



Munich Personal RePEc Archive

Why Some Countries Have More Billionaires Than Others? (Explaining Variations in Billionaire Intensity of GDP)

Popov, Vladimir

CEMI, NES, Dialogue of Civilizations Research Institute

1 June 2018

Online at <https://mpra.ub.uni-muenchen.de/87119/>
MPRA Paper No. 87119, posted 11 Jun 2018 19:44 UTC

WHY SOME COUNTRIES HAVE MORE BILLIONAIRES THAN OTHERS? (EXPLAINING VARIATIONS IN THE BILLIONAIRE-INTENSITY OF GDP)

Vladimir Popov¹

ABSTRACT

The list of billionaires and their wealth published by Forbes magazine in the US allows to compute the number of billionaires per unit of GDP and the ratio of their wealth to GDP for various countries. These measures of billionaire intensity vary greatly - sometimes by one or even two orders of magnitude. The paper offers descriptive statistics of geographical distribution of billionaires and a preliminary analysis of factors determining the country variations of billionaire intensity indicators.

Rich and well developed tax havens, like Monaco, Hong Kong, Guernsey, Cyprus, Lichtenstein, attract a lot of billionaires, but other less developed countries with zero or low personal income taxes (Persian Gulf states – Bahrain, Kuwait, Oman, Qatar, UAE) do not have many billionaires. Unsurprisingly, happiness index, especially such determinant of the index as healthy life expectancy, is a strong predictor of the concentration of wealth in particular countries.

Surprisingly, other determinants of happiness index, such as per capita income and social support, do not matter much, whereas personal freedom does matter, but has the “wrong” sign (the lower is personal freedom, the higher the billionaire intensity). Another unexpected result is the negative relationship between billionaire intensity and inequality of income distribution as measured by Gini coefficient derived from household surveys: billionaires seem to prefer countries with lower income inequalities. The presence of billionaires, though rises income inequality at the very top by definition, does not increase general income inequality.

Long term trends in the billionaire intensity, appear to mirror changes in within the country income inequalities as measured by gini coefficient: increase before the First World War, decrease until the 1980s and then the new rise.

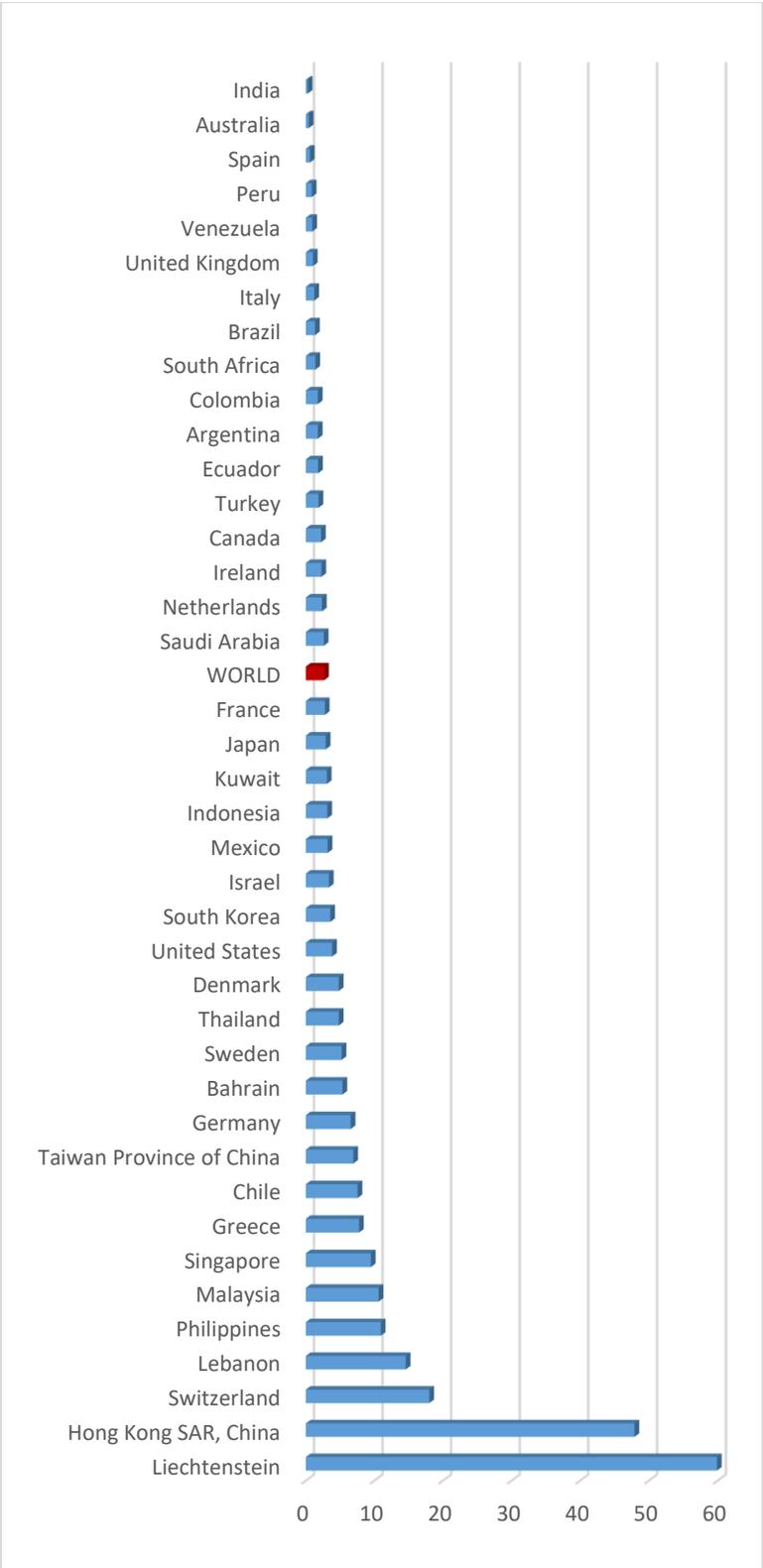
¹Research Director at the Dialogue of Civilizations Research Institute. I am grateful to Ekaterina Jarkov for the research assistance.

Number of billionaires and relative value of their wealth

According to Forbes billionaire list, the number of billionaire in the world increased from 423 in 1996 to 2028 in 2018 and their wealth grew from 2.7% of the gross world product to 5.4% (fig. 1-3). In 2018 the same number of richest world citizens as in 1996 (423, each of them had over 2.5 billion dollars) had total wealth equivalent to 4.7% of gross world product. In 1996 countries with the highest ratio of billionaires' wealth to GDP were Lebanon, Switzerland, Hong Kong and Lichtenstein (over 10% of GDP). In 2018 these countries stayed on the list, but there were newcomers: Monaco, Guernsey, Cyprus, Swaziland, Sweden, Israel, Georgia, United States, Ireland, Germany, Denmark, Iceland (fig. 4).

As fig. 5 suggests, there is a strong correlation between the wealth to GDP ratio in 2018 and the increase in this ratio in the preceding two decades. Or, to put it differently, the current billionaire wealth distribution emerged mostly in recent 20 years.

Fig. 1. Ratio of billionaires' wealth to PPP GDP in 1996, %



Source: Forbes billionaires list, WDI.

Fig. 2. Ratio of billionaires' wealth to PPP GDP in 2018, % (countries with ratio over 30%)

