IMC
WORKING PAPERS

Investment Migration Working Papers

Why some Countries have more Billionaires than Others? Explaining Variety in the Billionaire Intensity of GDP

Vladimir Popov

IMC-RP 2018/3

Publications in this Working Paper Series should be cited as:
AUTHOR, TITLE, INVESTMENT MIGRATION WORKING PAPER NO./YEAR [URL]

ISSN 2504-1541

Editorial Board

Advisory board

Information for prospective authors

The editors welcome unsolicited submissions of previously unpublished material that will advance knowledge in the field of investment migration. The Papers do not take copyright, encouraging the authors to republish material elsewhere, provided the text mentions that it has previously appeared in the Investment Migration Papers. Research papers should be between 6,000 and 15,000 words in length, including the references. The Policy Briefs should start at 3,500 words.

Submissions should be made electronically to the following email: 2016academic@ investmentmigration.org. The following information should be included at submission: authors full name, postal address, e-mail and institutional affiliation, and a statement that the text has not been previously published elsewhere. The submission should contain an abstract of up to 200 words and 5–10 key-words. All papers are reviewed by the members of the editorial board. We publish fast.

Joint Investment Migration Working Paper / DOC Research Institute Paper
IMC-RP2018/3

Why some countries have more Billionaires than others?
Explaining variations in the Billionaire Intensity of GDP

Vladimir Popov*

ABSTRACT: The list of billionaires and their wealth published by Forbes magazine in the US allows computing 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, the happiness index, especially one of its determinants – healthy life expectancy, is a strong predictor of the concentration of wealth in particular countries. Surprisingly, other determinants of the 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 personal freedom is, 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 seem to prefer countries with lower income inequalities. The presence of billionaires, while increasing income inequality at the very top by definition, does not increase general income inequality. Long-term trends in the billionaire intensity also appear to mirror changes in income equality within countries, as measured by the Gini coefficient: an increase before the First World War, followed by a decrease until the 1980s, and subsequently a new rise.

KEYWORDS: Income inequalities, billionaire intensity, tax rates, happiness index, murders

* Research Director (Economics and Politics), Dialogue of Civilizations Research Institute (DOC-RI). I am grateful to Ekaterina Jarkov, Research Assistant at DOC-RI, for her help with the data processing, and to Dimitry Kochenov and an anonymous referee for helpful comments. Usual disclaimers apply.

Contents

1. Introduction 1
2. Number of billionaires and relative value of their wealth 2
3. Determinants of billionaire intensity 10
4. Happiness Index 13
5. Long-term trends in income inequalities and billionaire intensity 23
6. Conclusions 29
7. References 30

1. Introduction

The *Forbes* magazine annual list of billionaires and their wealth provides enough data so that the number of billionaires per unit of gross domestic product (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 the factors which 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 well-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. Personal freedom does matter but it has the '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 of the income pyramid, it does not increase general income inequality.

