189740.0	20563.0	45784.9
Total Cropland	1595.0	729.0	4156.0	2971.0	2275.0	91910.0	3867.0	11664.0	1044.0	11972.0	909.0	29466.0	3125.0	20172.0	2640.0	29466.0	729.0	7980.1
Total Number of Goats	36.4	9.3	432.9	0.0	3.7	1226.0	5347.8	46.8	0.0	1246.0	72.0	380.0	857.0	3780.0	0.0	5347.8	0.0	895.9
Total Number of Pigs	7772.7	6511.0	4352.0	9282.0	1147.7	12275.5	1000.7	22980.0	1110.1	9254.3	13700.0	38928.4	2618.0	10911.0	2283.9	38928.4	1000.7	9753.8
Total Number of Sheep	230.9	714.4	4321.1	1073.1	79.7	29722.4	1831.3	2544.3	1172.8	6197.2	618.1	1899.6	1844.8	15374.3	1477.9	29722.4	79.7	4054.8
Total Pasture	2131.6	554.0	2187.3	208.1	134.5	13954.4	6393.2	3658.2	5678.5	5477.0	1170.2	10046.0	629.5	12745.1	619.7	13954.4	134.5	4379.2
Total Population	7721.0	9909.3	8804.0	5141.0	4986.4	58168.0	10129.6	31115.6	3508.2	50742.9	14951.5	76238.8	9922.7	39395.8	8550.0	76238.8	3508.2	23026.7
Total SO2 Emissions	74.2	263.7	2007.0	177.6	248.7	1368.3	469.1	7939.6	182.6	1793.1	185.7	6671.7	318.9	2161.8	107.9	6671.7	74.2	1278.1
Military expenditure (% of GDP) USD	1.2	2.4	3.8	2.0	1.6	3.3	3.8	2.6	1.2	3.1	2.4	2.6	2.4	2.3	2.6	3.8	1.2	2.4

Figure Nr.4 - OAM (1990) – (source: own presentation)