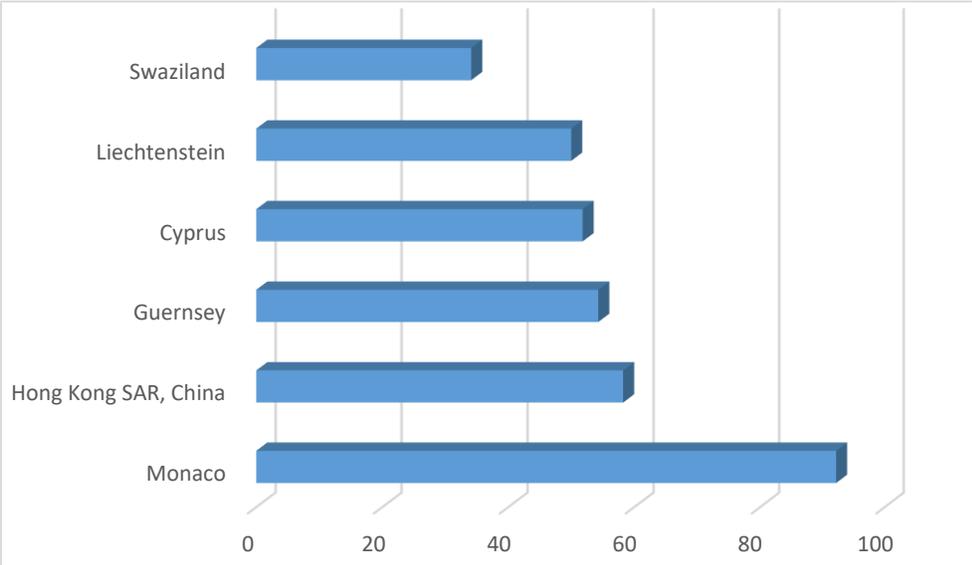
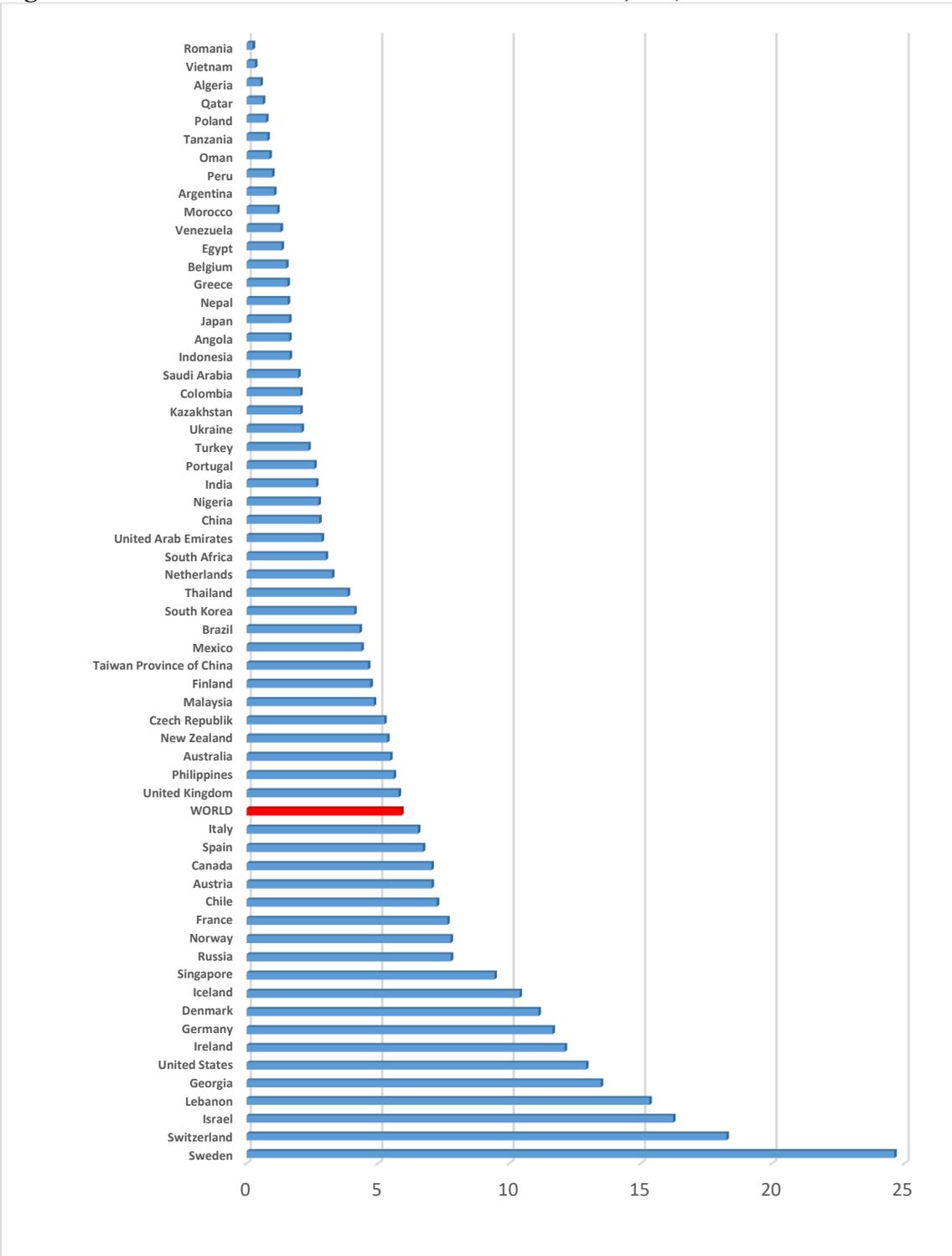
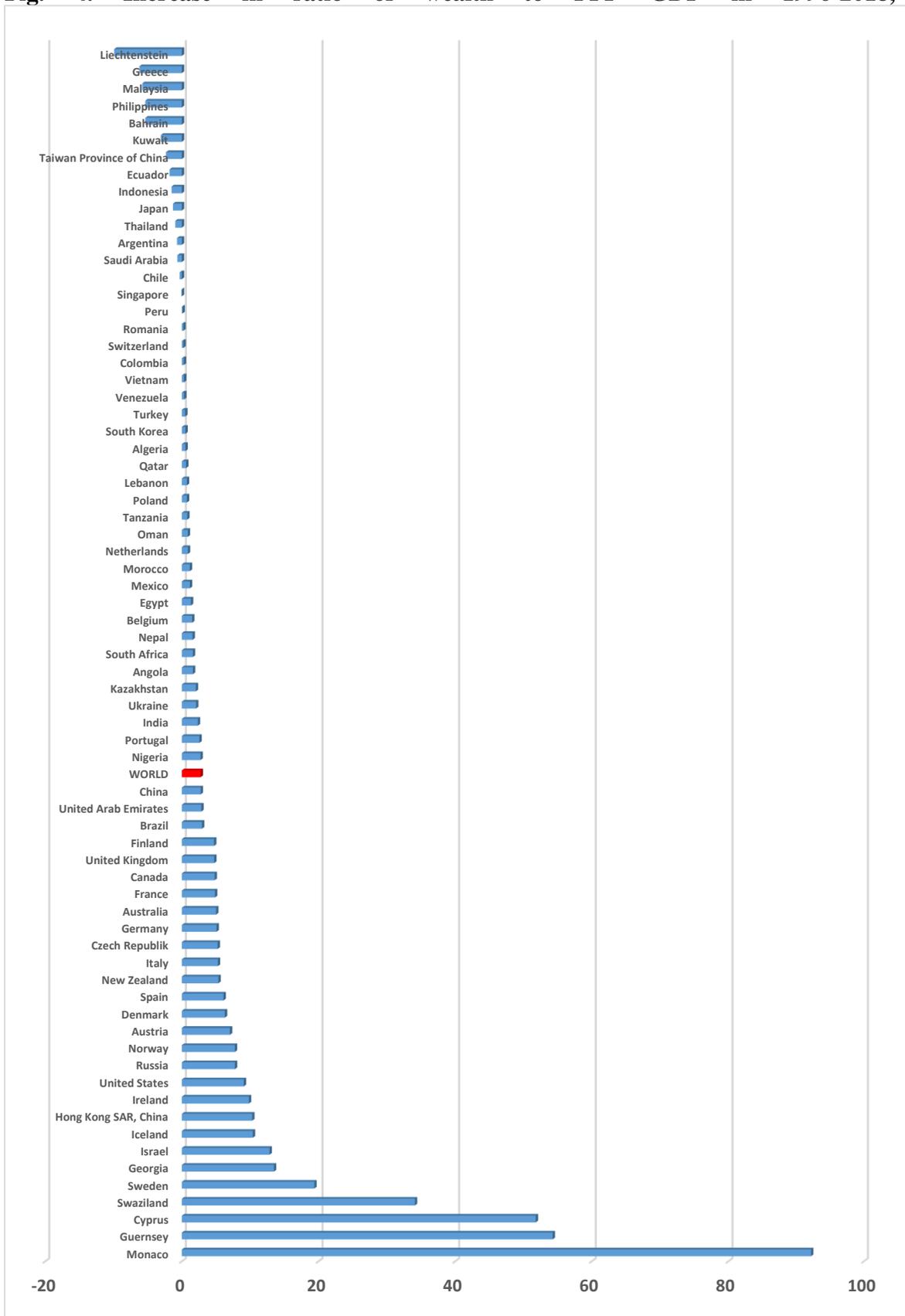


Fig. 3. Ratio of billionaires' wealth to PPP GDP in 2018, % (countries with ratio below 30%)



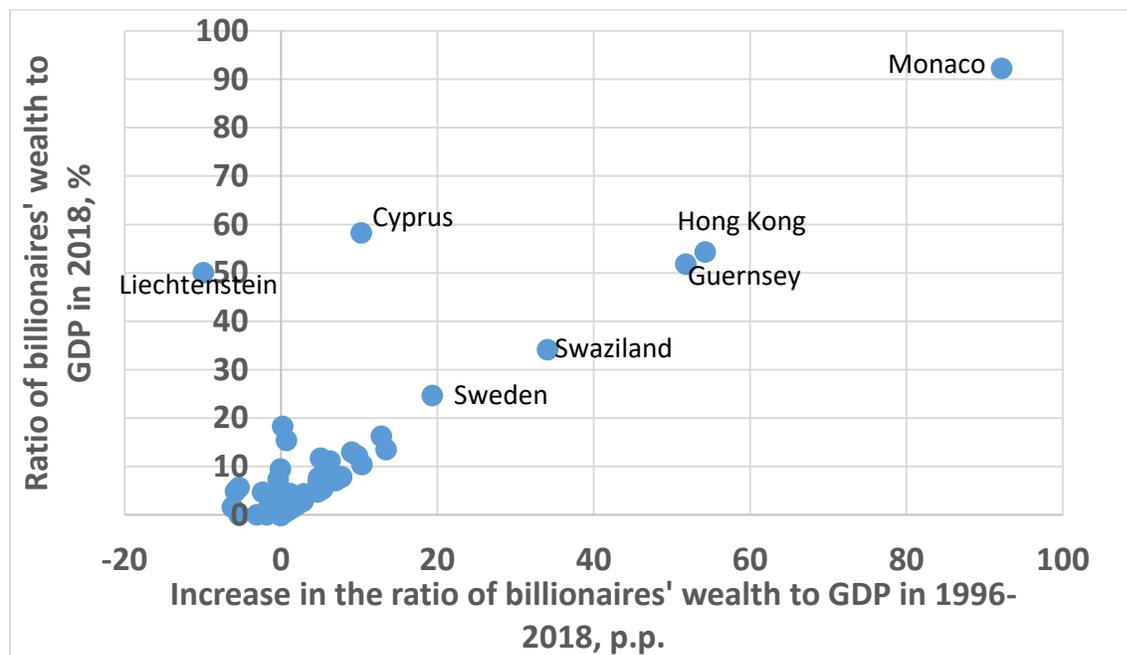
Source: Forbes billionaires list.

Fig. 4. Increase in ratio of wealth to PPP GDP in 1996-2018, p.p.



Source: Forbes billionaires list, WDI.

