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Expert Comment

Why do some countries have more billionaires than others? Explaining variations in the billionaire-intensity of GDP

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Explaining variations in the billionaire-intensity of GDP

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The *Forbes* magazine annual list of billionaires and their wealth provides enough data so that the number of billionaires per unit of GDP and the ratio of their wealth-to-GDP can be calculated for various countries. These measures of billionaire intensity vary greatly – sometimes by one or even two orders of magnitude. This paper offers descriptive statistics of the geographical distribution of billionaires and a preliminary analysis of factors that determine the country variations of billionaire intensity indicators.

Rich and well-developed tax havens, such as Cyprus, Guernsey, Hong Kong, Monaco, and Lichtenstein, attract many billionaires, but other less developed countries with zero or low personal income taxes (such as the Persian Gulf states of Bahrain, Kuwait, Oman, Qatar, UAE) have relatively few.

Unsurprisingly, the happiness index as presented in the *World Happiness Report* is a strong predictor of the concentration of wealth in particular countries. Some determinants of the index, such as healthy life expectancy, are strong predictors of the concentration of wealth. Surprisingly, other determinants, such as per capita income and social support, do not seem to matter. However, personal freedom does matter but it has a 'wrong' sign, i.e., the lower the assessment of personal freedom in a country, the higher the billionaire intensity.

Another unexpected result is the negative relationship between billionaire intensity and inequality of income distribution as measured by the Gini coefficient derived from household surveys. Billionaires, it seems, prefer countries with lower income inequalities. While by definition the presence of billionaires in a country increases income inequality at the very top income pyramid, it does not increase general income inequality.

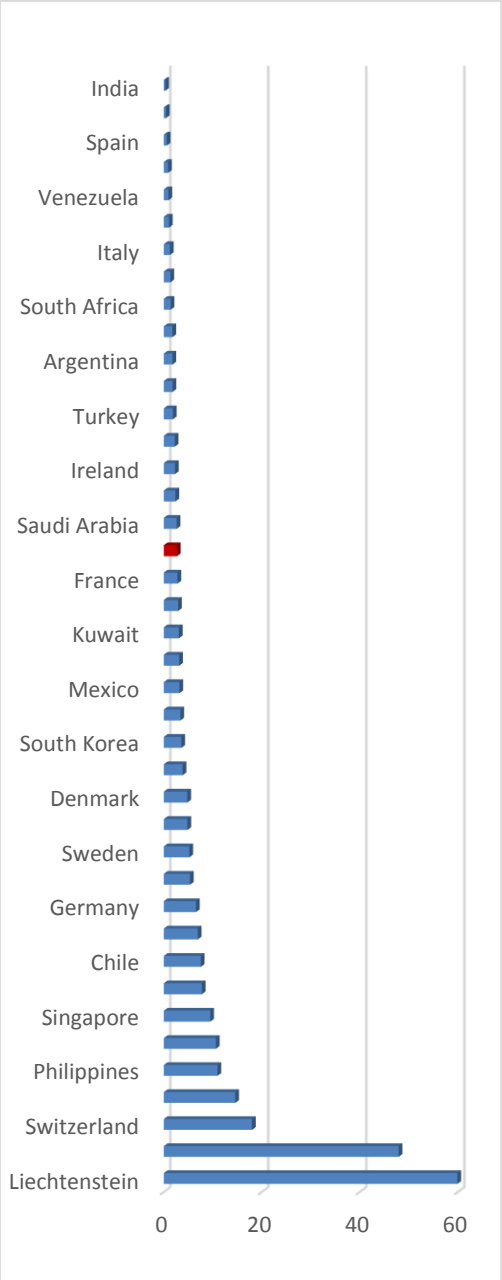
Furthermore, long-term trends in terms of billionaire intensity appear to mirror changes in income inequality within countries as measured by the Gini coefficient: an increase in inequalities before the First World War, a decrease until the 1980s, and then a new increase since then.

Number of billionaires and the relative value of their wealth

According to *Forbes*, the number of billionaires in the world increased from 423 in 1996 to 2,028 in 2018. In that time, the combined wealth of billionaires grew from 2.7% of the gross world product to 5.4% (Figure 1-3). In 2018, the richest 423 people in the world (the same number as all the billionaires in 1996) each had at least $2.5 billion in wealth, which when combined equalled 4.7% of gross world product. In 1996, the countries with the highest ratio of billionaire wealth to gross domestic product (GDP) were Hong Kong, Lebanon, Lichtenstein, and Switzerland (over 10% of GDP). In 2018, these countries remained on the list, but were joined by Cyprus, Denmark, Georgia, Germany, Iceland, Ireland, Israel, Monaco, Swaziland, Sweden, and the United States. As Figure 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. To express it differently, the current billionaire wealth distribution has largely emerged within the last 20 years. The *Forbes* list provides information on the citizenship of billionaires, but not on their residence (country of residence can change within the course of a year, and multiple times over a lifetime) and not on the second and third citizenship, so it is difficult to study migration of wealth with this data. However, it is

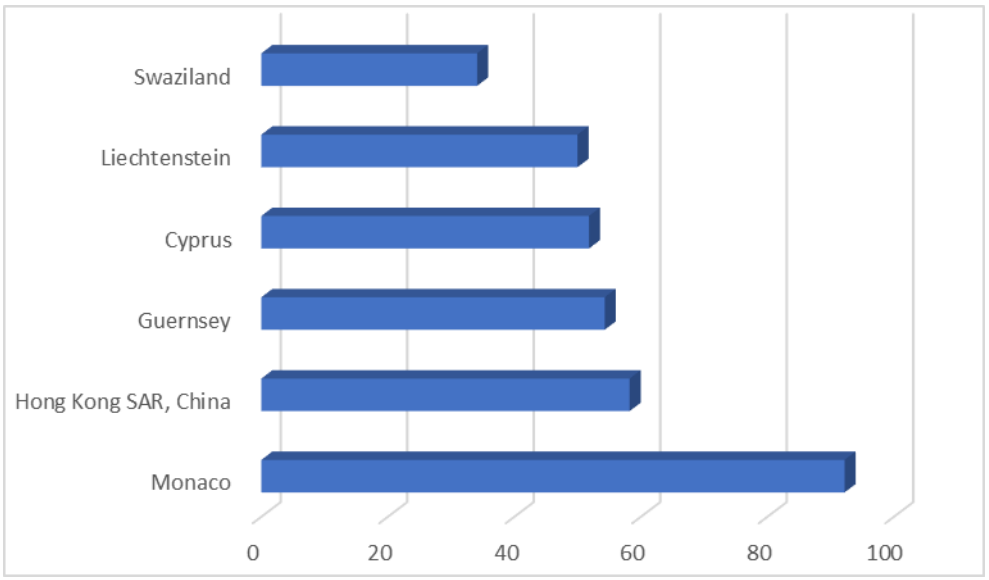
reasonable to assume that very wealthy individuals generally have no difficulties in changing citizenship if they so desire, so the billionaire intensity indicator reflects not only the generation of wealth, but also its migration.