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

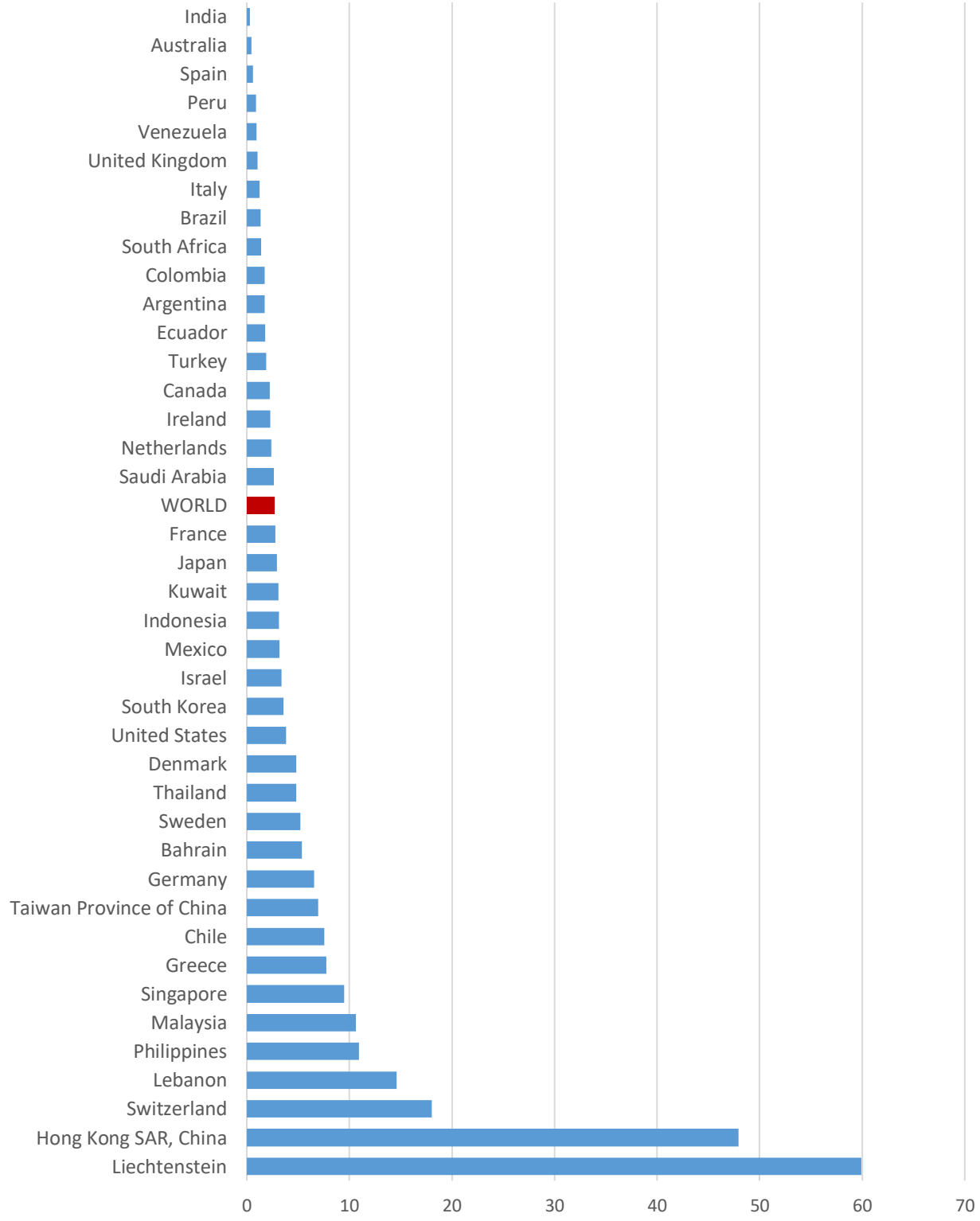
2. Number of billionaires and relative value of their wealth

According to *Forbes*, the number of billionaires in the world increased from 423 in 1996 to 2028 in 2018. In that time, the combined wealth of billionaires grew from 2.7% of the gross world product to 5.4% (Figures 1–3). In 2018 the richest 423 people in the world (the same number as all the billionaires in 1996) each possessed at least USD 2.5 billion in wealth, which when combined equalled 4.7% of the world's gross product. In 1996 the countries with the highest ratio of billionaire wealth to 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, Guernsey, Iceland, Ireland, Israel, Monaco, Swaziland, Sweden and the United States (Figure 4). 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 twenty 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 several times in a lifetime) and not on the second and third citizenship, so it is difficult to study the 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.