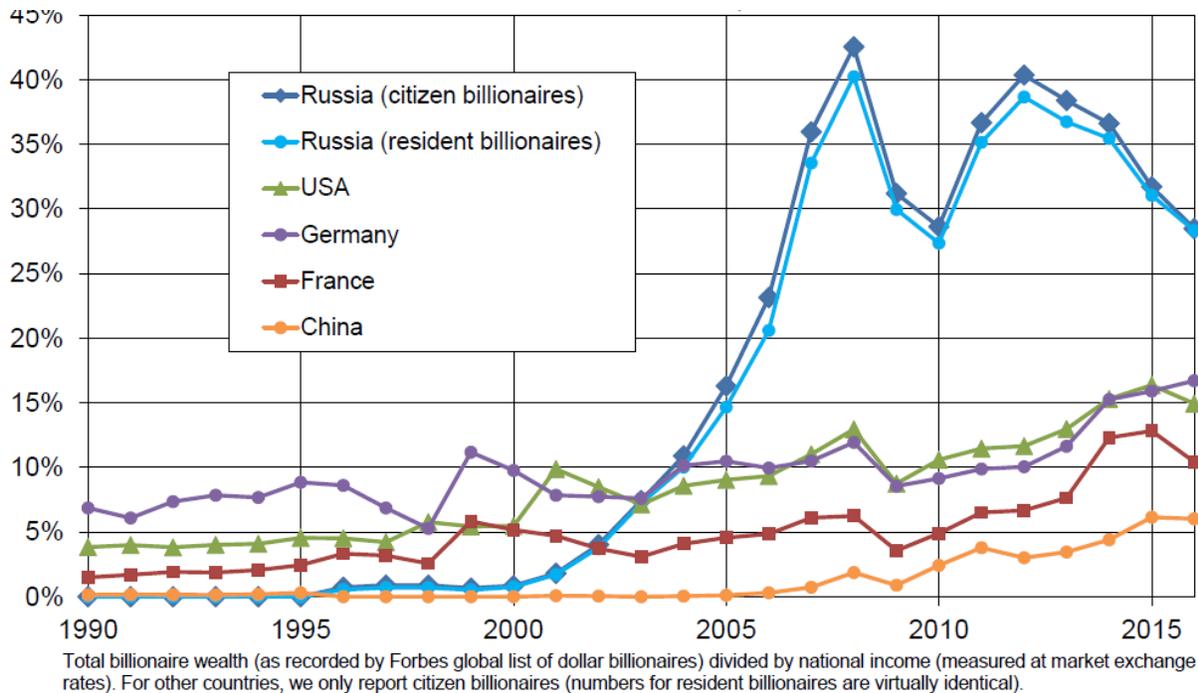
Fig. 5. Ratio of billionaires' wealth to PPP GDP in particular countries in 2018 in % and the increase in this ratio in 1996-2018, p.p.



Source: Forbes billionaires list, WDI.

Many billionaires emerged in post-communist countries after their transition to capitalism. Russian is the case in point: in 1995 there was not a single billionaire in the country, in 2007 there were over 100 billionaires with the total wealth over 40% of national income (at market exchange rate) – fig. 6. The billionaire wealth in 2007-16 in Russia was over 25% of national income, whereas in China, France, Germany, US it was mostly below 15% (fig. 6).

Fig. 6. Billionaire wealth from Forbes list as a % of national income in 1990-2016 in major countries



Note: This is the ratio of billionaires' wealth to national income at market exchange rate. It differs from the ratios of billionaires' wealth to GDP at PPP exchange rate that are computed in this paper.

Source: Novokmet, Piketty, Zucman (2017).

The 2013 Forbes count placed Russia and Georgia ahead of other countries in billionaire-intensity (number of billionaires per \$1 trillion PPP GDP), followed by the Ukraine, Czech Republic and Kazakhstan (table 1). Other former USSR countries did not have billionaires in 2013, although their PPP GDP was higher than that of Georgia. For example, Azerbaijan and Uzbekistan were supposed to have about 3 billionaires had they the same level of billionaire-intensity as Russia. But in fact, they did not.

Many billionaires that emerged in post-communist countries changed their citizenship. In 2014 there were at least 10 billionaires from Russia with the dual citizenship² and later several more acquired the citizenship of Malta and other countries using the citizenship for investment programs³.

In 2018 only 2 post-communist economies had the ratio of billionaires' wealth to GDP higher than the world average (6%) – Georgia⁴ (13.5%) and Russia (8%). Other post-communist countries had below the average ratios – Czech Republic (5%), China (3%), Ukraine and Kazakhstan (2 % each), Poland (0.7%), Vietnam (0.3%), Romania (0.2%) – fig. 3.

Table 1. Billionaires in former USSR, Eastern Europe China and Vietnam in 2013

	Number of billionaires	Total wealth	PPP GDP, 2012	Number per 1 trillion PPP GDP	Wealth of billionaires to PPP GDP, %
China	122	260.9	12471	9.8	2.1
Russia	110	403.8	3380	32.5	11.9
Ukraine	10	31.3	338.2	29.6	9.3
Kazakhstan	5	9.2	233	21.5	3.9
Czech Republic	4	14.0	277.9	14.4	5.0
Poland	4	9.8	844.2	4.7	1.2
Georgia	1	5.3	26.6	37.6	19.9
Vietnam	1	1.5	322.7	3.1	0.5
Romania	1	1.1	352.3	2.8	0.3
Uzbekistan	0	0	107	0.0	0.0

Source: Forbes billionaires list.

(http://www.forbes.com/billionaires/#page:1_sort:0_direction:asc_search:filter:All%20industries_filter:All%20countries_filter:All%20states); WDI.

² <https://www.rbc.ru/photoreport/09/04/2014/54240d5ecbb20fb1b3c62b6b>.

³ <https://www.vedomosti.ru/politics/news/2018/01/09/747290-grazhdan-malti>.

⁴ Georgia had only one billionaire – Bidzina Ivanishvili, but his net wealth of 4.6 billion dollars accounted for 13.5% of national PPP GDP for 2016.

The number of billionaires in China was growing fast: before the 2008-09 recession, in April 2007, according to Forbes' list, China had twenty billionaires; in 2011 after the recovery from 2008-09 recession, China had 116 billionaires (plus 36 in Hong Kong and 25 in Taiwan), whereas Russia – only 101; in 2018 the number of Chinese billionaires increased to 373.

Determinants of billionaire intensity

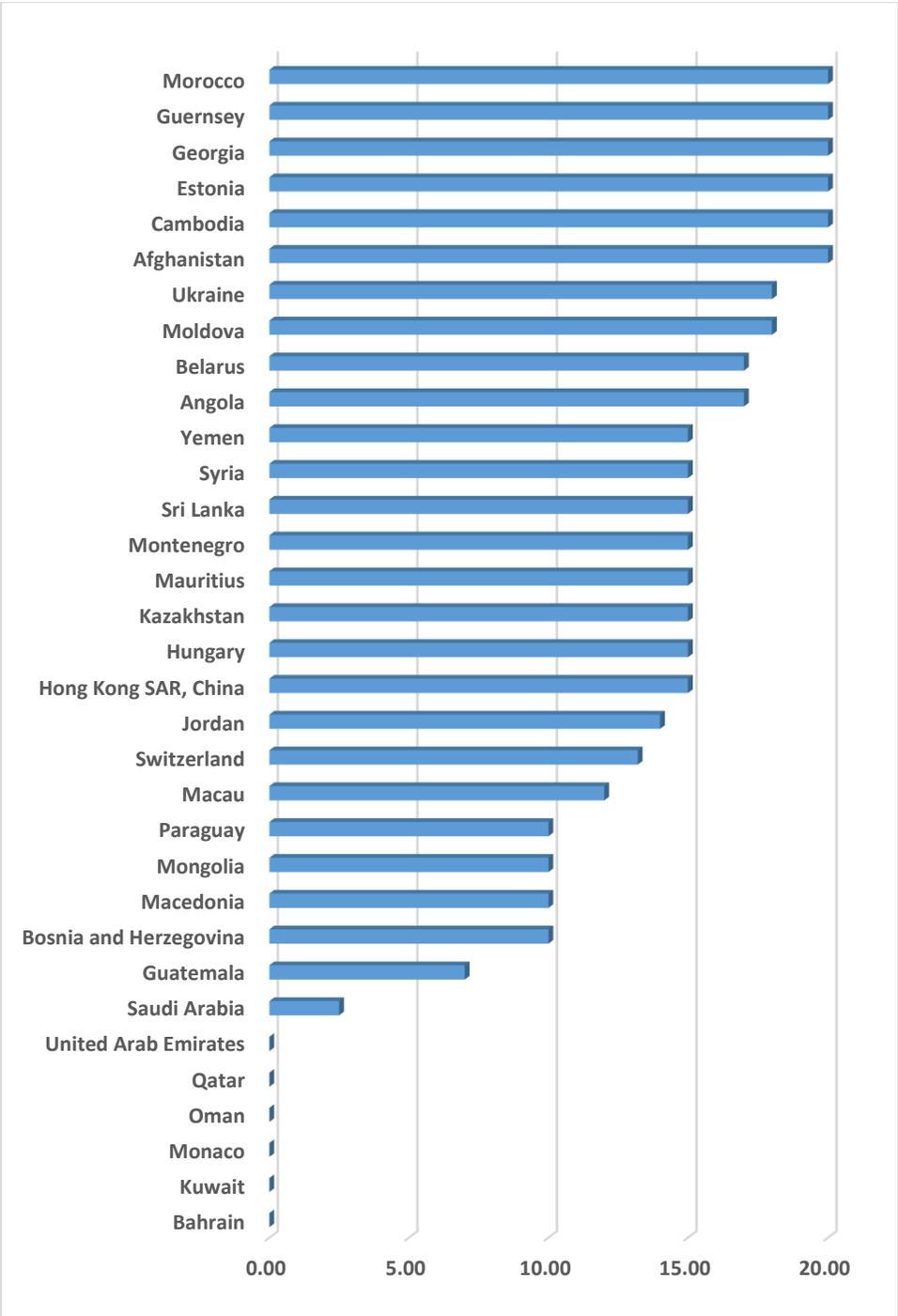
Tax rates. It could be expected that billionaires take the citizenship of the countries with low or zero tax rates (personal income, capital gains, inheritance taxes). It is true with respect to some tax havens (Monaco, Hong Kong, Guernsey, Lichtenstein), but not true with respect to the others (Persian Gulf states – Bahrain, Kuwait, Oman, Qatar, UAE – all have zero personal income tax – fig. 7, 8). In fact, many post-communist countries have extremely low personal income taxes (Bosnia and Herzegovina, Macedonia, Mongolia, Hungary, Kazakhstan, Montenegro, Belarus, Moldova, Ukraine, Estonia, Georgia – all lower than 20%) because there was no income tax return system under socialism, and even today, 3 decades after the transition, it is not operating full scale. But their billionaire intensity is way lower than in countries with some of the highest personal income taxes in the world - Sweden, Denmark, Ireland, Germany (fig. 8).