Figure 1. Ratio of combined billionaire wealth to Purchasing Power Parity (PPP) GDP 1996, %



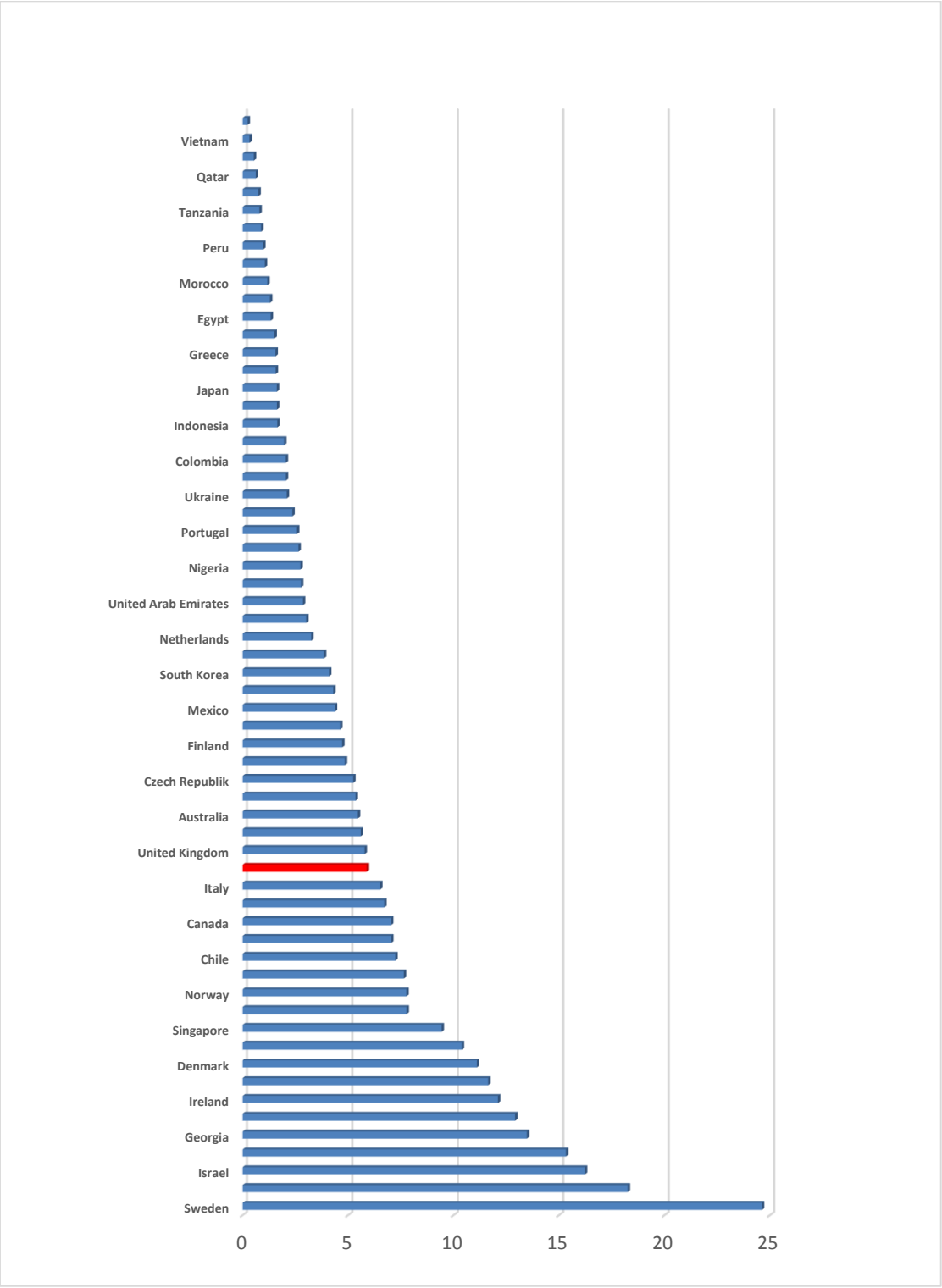
Source: 'The Forbes World's Billionaires List', WDI.

Figure 2. Ratio of billionaire wealth to PPP GDP in 2018, % (countries with ratio over 30%)



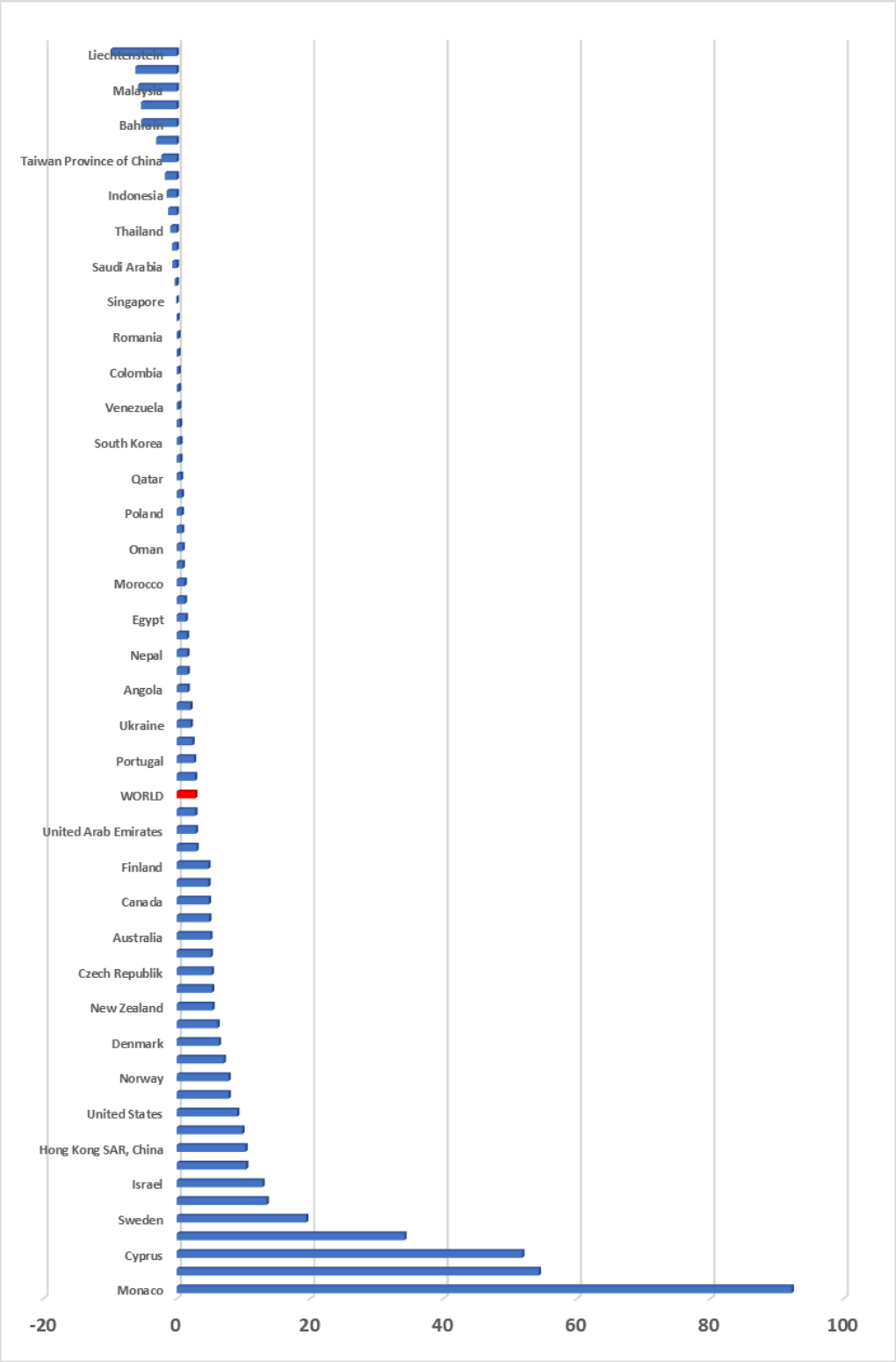
Source: 'The Forbes World's Billionaires List', WDI.