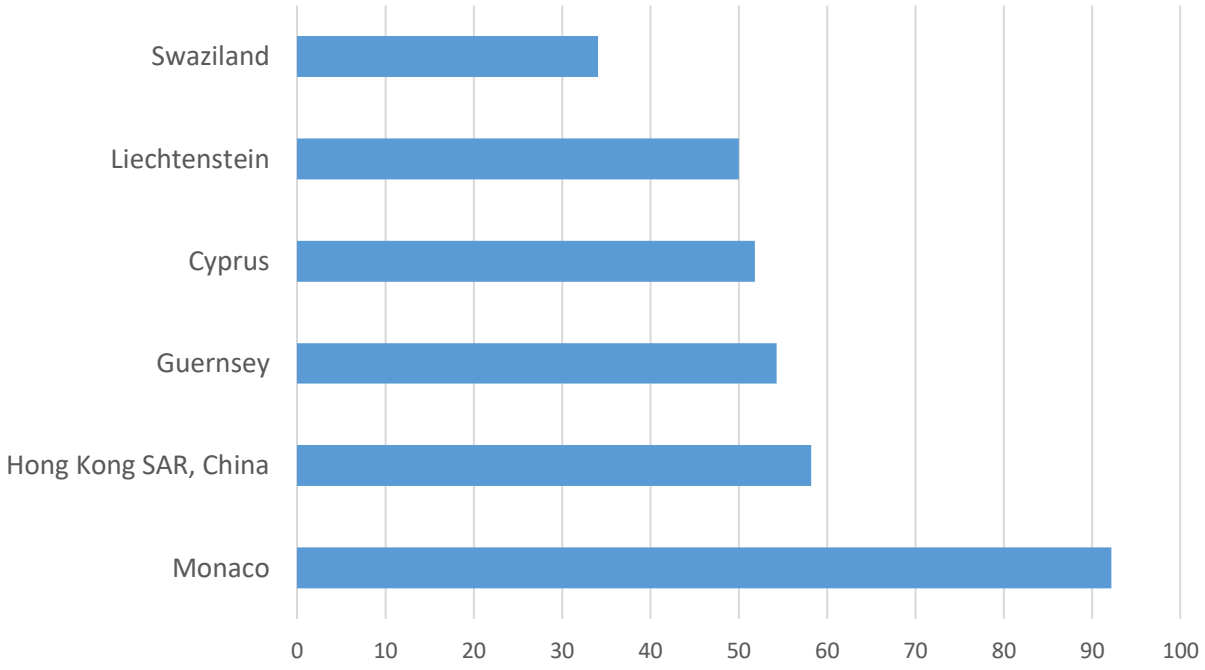
Solimano (2018), using data from the Global Wealth Migration Review, lists countries with the highest inflows of high net worth individuals (HNWI – those whose net worth exceeds USD 1 million) in 2017 (Australia, US, Canada, UAE, Israel, Switzerland, New Zealand, Singapore and the Caribbean tax havens – Bermuda, the Cayman Islands, the Virgin Islands, St. Barts, Antigua, St Kitts and Nevis, etc.). It is easy to notice that these countries have relatively high billionaire wealth to GDP ratios, and this ratio is higher than average, particularly in the US, Canada, Singapore, Switzerland and Israel (Figures 2–3).

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



Source: 'The Forbes World's Billionaires List', WDI 1996.