Overall, if there is a relationship between tax rates and billionaire intensity, it is positive, rather than negative (fig. 9)⁵. The reason is that safety, security and quality of life matter more than the tax rate, and these latter characteristics are generally better in high tax countries.

This result is consistent with findings of other researchers. As Solimano (2018) concludes, the link between tax levels at home and offshore wealth may be tenuous, judging by the low proportion of offshore wealth held by high-tax jurisdictions like Scandinavian countries.

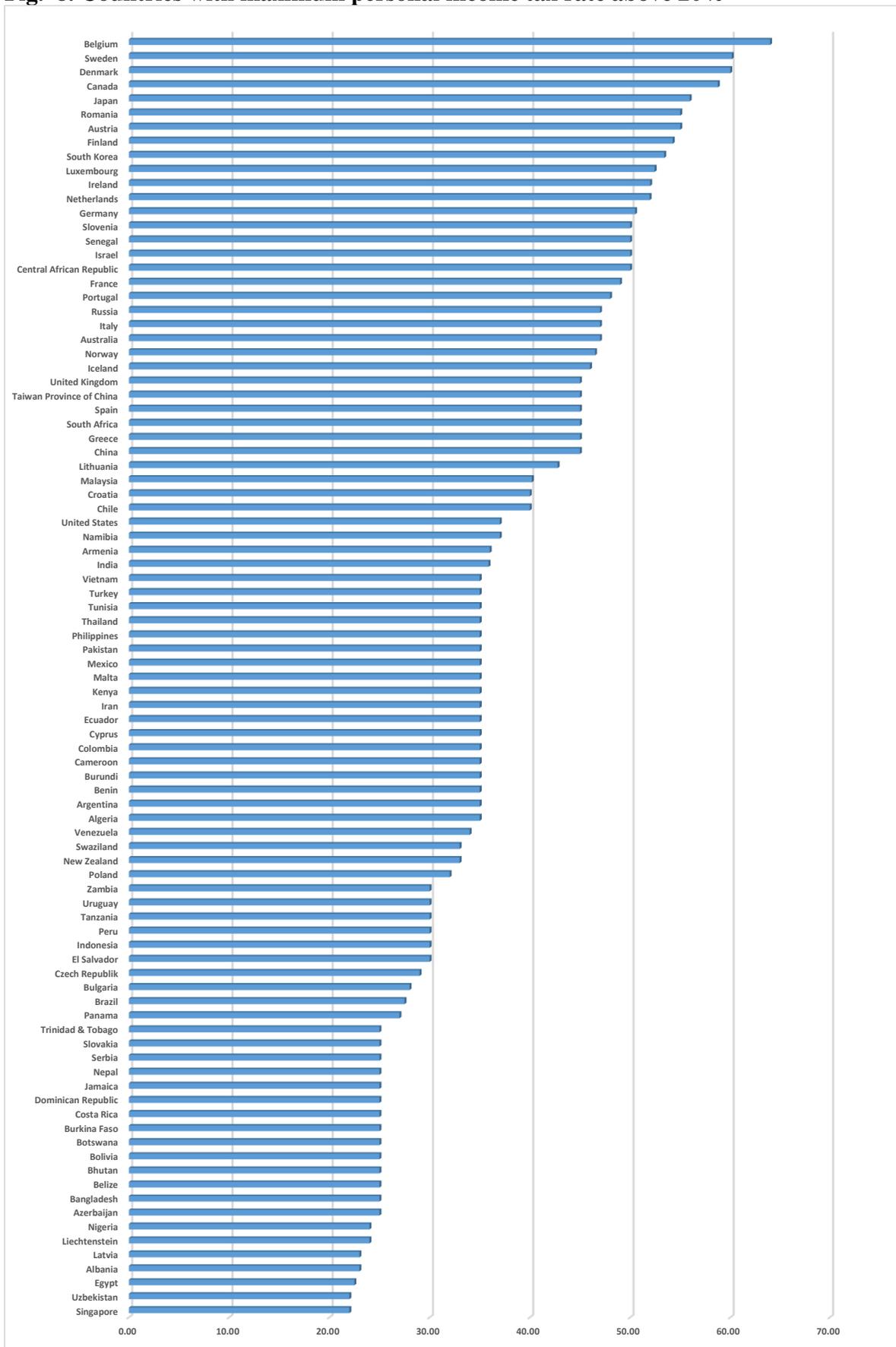
⁵ In multiple regressions of billionaire intensity on determinants of quality of life and tax rates, the later turn out to be insignificant (see below).

Fig. 7. Countries with maximum personal income tax rate of 20% and less



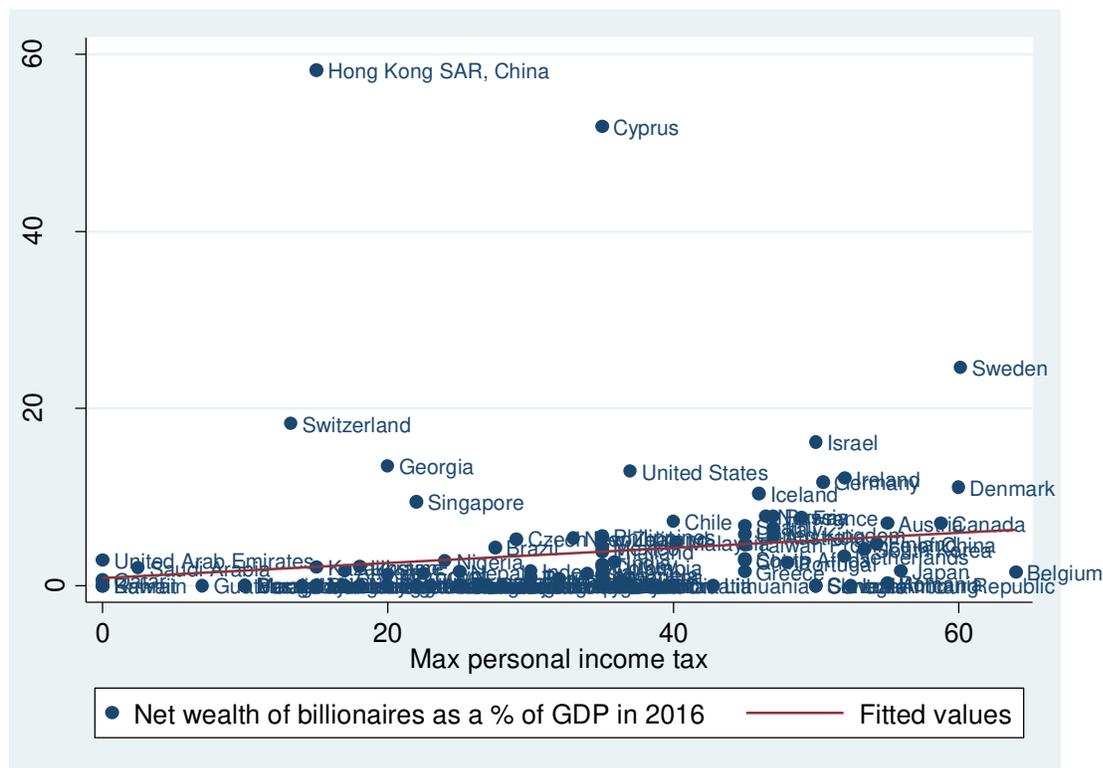
Source: List of countries by tax rates, Wikipedia, accessed May 15, 2018 (https://en.wikipedia.org/wiki/List_of_countries_by_tax_rates).

Fig. 8. Countries with maximum personal income tax rate above 20%



Source: List of countries by tax rates, Wikipedia, accessed May 15, 2018 (https://en.wikipedia.org/wiki/List_of_countries_by_tax_rates).

Fig. 9. Maximum personal income tax rates and net wealth of billionaires as a % of PPP GDP in 2018

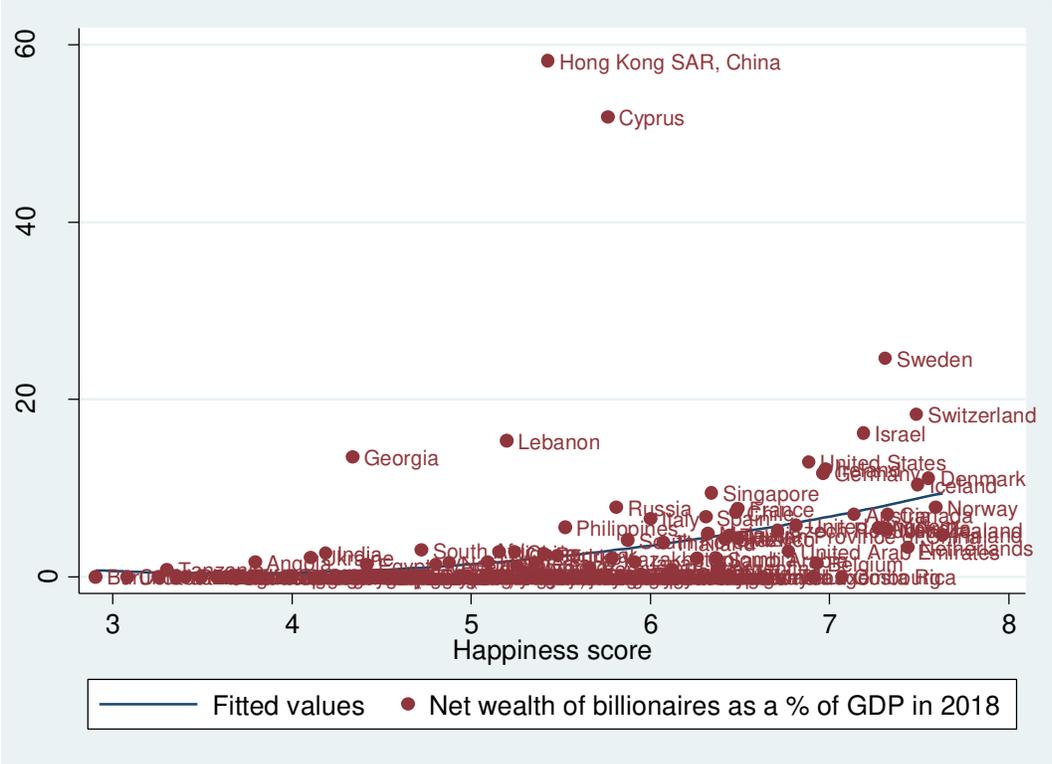


Source: List of countries by tax rates, Wikipedia, accessed May 15, 2018 (https://en.wikipedia.org/wiki/List_of_countries_by_tax_rates).