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



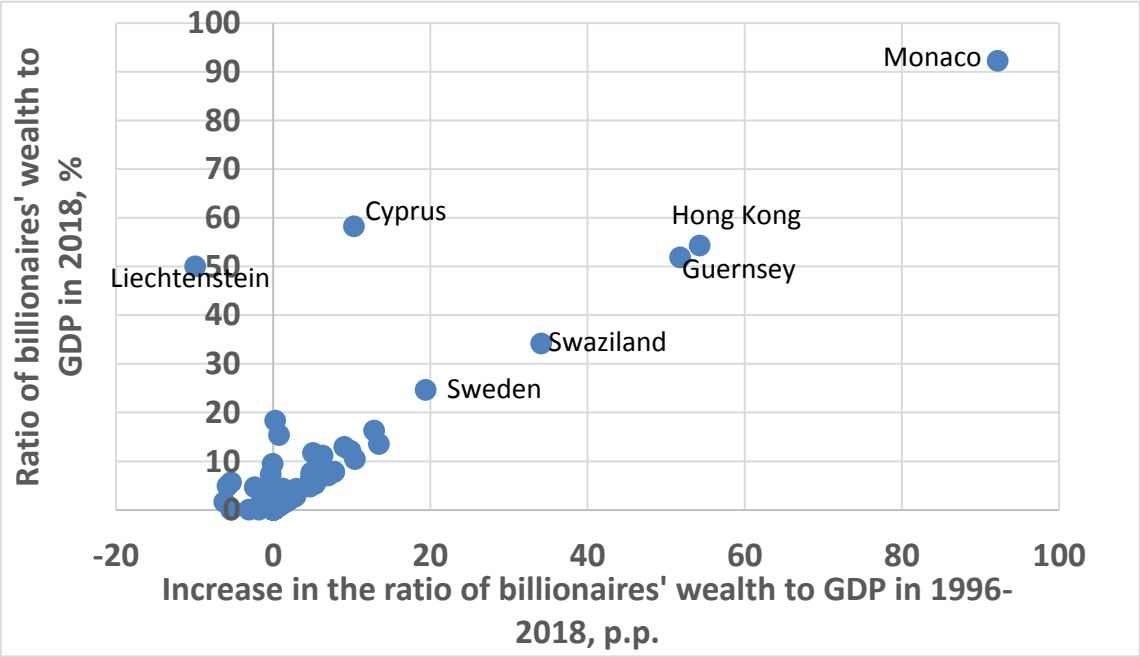
Source: 'The Forbes World's Billionaires List', WDI.

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



Source: 'The Forbes World's Billionaires List', WDI.

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



Source: 'The Forbes World's Billionaires List', WDI.

Many billionaires emerged in the former communist countries after the transition of those countries to capitalism. Russian is an example: in 1995 there was not a single billionaire in the country. In 2007, there were more than 100 billionaires with a combined wealth of over 40% of the national income. The wealth of billionaires in Russia in 2007-2016 was over 25% of the national income, while in China, France, Germany, and the US it was below 15%.

The 2013 *Forbes* list placed Georgia and Russia ahead of other former communist countries in billionaire intensity (number of billionaires per $1 trillion purchasing power parity (PPP) GDP), followed by Ukraine, the 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 would have had about three billionaires had they the same level of billionaire-intensity as Russia. But, in fact, they did not.

Many of the billionaires that emerged in post-communist countries have changed their citizenship. In 2014, there were at least 10 billionaires from Russia with dual citizenship. Several others later gained passports from Malta and similar countries through citizenship for investment programs.

In 2018, only two post-communist economies had a ratio of combined wealth of billionaires to GDP that was higher than the world average (6%): Georgia (13.5%) and Russia (8%). In Georgia's case, there was only one billionaire, Bidzina Ivanishvili, but his net wealth of $4.6 billion accounted for 13.5% of the national PPP GDP for 2016. Other post-communist countries were below the average ratios: the Czech Republic (5%), China (3%), Ukraine and Kazakhstan (2% each), Poland (0.7%), Vietnam (0.3%), Romania (0.2%).

Table 1. Billionaires in former USSR and Eastern Europe countries, 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: 'The Forbes World's Billionaires List', WDI.

But the number of billionaires in China was growing fast. In April 2007, before the 2008-2009 recession, *Forbes* listed 20 billionaires in China. In 2011, after the recovery from the recession, China had 116 billionaires (plus 36 in Hong Kong and 25 in Taiwan), while Russia had only 101. By 2018, the number of Chinese billionaires had increased to 373.

Determinants of billionaire intensity

It could be expected that billionaires readily take the citizenship of countries with low or zero tax rates (personal income, capital gains, and inheritance taxes). This is true with respect to some tax havens, such as Guernsey, Hong Kong, Monaco, and Lichtenstein, but not so with respect to others. For example, the Persian Gulf states of Bahrain, Kuwait, Oman, Qatar, and the UAE all have zero personal income tax, but their billionaire intensity is significantly lower than in countries with some of the highest personal income taxes in the world, including Denmark, Germany, Ireland, and Sweden.

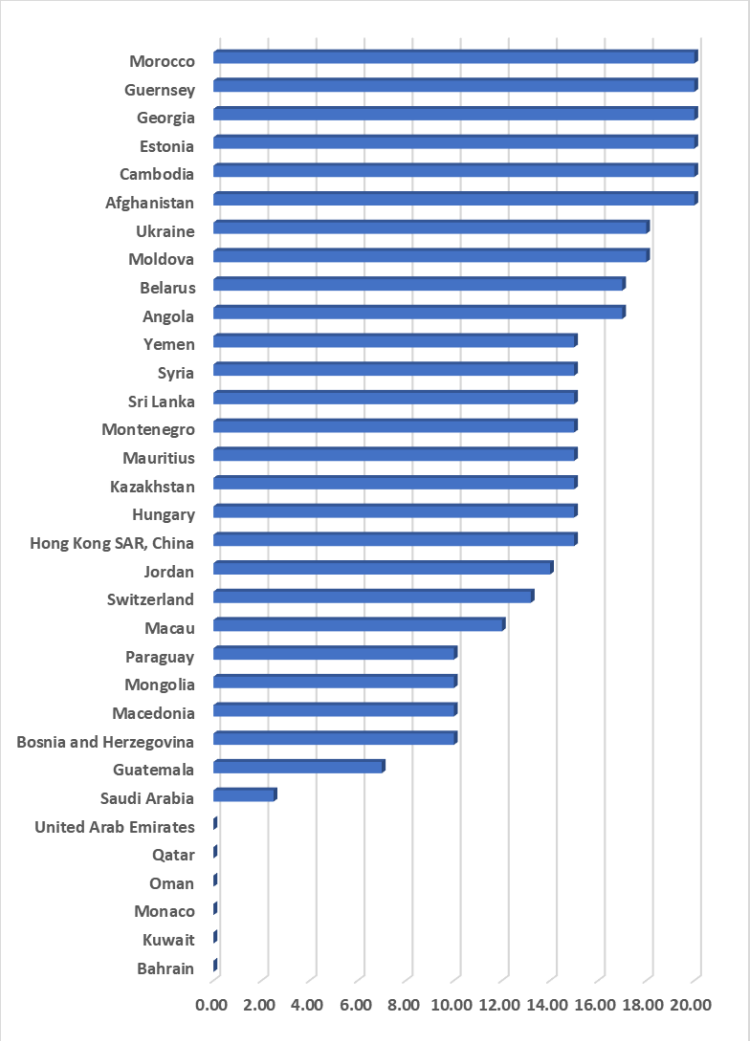
In fact, many post-communist countries have extremely low personal income taxes. Belarus, Bosnia and Herzegovina, Estonia, Georgia, Hungary, Kazakhstan, Macedonia, Moldovia, Mongolia, Montenegro, and Ukraine all have personal income taxes below 20% because there was no income tax return system under socialism. Even today, three decades after the transition from communism, the income tax return system is not functioning fully. But, like the Persian Gulf states, their billionaire intensity is significantly lower than in countries with some of the highest personal income taxes in the world.