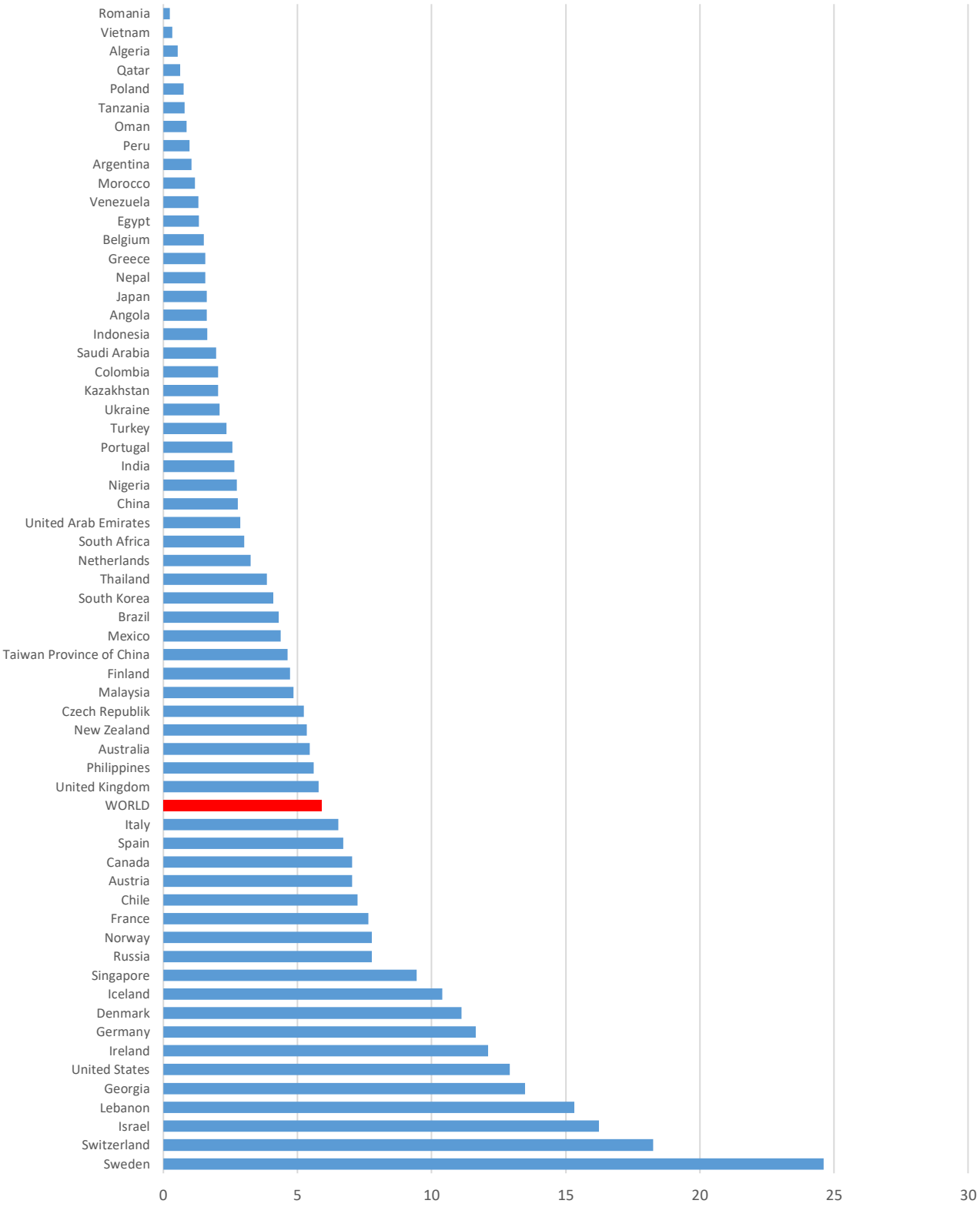
Figure 2. Ratio of billionaire wealth to PPP GDP in 2018, % (countries with ratios over 30%)



Source: 'The Forbes World's Billionaires List', WDI 2018.