Happiness index. Perhaps not surprisingly, billionaires concentrate in countries with good quality of life. The World Happiness Report ranks countries based on the subjective evaluations of happiness by the people on a 0 to 10 scale. On top of the list in recent years are Scandinavian countries (Finland, Norway, Denmark, Iceland, Sweden), Switzerland, the Netherlands, Canada, Australia, New Zealand, Israel. At the bottom of the list are Burundi, Central African Republic, South Sudan, Tanzania, Yemen, Rwanda, Syria, Liberia, Haiti, Malawi, Botswana, Afghanistan.

Unfortunately, in small countries and tax havens (Guernsey, Monaco, Liechtenstein) happiness index is not measured, but for over 150 countries for which data on happiness are available, there is a strong correlation between happiness index and billionaire intensity (fig. 9).

Fig. 9. Happiness index and billionaire intensity in 2017-18



Source: World Happiness report; Forbes billionaire list.

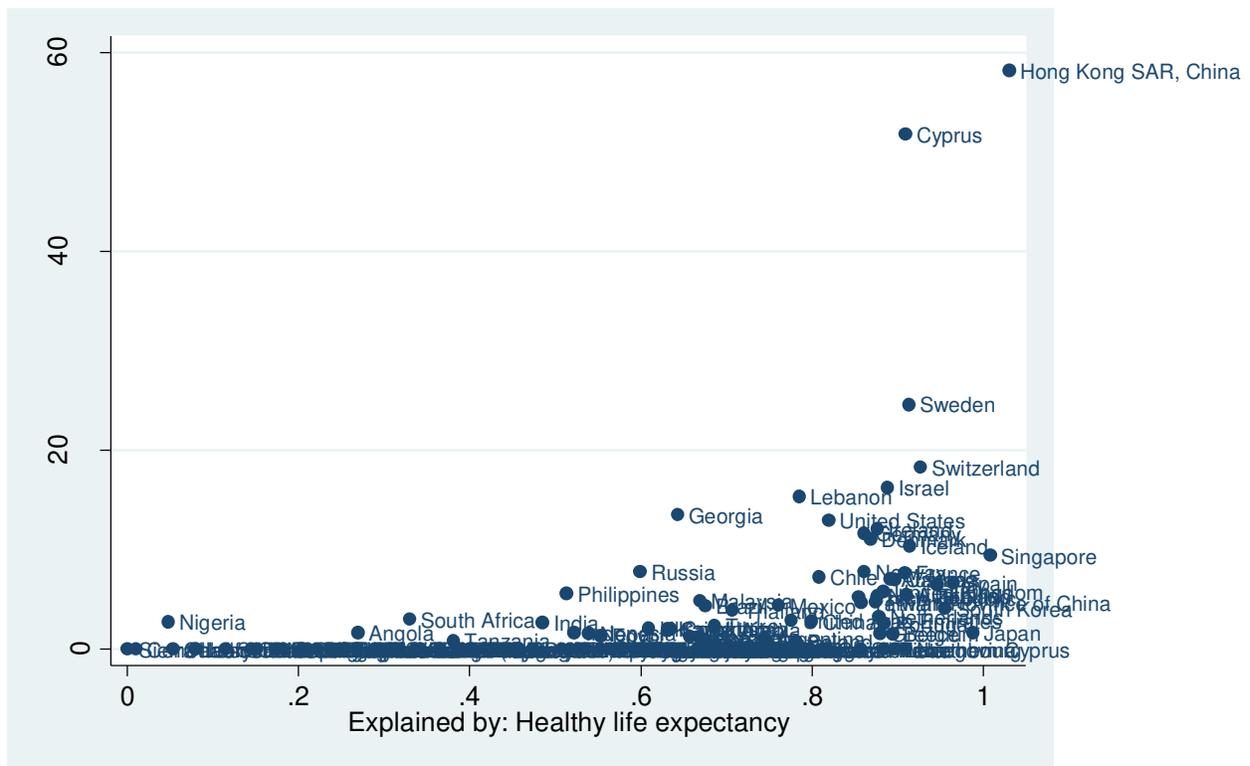
There are 6 major determinants of happiness identified by the World Happiness Report:

- PPP GDP per capita,
- healthy life expectancy (data from the World Health Organization),
- social support index (answers to the question about relatives or friends that one can count on to help when in need),
- freedom index (answers to the question about freedom to choose what you do with your life),
- generosity index (residual of regressing national average of responses to the question “Have you donated money to a charity in the past month?” on GDP per capita),

- corruption index (answers to the questions on how corruption is widespread throughout the government and business).

In multiple regressions of billionaire intensity on the determinants of happiness index, however, some of them, such as per capita income and social support, do not matter, whereas personal freedom does matter, but have “wrong” signs (the lower is personal freedom, the higher the billionaire intensity). The best explanatory power is shown by the healthy life expectancy indicator (fig. 10).

Fig. 10. Happiness score in 2018 and murder rate (per 100,000 inhabitants) in 2016



Source: World Happiness report, Forbes billionaire list.

The best regression equation explains billionaire intensity by healthy life expectancy, generosity, freedom index (negative impact) and corruption index (negative impact⁶). In one regression social support also has a negative impact on billionaire intensity (table 2).

⁶ “Happiness score explained by corruption” is not corruption index per se, but part of the happiness score that is explained by corruption (from the regression equation in which corruption influences happiness negatively). So in

Table 2. Regression results of billionaire intensity on happiness determinants, tax rates, inequality and murder rate

Dependent variable – ratio of billionaires’ net wealth to GDP, %

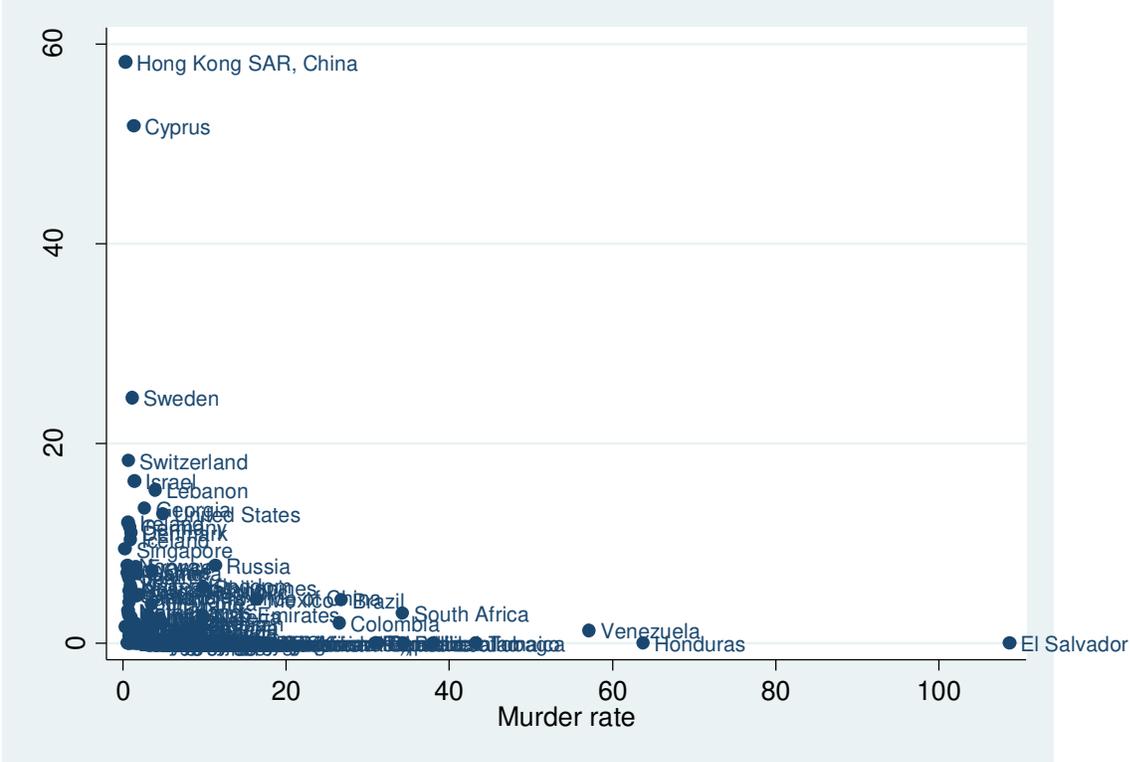
Equations, Number of Observations / Variables	1, N=141	2, N=155	3, N=155	4, N=117	5, N=154
Constant	6.4***	-4.4***	-2.4 (significant at 12%)	-5.6***	3.8***
Happiness score from 0 to 10 explained by healthy life expectancy	.	11.0***	10.6**	12.5**	11.5***
Happiness score from 0 to 10 explained by PPP GDP per capita in 2017 in 2011 dollars			4.2**		
Happiness score from 0 to 10 explained by generosity		8.9**	12.2***	11.9*	
Happiness score from 0 to 10 explained by freedom		-6.2**		-7.6*	
Happiness score from 0 to 10 explained by social support			-5.8*		
Happiness score from 0 to 10 explained by corruption		16.1*		17.2 (significant at 15%)	
Maximum personal income tax rates in 2017				0.01	
Gini coefficient of income distribution (WDI data, last year available)	-0.1***				
Murder rate, 2016 or last available year, per 100,000 inhabitants					-0.04***
Adjusted R ² , %	2	22	21	22	17

*, **, *** - Significant at 1, 5 and 10% level respectively.

table 2 and other tables a positive sign of “Happiness score explained by corruption” means that corruption affects happiness negatively.