Overall, if there is a relationship between tax rates and billionaire intensity, it is positive, rather than negative. In multiple regression analysis of billionaire intensity involving such determinants as quality of life and tax rates, the latter turn out to be insignificant. The reason is that safety, security, and quality of life matter more than the tax rate, and these quality of life characteristics are better generally in high tax countries. In addition, having the wealth

to hire advisors skilled in exploiting legal tax loopholes means many wealthy individuals are not overburdened with onerous taxes and often manage to pay zero or very low amounts of tax.

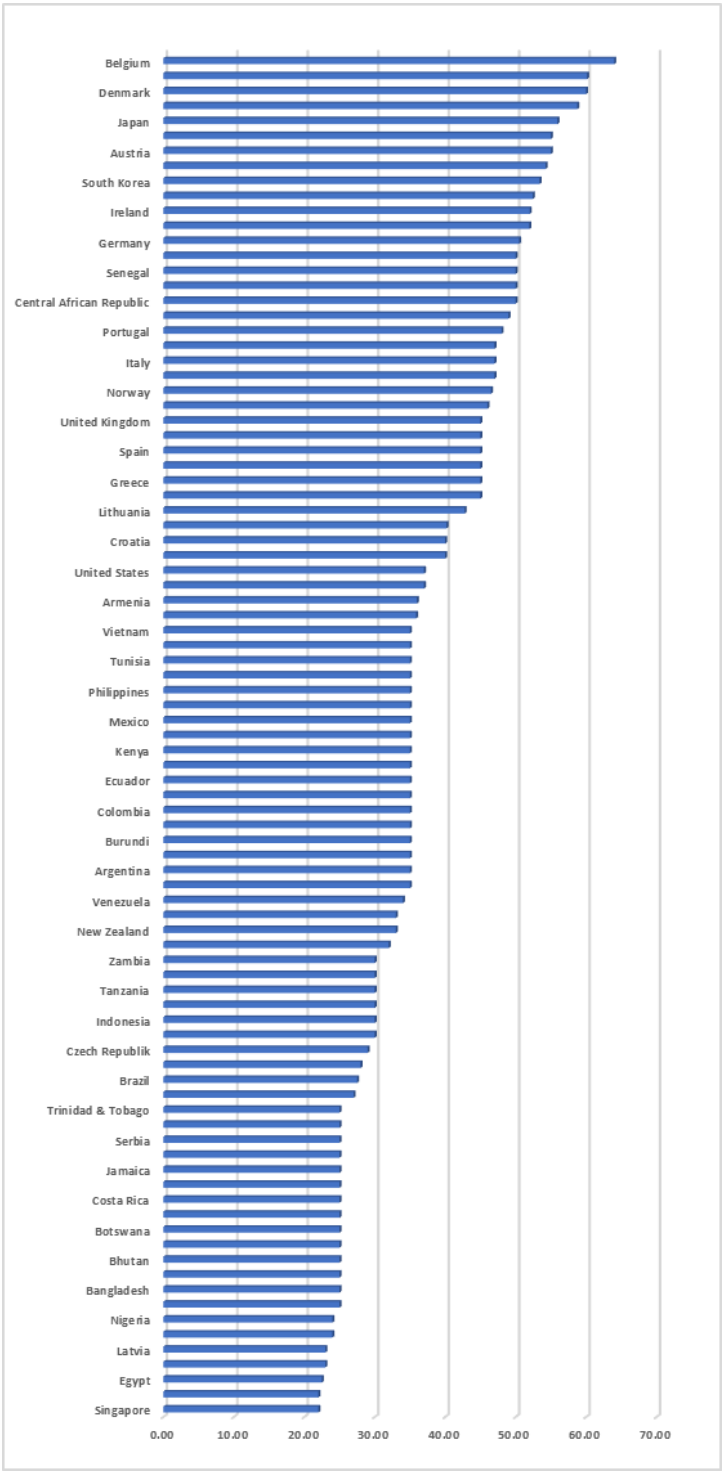
This result is consistent with findings of other researchers. As Solimano (2018) concludes, the link between tax levels at home and offshore wealth may be tenuous, judging by the low proportion of offshore wealth held by high-tax jurisdictions like Scandinavian countries.

Figure 6. Countries with a personal income tax rate of 20% and less



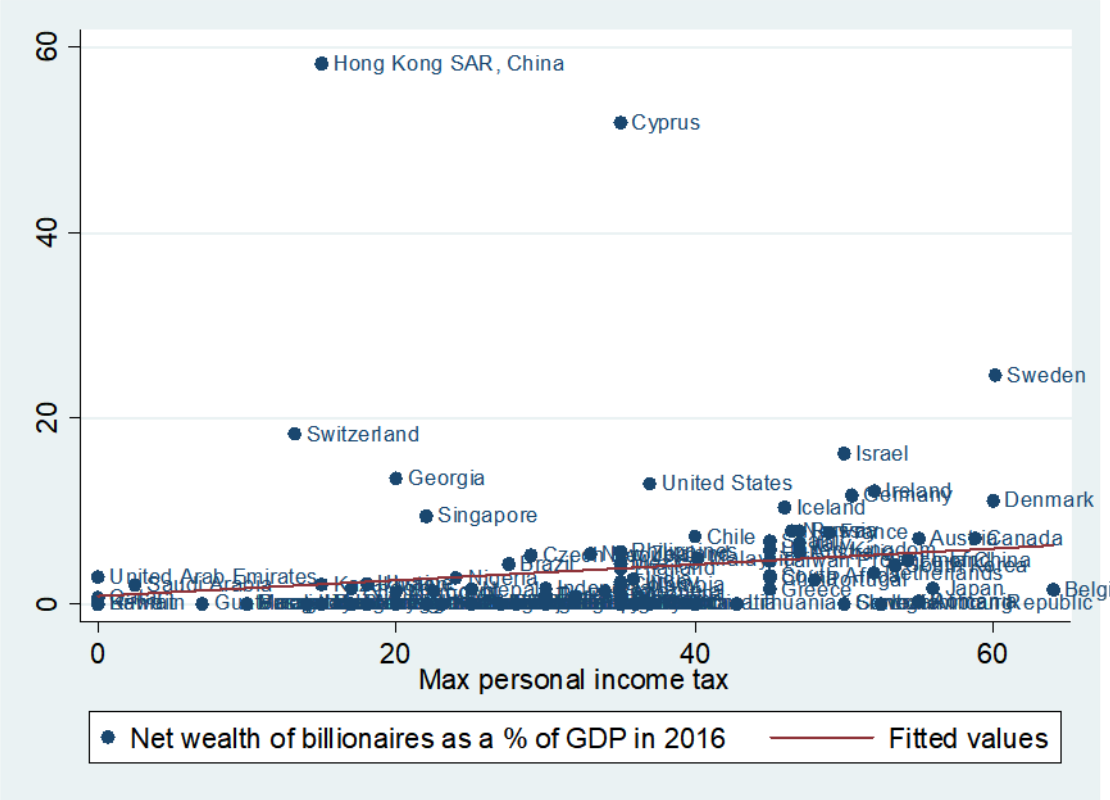
Source: List of countries by tax rates, Wikipedia, 15 May 2018