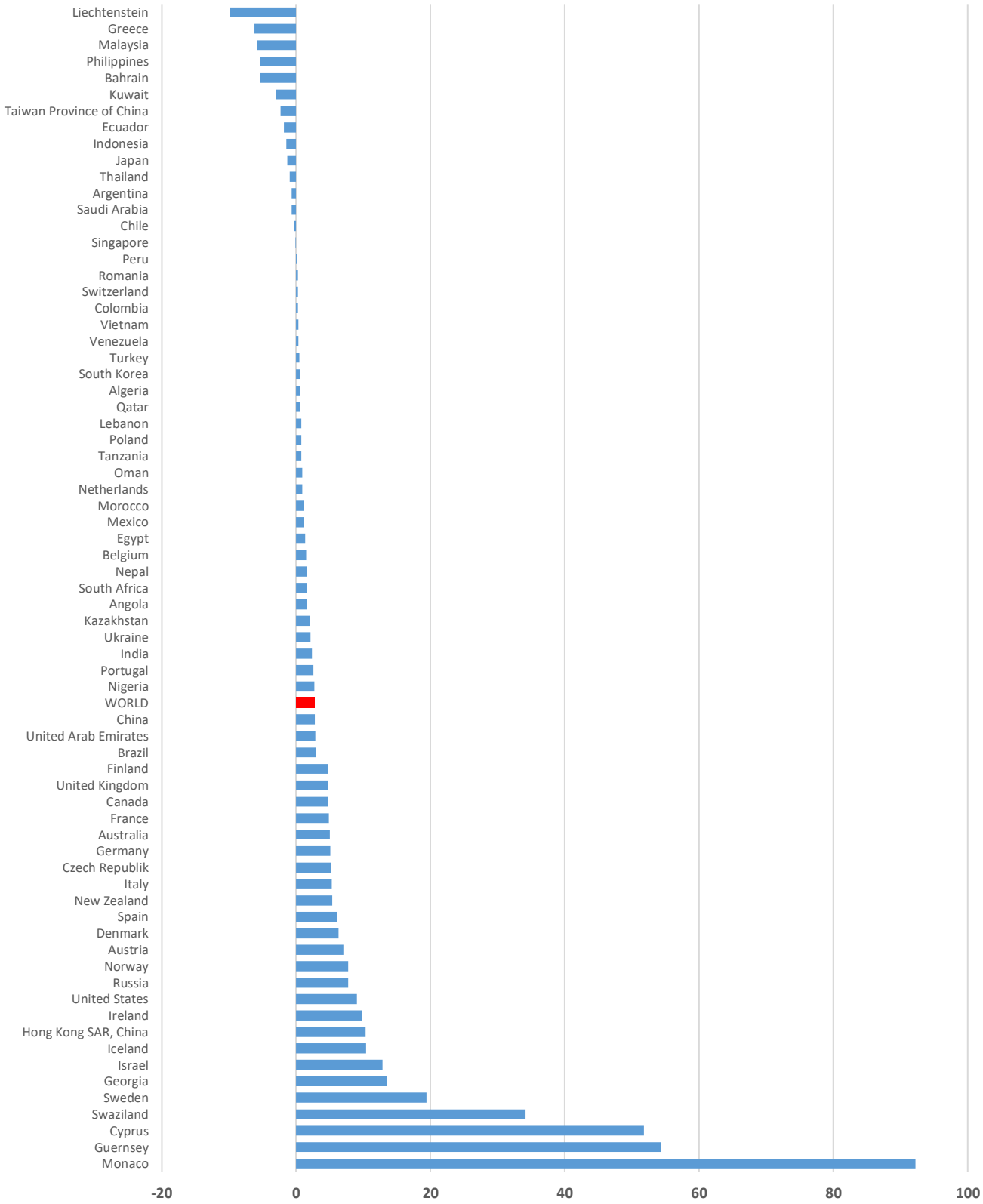
Figure 3. Ratio of the combined wealth of billionaires to PPP GDP in 2018, %

(Countries with ratios below 30%)