Murder rate has a predictable negative impact on billionaire intensity (fig. 11), but in multiple regressions this variable works only together with healthy life expectancy (table 2) and loses significance, when other determinants of happiness are included into the right hand side.

Fig. 11. Net wealth of billionaires as a % of GDP in 2018 and murder rate (per 100,000 inhabitants) in 2016



Source: Forbes billionaire list; UNODC.

Another unexpected result is the negative relationship between billionaire intensity and inequality of income distribution as measured by Gini coefficient derived from household surveys: billionaires seem to prefer countries with lower income inequalities and the presence of billionaires, though rises income inequality at the very top by definition, does not increase general income inequality that is measured by surveys of households that get into representative sample (it is safe to assume that billionaires do not participate in these surveys).

The number of billionaires depends mostly on the total size of the country's GDP (per capita GDP is also important, but much less).⁷ The deviations from the predicted values that are shown in the table 3 and fig. 12. Countries that exceed the predicted number of billionaires considerably (2 times and more) are some developed countries (Canada, Israel, Germany, Spain, UK), as well as developing countries (India, Turkey, Saudi Arabia, Egypt, Hong Kong, Malaysia, Philippines, Brazil, Russia, Ukraine, Kazakhstan). On the contrary, countries where the number of billionaires is considerably lower than predicted are Japan, China, most countries of Western Europe, Oman, Argentina, Romania, Czech Republic.

Table 3. Number of billionaires in various countries – actual and predicted by regression (see footnote 6)

COUNTRY	Number of billionaires in 2007 (1)	Predicted number of billionaires (2)	“Excess” number of billionaires (3) = (1) – (2)
United States	415	407	8
Canada	23	9	14
Australia	12	7	5
New Zealand	3	5	-2
Japan	24	45	-21
Korea, Rep.	10	7	3
Israel	9	5	4
XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
Western Europe	174	144	29
Austria	3	6	-3
Belgium	2	6	-4
Cyprus	2	5	-3
Denmark	2	6	-4
France	15	15	0
Germany	55	22	33
Greece	1	6	-5
Iceland	2	6	-4
Ireland	4	6	-2
Italy	13	12	1
Monaco	1		
Netherlands	4	7	-3
Norway	4	6	-2
Portugal	1	5	-4
Spain	20	9	11

⁷ The relationship is non-linear:

Number of billionaires in 2007 = $-0.9 + 0.367y - 0.0049y^2 + 2.6Y^2$, where

y – PPP GDP per capita in thousand \$ in 2005,

Y – PPP GDP in 2005 in trillions.

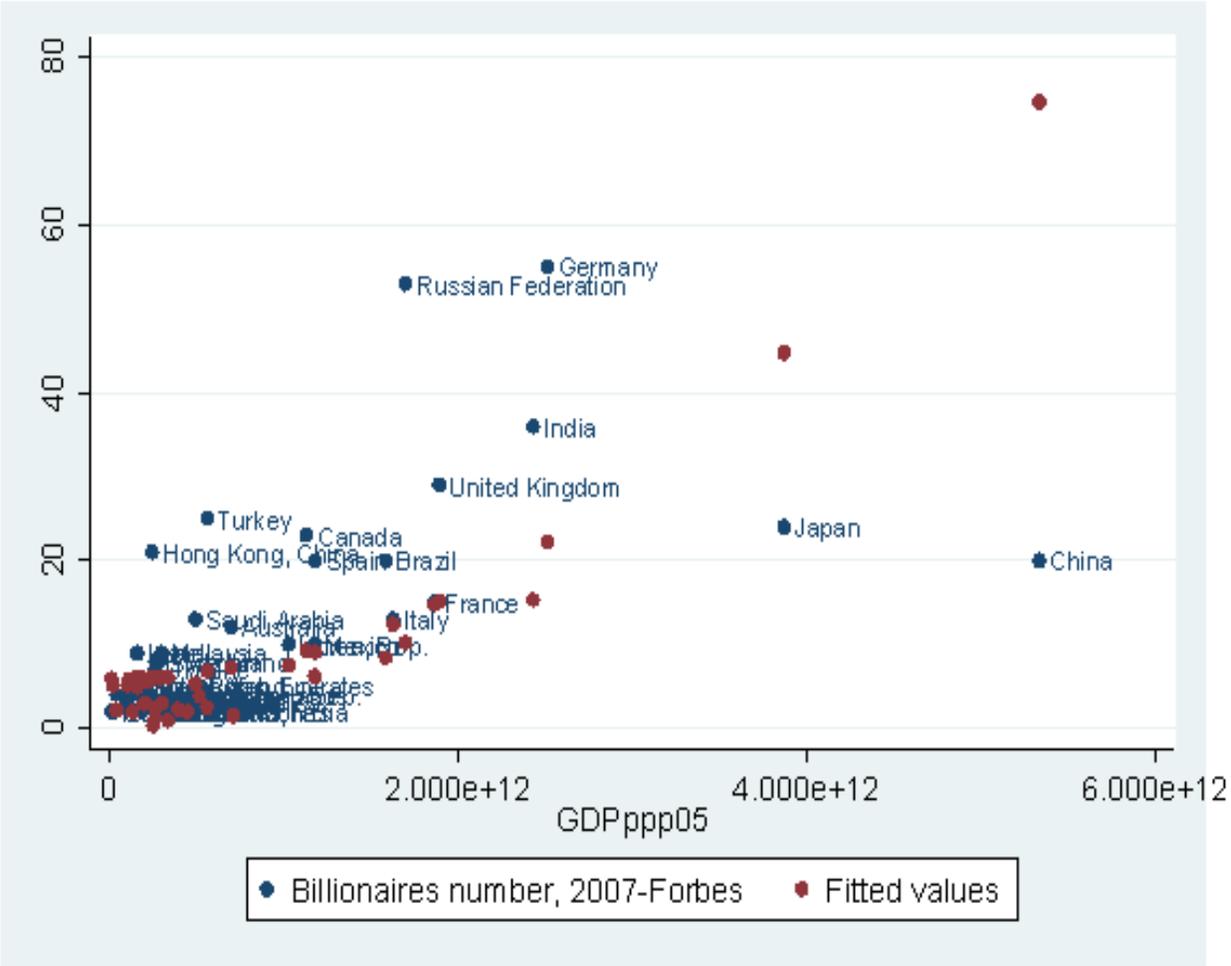
N= 181, R² = 0.95, all coefficients significant at 1% level.

Sweden	8	6	2
Switzerland	8	6	2
United Kingdom	29	15	14
SA	36	15	21
India	36	15	21
SSA	3	2	1
South Africa	3	2	1
MENA	56	27	29
Turkey	25	2	23
Saudi Arabia	13	5	8
UAE	5	6	-1
Kuwait	4	6	-2
Lebanon	4	2	2
Egypt, Arab Rep.	4	1	3
Oman	1	5	-4
EA	70	93	-31
China	20	75	-55
Hong Kong, China	21	6	15
Malaysia	9	3	6
Taiwan	8		
Singapore	4	6	-2
Thailand	3	2	1
Philippines	3	0	3
Indonesia	2	2	0
LA	38	24	14
Brazil	20	8	12
Mexico	10	6	4
Chile	3	3	0
Colombia	2	1	1
Venezuela, RB	2	2	0
Argentina	1	3	-2
FSU	65	13	52
Russian Federation	53	10	43
Ukraine	7	1	6
Kazakhstan	5	2	3
EE	8	13	-5
Poland	5	4	1
Romania	1	2	-1
Yugoslavia, FR (Serbia/Montenegro)	1	2	-1
Czech Republic	1	5	-4
ALL	946	817	120
COUNTRY	Number of billionaires	Predicted number	“Excess” number
	(1)	of billionaires	of
		(2)	billionaires
			(3) = (1) – (2)

Source : Popov (2014).

This picture is not completely consistent with the pattern of income and wealth distribution – the major difference is the “excess” number of billionaires in MENA countries that are characterized by relatively even distribution of income and wealth⁸. It looks like East Asia and MENA countries have different models of wealth distribution – in the former income inequalities are relatively low overall and at the very top, whereas in the later they are low overall, but not at the very top.

Fig. 12. Number of billionaires in 2007 and PPP GDP in 2005 (billion \$) by country



Source : WDI database ; Forbes billionaires list (<http://www.forbes.com/billionaires/>).

⁸ After controlling for total GDP and GDP per capita such variables as resource abundance and the share of export of fuel in total export, Islam dummy, democracy level in 1972-2002 and in 2002-03 are not significant in explaining the number of billionaires.

In 2007, for instance, China still had less billionaires than predicted by the regression, whereas Russia had more, whereas Gini in China was at about the same level as in Russia (just over 40%). So the Gini coefficient should not be taken as the ultimate measure of income inequality. The share of 10% richest taxpayers in total income in China was only 30% in 2003 versus 40% in Japan (Alvaredo, Atkinson, Piketty and Saez, 2012), even though Japanese Gini at that time was way below Chinese – about 30 and 40% respectively.

Overall, it turns out that billionaires concentrate in countries with long healthy life expectancy, low social support, low corruption, low freedom, and low inequalities, whereas the level income and the level of taxation do not really matter.