Figure 7. Countries with personal income tax rate above 20%



Source: List of countries by tax rates, Wikipedia, May 15, 2018

Figure 8. Personal income tax rates and net wealth of billionaires as a % of PPP GDP in 2018



Source: List of countries by tax rates, Wikipedia, May 15, 2018

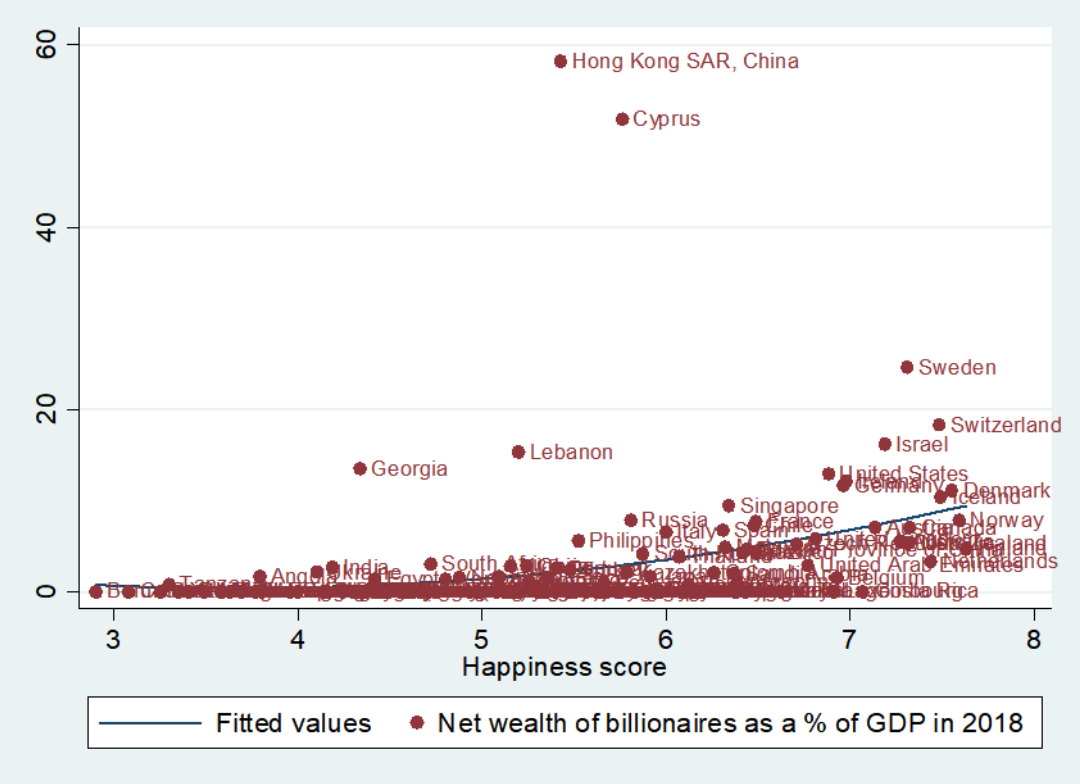
Happiness index

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

Unfortunately, happiness is not measured in small country tax havens, such as Guernsey, Liechtenstein, and Monaco. However, in the 150+ countries for which data on

happiness are available, there is a strong correlation between the happiness index and billionaire intensity, as seen in Figure 9.

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



Source: *World Happiness Report*; "The Forbes World's Billionaires List".

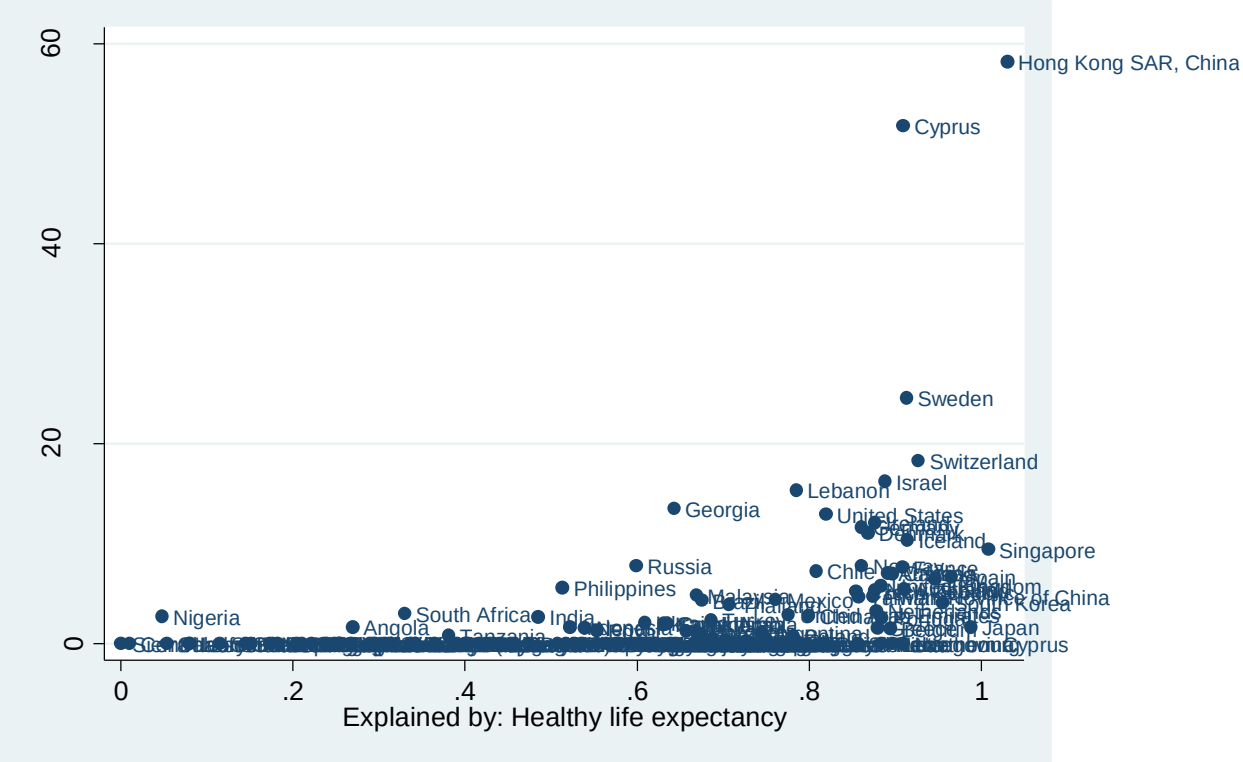
There are six major determinants of happiness identified by the *World Happiness Report*:

- 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 widespread corruption is throughout the government and business)

After running multiple regressions on billionaire intensity and the determinants of the happiness index, it appears that some determinants, such as per capita income and social support, do not matter. The personal freedom determinant does, but it has the ‘wrong’ sign: the lower the personal freedom, the higher is the billionaire intensity. The best explanatory power is the healthy life expectancy indicator, as demonstrated in Figure 10.