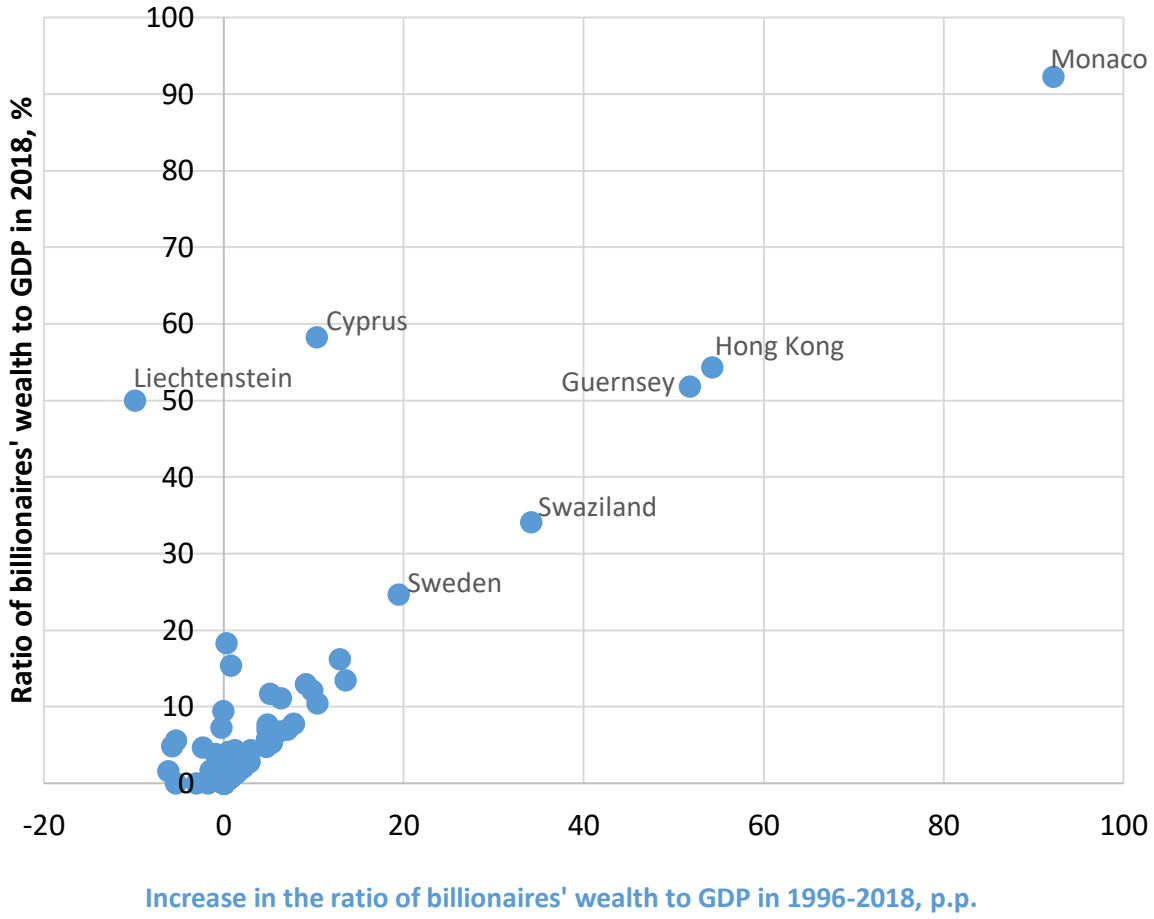
Source: 'The Forbes World's Billionaires List', WDI 2018.