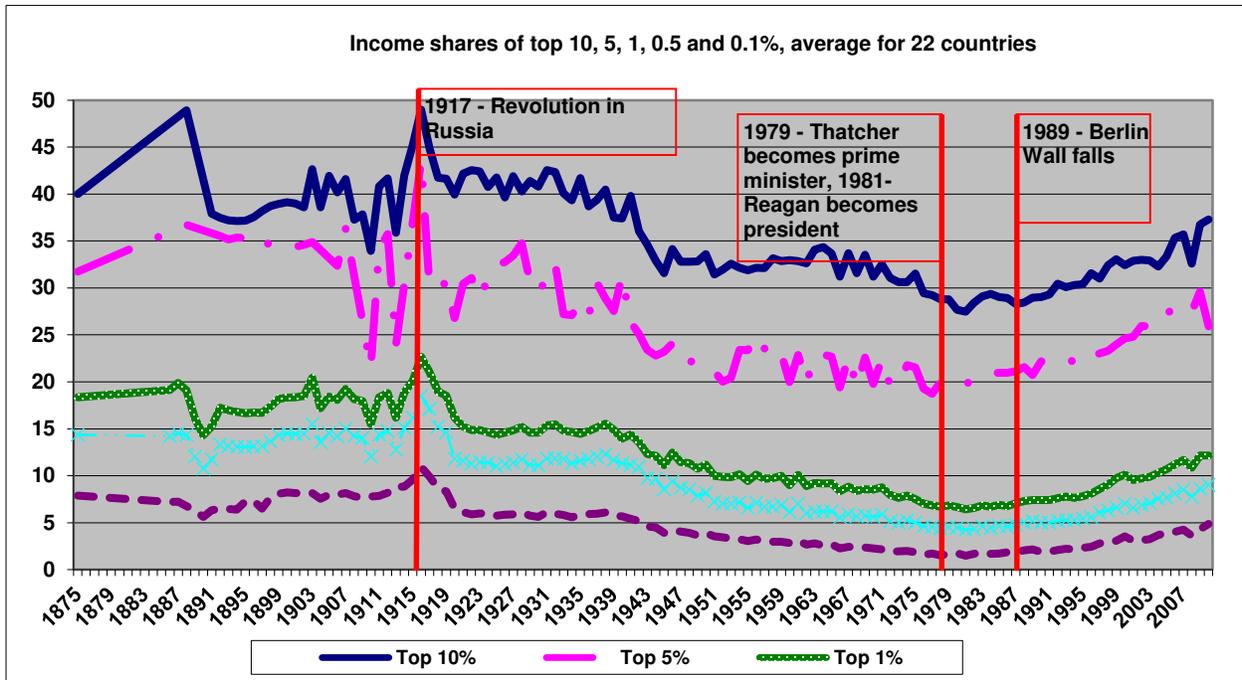
Long term trends in income inequalities and billionaire intensity

Long term data suggest that inequality increased from the ancient times to an all-time peak in the early twentieth century and then started to decline after the First World War and the 1917 Russian revolution (fig. 13).

The destruction of communal and collectivist institutions, first carried out in European countries in the sixteenth to nineteenth centuries (e.g. the enclosure movement in England) and extended by colonialism beyond, has been accompanied by increasing wealth and income inequality in most societies. Only during the Hobsbaum's 'short 20th century' was the trend towards increased income and wealth inequalities temporarily interrupted, probably because of the greater egalitarianism of the socialist countries with lower levels of inequalities (with Ginis between 25 percent and 30 percent on average) and the checks to rising inequalities with the growth of socialist and other egalitarian movements (fig. 13). But since 1980 inequality is growing again and is now close to the historical highs (Jomo, Popov, 2016).

In many countries, inequality has been approaching levels before the Second World War, which led to the emergence of the socialist bloc and the dramatic decline in inequalities in most countries. To give one example, in the United States, the share of the nation's total income held by the top (richest) ten percent of the population was 40–45 percent in the 1920s and 1930s, fell to 30–35 percent from the 1940s to the 1970s, and started to increase again from the early 1980s, reaching 45 percent in 2005 (fig. 13).

Fig. 13. Shares of top income groups in 22 major countries (unweighted average) in 1875-2010



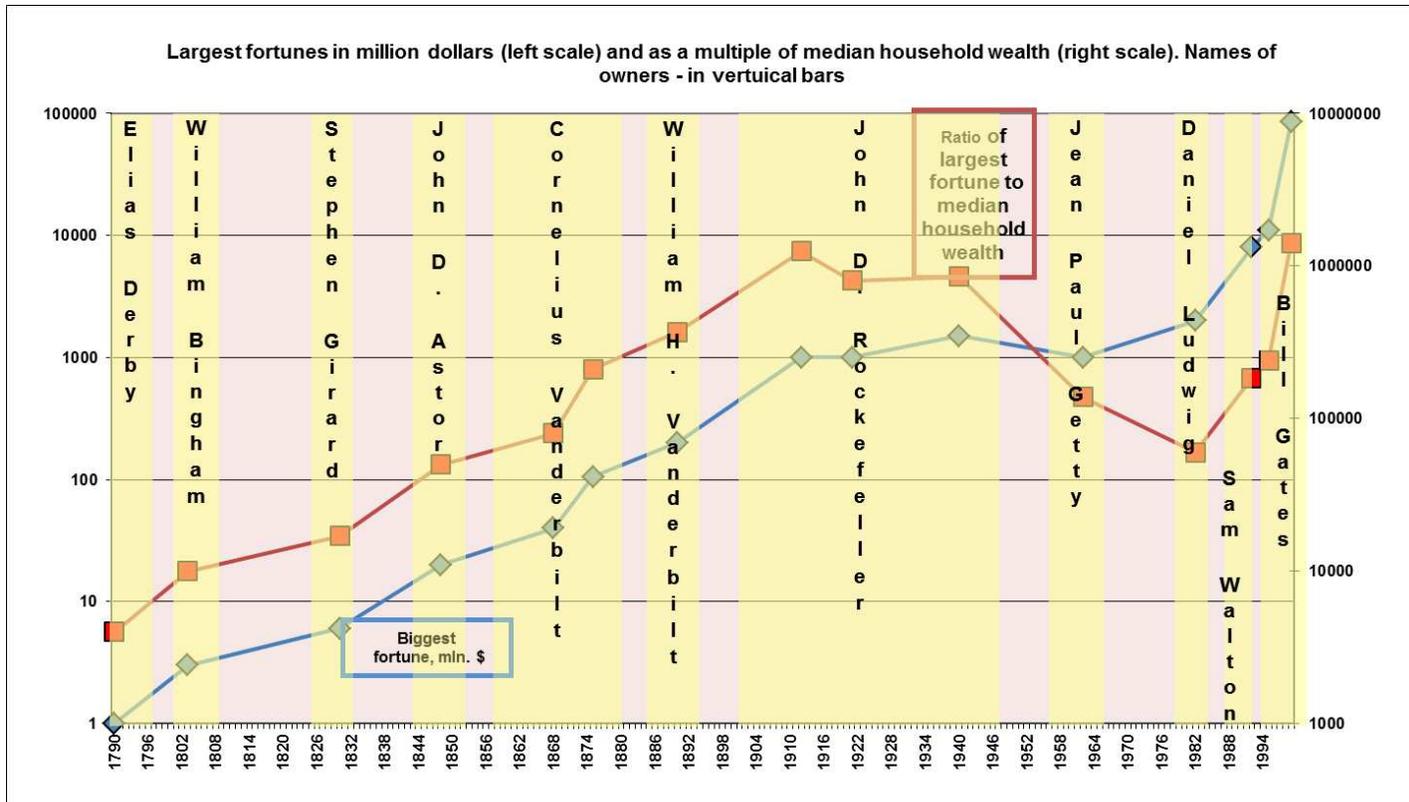
Note: European countries: Denmark, France, Germany, Netherlands, Switzerland, UK, Ireland, Norway, Sweden, Finland, Portugal, Spain, Italy; North America: United States and Canada; Australia and New Zealand; Latin America: Argentina; Asia: Japan, India, China, Singapore, Indonesia; Sub-Saharan Africa: South Africa, Mauritius, Tanzania. Overall: about half the population of the world.

Source: Alvaredo, Facundo, Anthony B. Atkinson, Thomas Piketty and Emmanuel Saez, The World Top Incomes Database, <http://g-mond.parisschoolofeconomics.eu/topincomes>.

Trends in long term billionaire intensity, as much as available statistics suggests, were similar to the changes in the shares of the top 10, 1 and 0.1% in total income. In the United States the ratio of the largest fortunes to the median wealth of households (fig. 14) increased from 1000 in 1790 (Elias Derby's wealth was estimated to be worth \$1 million) to 1,250,000 in 1912 (John D.

Rockefeller's fortune of \$1 billion), falling to 60,000 in 1982 (Daniel Ludwig's fortune of 'only' \$2 billion), before increasing again to 1,416,000 in 1999 (Bill Gates' \$85 billion fortune).

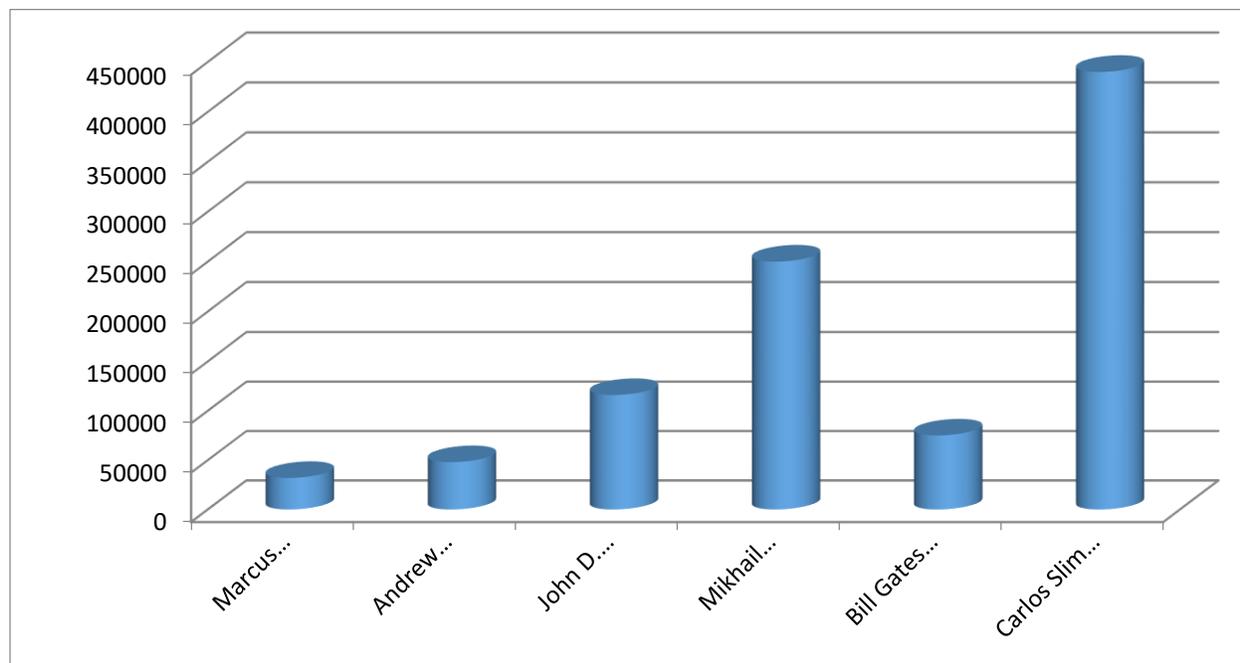
Figure 14. Largest fortunes in the US in million dollars and as a multiple of the median wealth of households, log scale



Source: Phillips (2002)

Comparison of the wealth of the richest tycoons in different countries in different epochs (fig. 15) gives different numbers (for average income, not average household wealth), but points to a similar conclusion – compared to the average income in the US, Bill Gates was relatively richer than Carnegie and Crassus (though not richer than Rockefeller), whereas Russian tycoon Mikhail Khodorkovsky was relatively richer in 2003 (compared to the average income in Russia) than all of them. The world may not have reached the highest level of inequality yet, but may still be moving to the greatest inequality ever observed in human history.