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



Source: *World Happiness Report*, “The Forbes World’s Billionaires List”

The best regression equation explains the billionaire intensity by the corruption index (negative impact),[1] the freedom index (negative impact), healthy life expectancy, and generosity. In one regression, social support also has a negative impact on billionaire intensity (Table 2).

[1] "Happiness score explained by corruption" is not the 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 and other tables, a positive sign of "Happiness score explained by corruption" means that corruption affects happiness negatively.

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

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

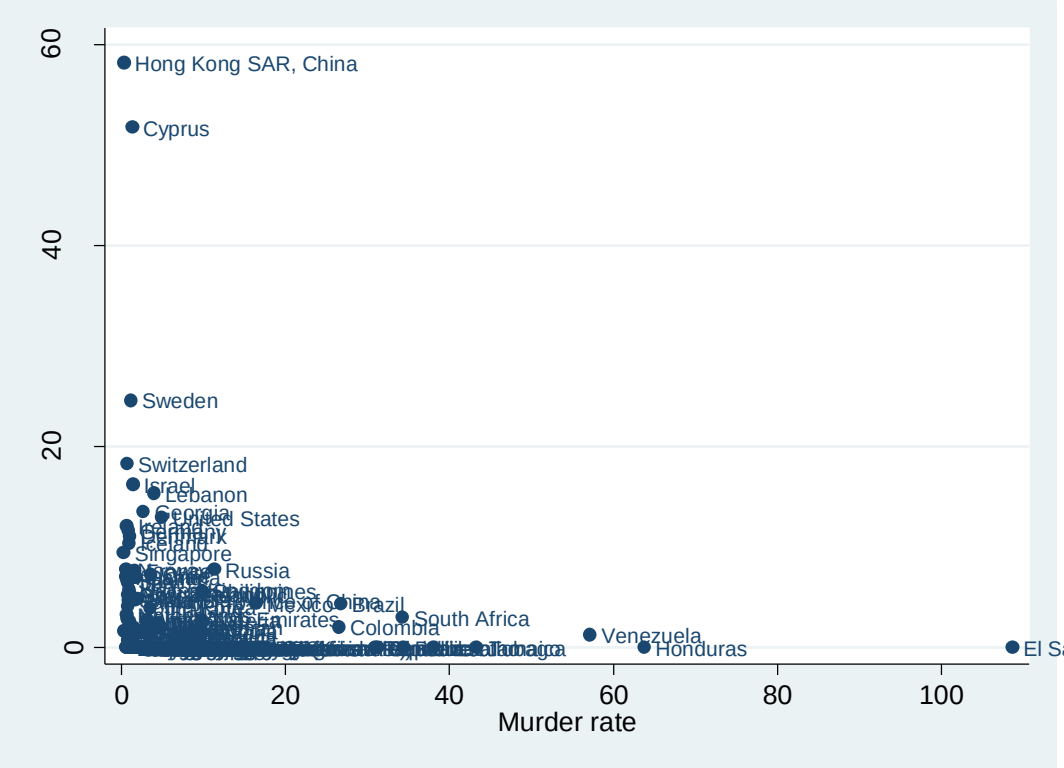
Equations, Number of Observations / Variables	1, N=141	2, N=155	3, N=155	4, N=117	5, N=154
Constant	6.4***	-4.4***	-2.4 (significant at 12%)	-5.6***	3.8***
Happiness score from 0 to 10 explained by **healthy life expectancy**	.	11.0***	10.6**	12.5**	11.5***
Happiness score from 0 to 10 explained by **PPP 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 R2, %	2	22	21	22	17

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

The murder rate has a predictable negative impact on billionaire intensity, but in multiple regressions this variable works only together with healthy life expectancy (Table 2). It loses significance when other determinants of happiness are included into the right-hand side of the equation.

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



Source: 'The Forbes World's Billionaires List'; United Nations Office on Drugs and Crime (UNODC).

Another unexpected result is the negative relationship between billionaire intensity and the inequality of income distribution as measured by Gini coefficient derived from household surveys. It seems billionaires prefer countries with lower income inequalities and the presence of billionaires, though it increases income inequality at the very top of the income pyramid by definition, does not increase general income inequality that is measured by surveys of representative sample households (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 so).[2] The deviations from the predicted values that are shown in Table 3. Countries that significantly exceed the predicted number of billionaires (by double or more) include developed countries such as Canada, Germany, Israel, Spain and the UK, as well as the developing countries of Brazil, Egypt, Hong Kong, India, Kazakhstan, Malaysia, Russia, Saudi Arabia, Turkey, Ukraine, and the Philippines. Countries where the number of billionaires is considerably lower than predicted are Argentina, China, Japan, Oman, Romania, most countries of Western Europe and the Czech Republic.

Table 3. Number of billionaires in various countries – actual and predicted by regression

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**

[2] The relationship is non-linear:
Number of billionaires in 2007 = -0.9 + 0.367***y*** – 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, R^2 = 0.95, all coefficients significant at 1% level.

Israel	**9**	**5**	**4**
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
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

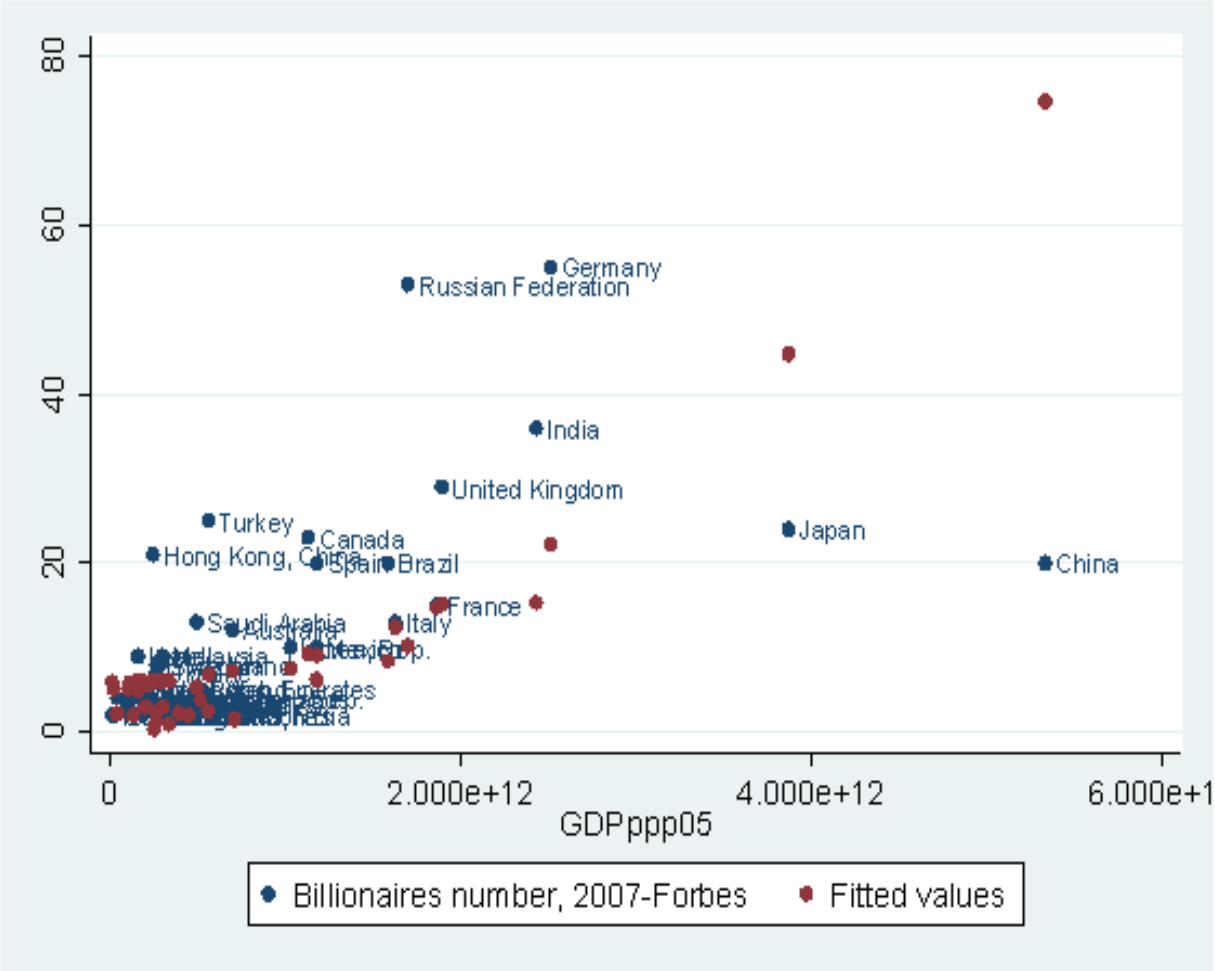
ALL	**946**	**817**	**120**
COUNTRY	Number of billionaires (1)	Predicted number of billionaires (2)	"Excess" number of billionaires (3) = (1) – (2)