Figure 15. Income of the richest as a multiple of the average national per capita income



Source: Milanovic, 2011.

It is not clear where the trend in income inequalities will lead. Simon Kuznets (1955) hypothesized that there is an inverted U-shaped relationship between economic growth and inequality, with inequality increasing at the industrialization stage, when the urban-rural income gap rises, and declining later with the rise of the welfare state. However, empirical research does not unequivocally support the Kuznets curve hypothesis.

In *Capital in the XXI century*, Thomas Piketty (2014) argued that the recent trend of rising national-level inequality is permanent because the profit rate is higher than the economic growth rate. For him, rising inequality is a long-term trend due to the increased wealth (capital) to output ratio (K/Y) under 'patrimonial capitalism', leading to the rising share of capital in national income. He believes this trend will continue into the future and was only temporarily interrupted in the twentieth century due to the destruction of capital during the two world wars and for other reasons. In this logic, it is not clear why the sustained increase in capital (versus labor) has not induced a decline in the rate of profit offsetting the effect of the growth of capital (Milanovic, 2014).

An alternative view, consistent with the trends noted above, is that the reversal of growing inequality followed the 1917 Bolshevik revolution in Russia, the emergence of the USSR and other socialist countries, the strengthening of socialist and populist movements, the growth of the welfare state and other changes associated with Karl Polanyi's *Great Transformation*. After socialism lost its dynamism from the 1960s and posed less of a threat, income inequalities started to grow again (Jomo, Popov, 2016).

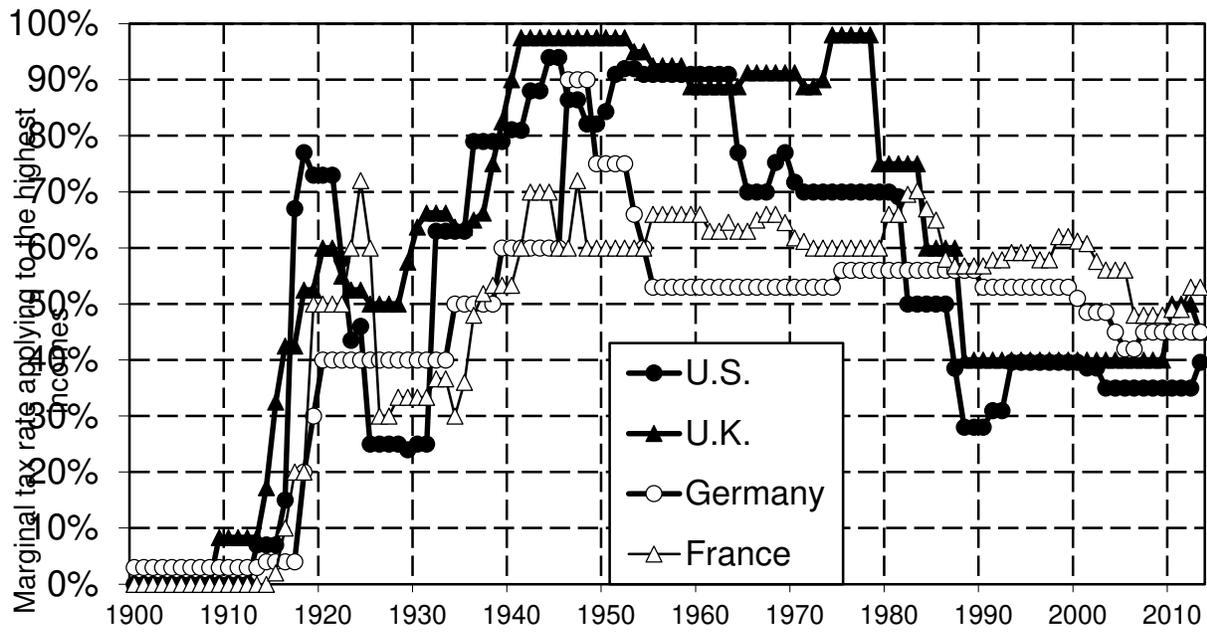
In 1996 there were 423 billionaires and their net worth was 2.7% of the world gross product. In 2018 the same number of richest world citizens as in 1996 (423, each of them possessed over 2.5 billion dollars already) had total wealth equivalent to 4.7% of gross world product (all billionaires control 5.7% of the world GDP and .

The recent rise in inequality has paralleled an increasing rate of profit. During the post-war Golden Age, typically, when profits were high, capital's success was shared with other social groups. In the 1950s and 1960s, for instance, wages, salaries and social security benefits grew together with rising profit margins. But since the early 1980s, profit margins have increased hand in hand with rising inequalities (Jomo, Popov, 2016).

Even though there are a lot of discussions and concerns about growing income and wealth inequalities (even participants of the Davos Forum recognize growing inequality as the major risk for the world economy), these concerns have not yet materialized into practical policy measures. Economic policy in major Western countries seem to support this growing shift between the rich and the poor: marginal personal income tax rates were lowered considerably since the beginning of the 1980s (fig. 16).

Even though inequality appears to grow at all levels, one cannot observe rising social tensions that could be linked to growing income and wealth inequality. Countries that have the highest billionaire intensity are relatively better off than the others, have higher healthy life expectancy, higher happiness indices than others and relatively good income distribution, if several (or several dozen) billionaires at the very top are not counted. How long will it last?

Figure 16. Top income tax rates, 1900-2013



The top marginal tax rate of the income tax (applying to the highest incomes) in the U.S. dropped from 70% in 1980 to 28% in 1988.

Source: Piketty, Thomas (2014) *Capital in the XXI Century*, Cambridge, MA: Harvard University Press. Website: piketty.pse.ens.fr/capital21c.

Conclusions

Rich and well developed tax havens, like Monaco, Hong Kong, Guernsey, Cyprus, Lichtenstein, attract a lot of billionaires, but other less developed countries with zero or low personal income taxes (Persian Gulf states – Bahrain, Kuwait, Oman, Qatar, UAE) do not have many billionaires. Unsurprisingly, happiness index, especially such determinant of the index as healthy life expectancy, is a strong predictor of the concentration of wealth in particular countries.

Surprisingly, other determinants of happiness index, such as per capita income and social support, do not matter, whereas personal freedom does matter, but has “wrong” sign (the lower is personal freedom, the higher the billionaire intensity). Another unexpected result is the negative relationship between billionaire intensity and inequality of income distribution as measured by

Gini coefficient derived from household surveys: billionaires seem to prefer countries with lower income inequalities. The presence of billionaires, though rises income inequality at the very top by definition, does not increase general income inequality.

But the increase in billionaire intensity in 1996-2018 confirms that the rise in inequality in recent two decades occurred not only at the level of deciles and percentiles, but also at the very top – less than 400 billionaires now control the wealth equivalent to 4.7% of world gross product as compared to 2.7% in 1996. Tax policy in major countries since the 1980s favors these trends.

References

Alvaredo, Facundo, Anthony B. Atkinson, Thomas Piketty and Emmanuel Saez (2012). The World Top Incomes Database. <http://g-mond.parisschoolofeconomics.eu/topincomes>, April 25.

Atkinson, Anthony Barnes and Jakob Egholt Sjøgaard (2013). The long-run history of income inequality in Denmark: Top incomes from 1870 to 2010. EPRU Working Paper Series 2013-01, Economic Policy Research Unit, Department of Economics, University of Copenhagen.

Forbes billionaires list, <https://www.forbes.com/billionaires/list/>

Homicide (List of countries by intentional homicide rate), Wikipedia, https://en.wikipedia.org/wiki/List_of_countries_by_intentional_homicide_rate
https://en.wikipedia.org/wiki/List_of_countries_by_intentional_homicide_rate_by_decade

Hurun Global Rich List, <http://www.hurun.net/EN/HuList/Index?num=8407ACFCBC85>

Jomo, Kwame Sundaram, Vladimir Popov (2015). *Development*, Vol. 58, No. 2-3, 2015.

Milanovic, Branko (2011). *The Haves and Have-Nots: A Brief and Idiosyncratic History of Global Inequality*, New York: Basic Books.

Novokmet, Filip, Thomas Piketty, Gabriel Zucman (2017). From Soviets to Oligarchs: Inequality and Property in Russia 1905-2016. World Income Database Working paper series N° 2017/09. July 29, 2017.

Phillips, Kevin (2002). *Wealth and Democracy: A Political History of the American*, New York: Broadway Books.

Piketty, Thomas (2014). *Capital in the XXI Century*, Cambridge, MA: Harvard University Press.

Popov, Vladimir (2014). *Mixed Fortunes: Economic History of China Russia and the West*. OUP, 2014.

Solimano, Andres (2018). Wealth mobility: Implications for inequality. DOC-RI Expert

Comment, <https://doc-research.org/2018/02/wealth-mobility-implications-inequality/>

Soltow, Lee (1989). *Distribution of Wealth and Income in the United States in 1798*, Pittsburgh: University of Pittsburgh Press.

WDI (World Development Indicators database), <https://data.worldbank.org/products/wdi>

World Happiness Report, <http://worldhappiness.report/>