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 the countries of the Middle East and North Africa region (MENA) that are characterised by a relatively even distribution of income and wealth.[3] 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, while in the later they are low overall, but not at the very top.

[3] 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.

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



Source: 'The Forbes World's Billionaires List', WDI.

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

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

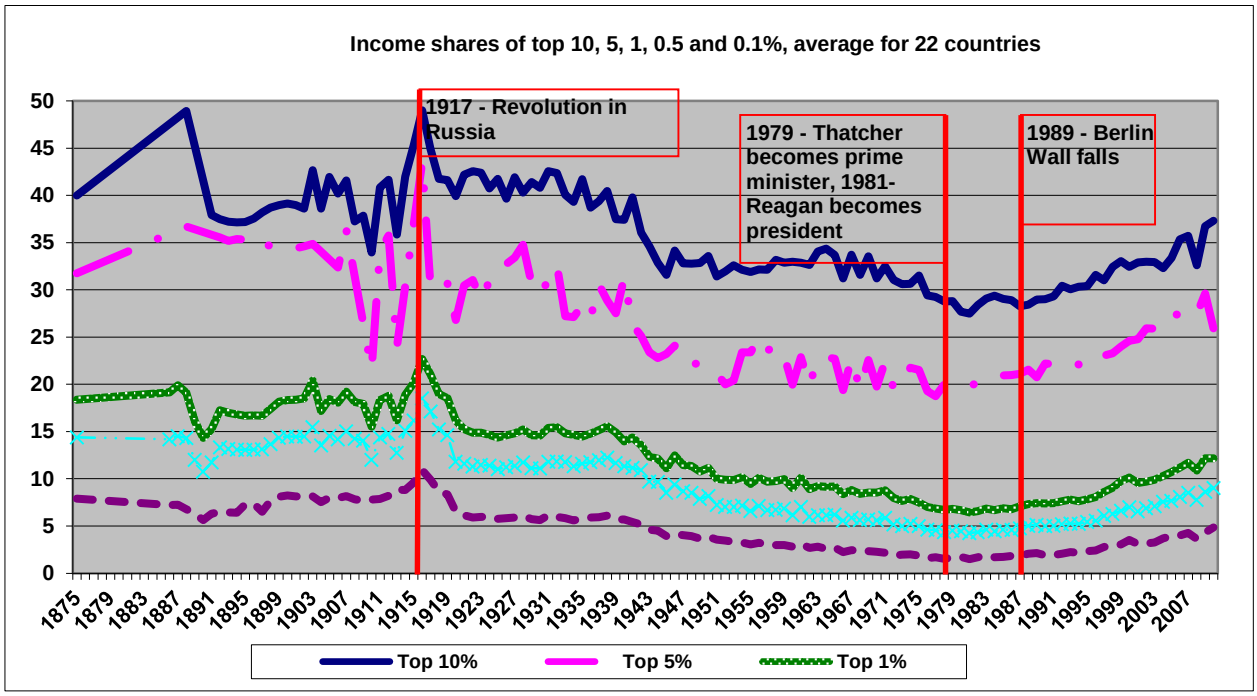
Long-term trends in income inequalities and billionaire intensity

Long-term data suggests that inequality increased from ancient times to reach an all-time peak in the early 20th century and then declined after the First World War and the 1917 Russian Revolution.

The destruction of communal and collectivist institutions, first carried out in European countries between the 16th and 19th centuries, such as through the enclosure movement in England, and extended by colonialism beyond, was accompanied by increasing wealth and income inequality in most societies. Only during the Hobsbawm's 'short 20th century' was the trend towards increased income and wealth inequalities interrupted. This was probably because of the greater egalitarianism present in the socialist countries where there were lower levels of inequalities (with Gini coefficients of between 25% and 30% on average) and because of the checks experienced elsewhere to rising inequalities through the growth of socialist and other egalitarian movements. But since 1980, inequality is growing again and is now close to historical highs (Jomo, Popov, 2016).

In many countries, inequality has been approaching the levels recorded 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) 10% of the population was 40–45% in the 1920s and 1930s. This fell to 30–35% from the 1940s to the 1970s. This started climbing again in 1980 and reached 45% in 2005 (Figure 13).

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



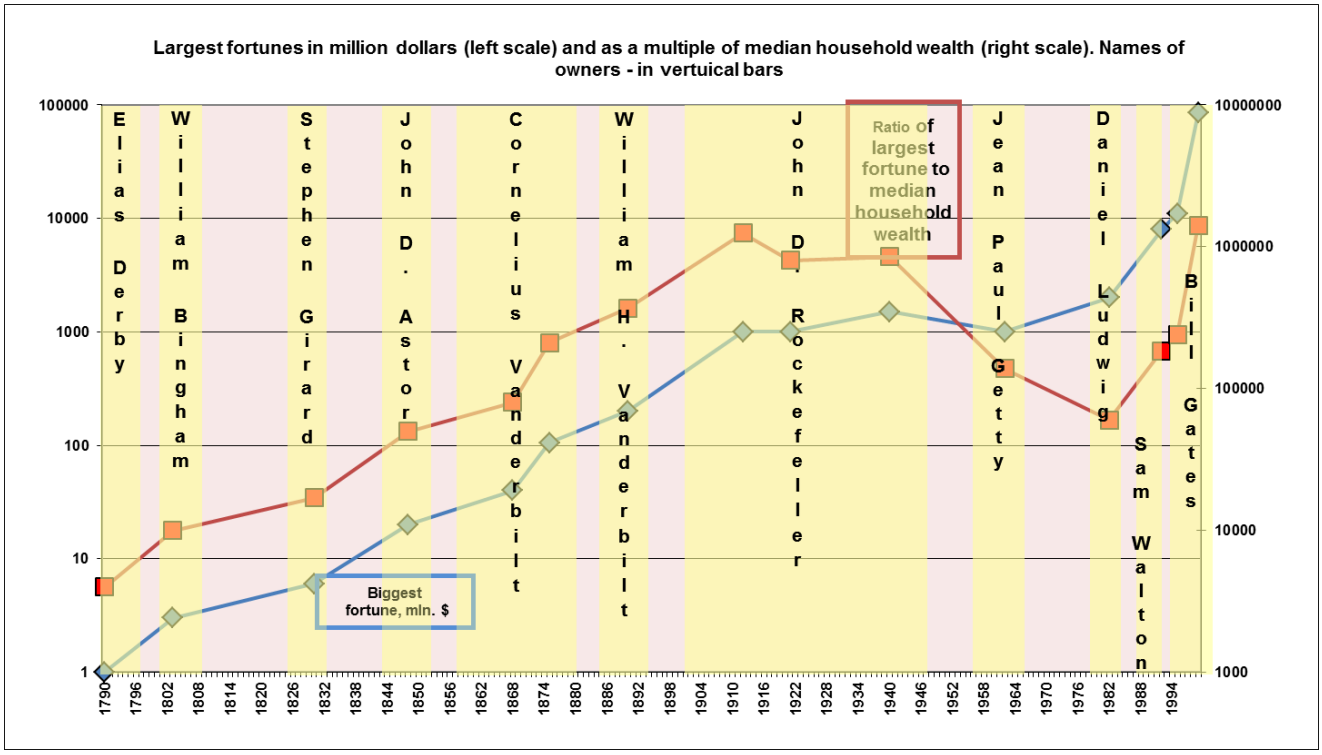
Note: Asia: China, India, Indonesia, Japan, Singapore; Australia and New Zealand; European countries: Denmark, Finland, France, Germany, Italy, Ireland, Portugal, Netherlands, Norway, Spain, Switzerland, Sweden, UK; Latin America: Argentina; North America: Canada and the United States; Sub-Saharan Africa;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

Source: Data from A., Facundo, A. B. Atkinson, T. Piketty and E. Saez, The World Top Incomes Database

The trends in long-term billionaire intensity, as much as available statistics reveal, 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 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 (the $85 billion fortune of Bill Gates).

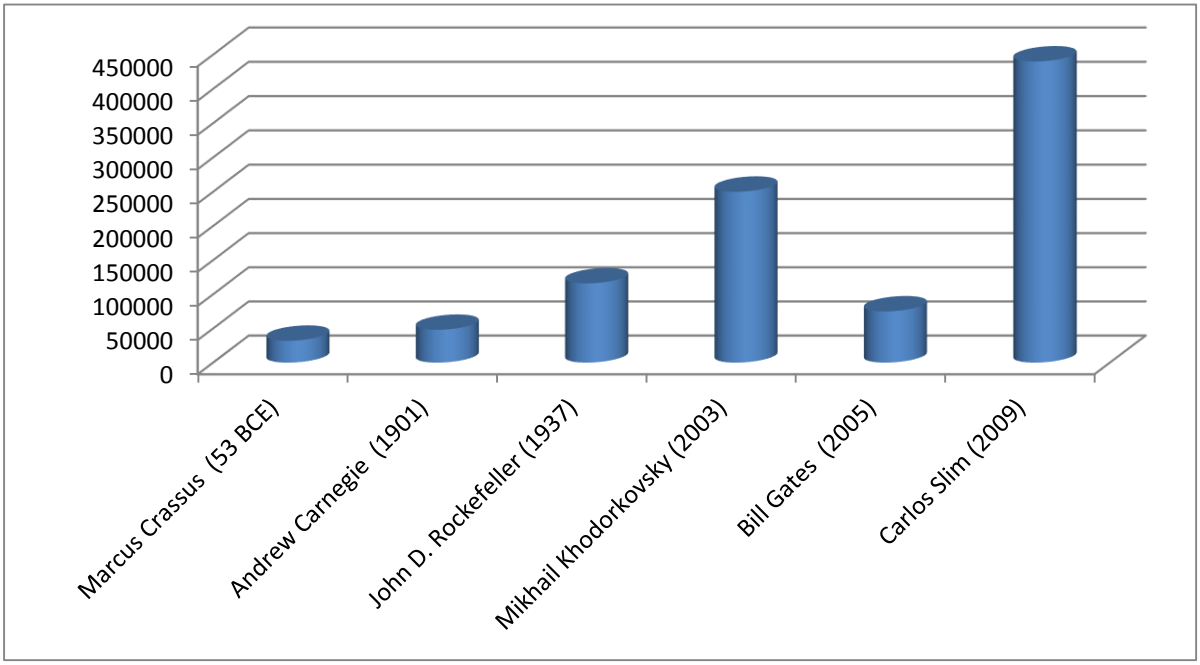
Figure 14. Largest fortunes in the US in millions of dollars and as a multiple of the median wealth of households, log scale



Source: Data from Phillips (2002).

A comparison of the wealth of the richest tycoons in different countries in different epochs. 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 we 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: Data from Milanovic (2011)

It is not clear where the trend in income inequalities will lead. Simon Kuznets (1955) hypothesised that there is an inverted U-shaped relationship between economic growth and inequality, with inequality increasing at the industrialisation 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 twenty-first 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 and was only temporarily interrupted in the 20th century due to the destruction of capital during the two world wars and for other reasons. In this logic, however, it is not clear why the sustained increase in

capital (versus labour) 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 onwards and posed less of a threat, income inequalities started to grow again (Jomo, Popov, 2016).

In 1996, there were 423 billionaires and their new worth was 2.7% of the world gross product. In 2018 the same number of richest world citizens (423), each had over $2.5 billion. Together they had a total wealth equivalent to 4.7% of gross world product (overall there were 2028 billionaires that controlled 5.7% of the world GDP).

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 mounting discussions and concerns about growing income and wealth inequalities (even participants of the Davos Forum recognise growing inequality as a major risk for the world economy), these concerns have not yet materialised 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 after the beginning of the 1980s.

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 this last?

Conclusion

Rich and well-developed tax havens, such as Cyprus, Guernsey, Hong Kong, Monaco, and Lichtenstein, attract many billionaires, but other less developed countries with zero or low personal income taxes (such as the Persian Gulf states of Bahrain, Kuwait, Oman, Qatar, UAE) have relatively few.

Unsurprisingly, the happiness index is a strong predictor of the concentration of wealth in particular countries. Some determinants of the index, such as healthy life expectancy, are strong predictors of the concentration of wealth. Surprisingly, other determinants, such as per capita income and social support, do not seem to matter. Personal freedom does matter but it is a 'wrong' sign, i.e., the lower the assessment of personal freedom in a country, the higher the billionaire intensity.

Another unexpected result is the negative relationship between billionaire intensity and inequality of income distribution as measured by the Gini coefficient derived from household surveys. Billionaires, it seems, prefer countries with lower income inequalities. While by definition the presence of billionaires in a country increases income inequality at the very top income pyramid, it does not increase general income inequality.

The increase in billionaire intensity in 1996-2018 confirms that the rise in inequality in the past two decades occurred not only at the level of deciles and percentiles, but also at the very top. Less than 400 billionaires now control wealth equivalent to 4.7% of world gross product as compared to 2.7% in 1996. Since the 1980s, tax policies in major countries have supported these trends.

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