Figure 4. Increase in wealth to PPP GDP ratios in 1996-2018



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

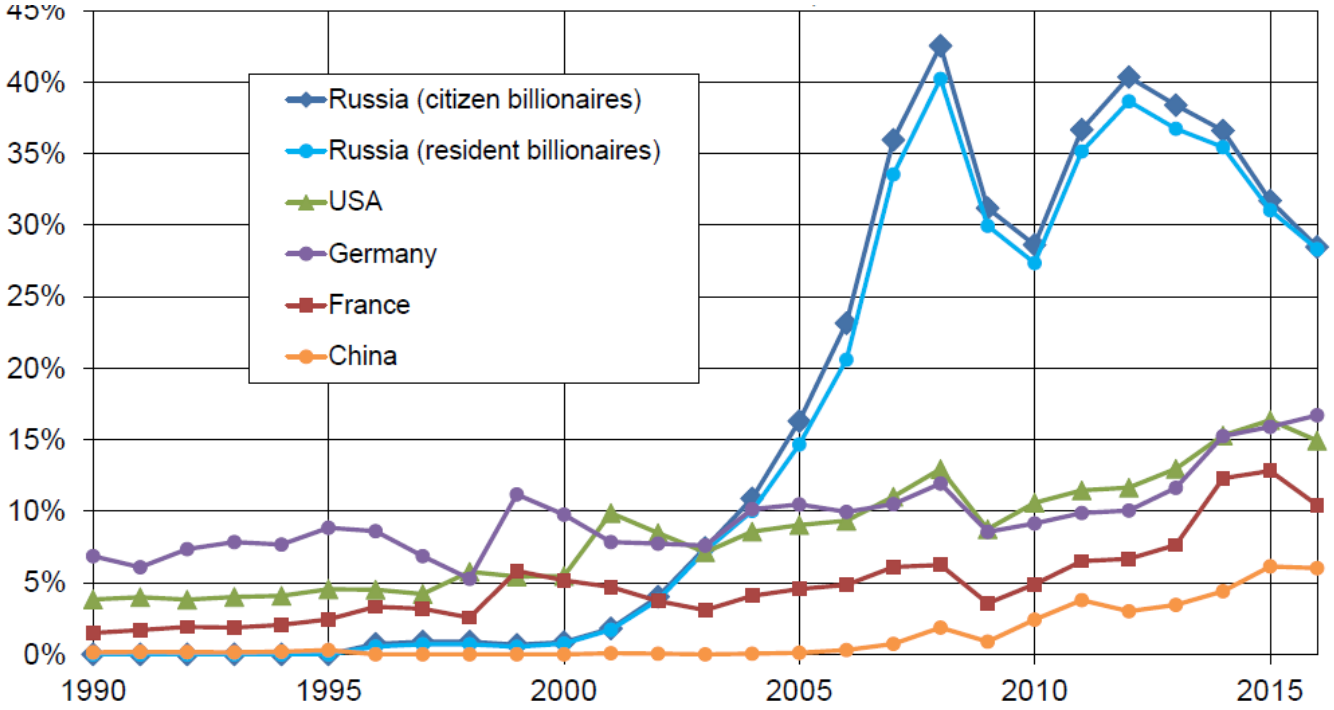
Figure 5. Ratio of billionaire wealth to PPP GDP in certain countries in 2018 in % and the increase in this ratio in 1996-2018



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

Many billionaires emerged in the former communist countries after the transition of those countries to capitalism. Russia 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 (at the market exchange rate, see Figure 6). The wealth of billionaires in Russia in 2007–2016 accounted for more than 25% of the national income, while in China, France, Germany, and the US it was less than 15% (Figure 6).

Figure 6. *Forbes* Billionaire wealth as a % of national income in 1990-2016 in major countries



Total billionaire wealth (as recorded by Forbes global list of dollar billionaires) divided by national income (measured at market exchange rates). For other countries, we only report citizen billionaires (numbers for resident billionaires are virtually identical).

Source: Novokmet, Piketty and Zucman (2017).[2]

The 2013 *Forbes* list placed Georgia and Russia ahead of other former communist countries in billionaire intensity (number of billionaires per USD 1 trillion PPP GDP), followed by the 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 Georgia's. For example, Azerbaijan and Uzbekistan would have had about three billionaires had they had the same levels of billionaire intensity as Russia. However, in fact, they did not.

Many of the billionaires who emerged in post-communist countries changed their citizenships. In 2014 there were at least 10 billionaires from Russia with dual citizenship. Several others later gained passports from Malta and other countries through citizenship for investment programmes.[3]

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

[3] https://www.rbc.ru/photoreport/09/04/2014/54240d5ecbb20fb1b3c62b6b; https://www.vedomosti.ru/politics/news/2018/01/09/747290-grazhdan-malti.

In 2018 only two post-communist economies had combined wealth of billionaires to GDP ratios 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 USD 4.6 billion accounted for 13.5% of the national PPP GDP for 2016. As Figure 3 shows, 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%) and Romania (0.2%).

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

Country	Number of Billionaires	Total Wealth	PPP GDP, 2012	Number per USD 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.

However, the number of billionaires in China was growing fast. In April 2007, before the 2008–2009 recession, *Forbes* listed twenty 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.

3. Determinants of billionaire intensity

It is to be expected that billionaires would 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 with respect to others. For example, the Persian Gulf states of Bahrain, Kuwait, Oman, Qatar and the UAE all have zero personal income tax (Figures 7, 8), but their billionaire intensity is significantly lower

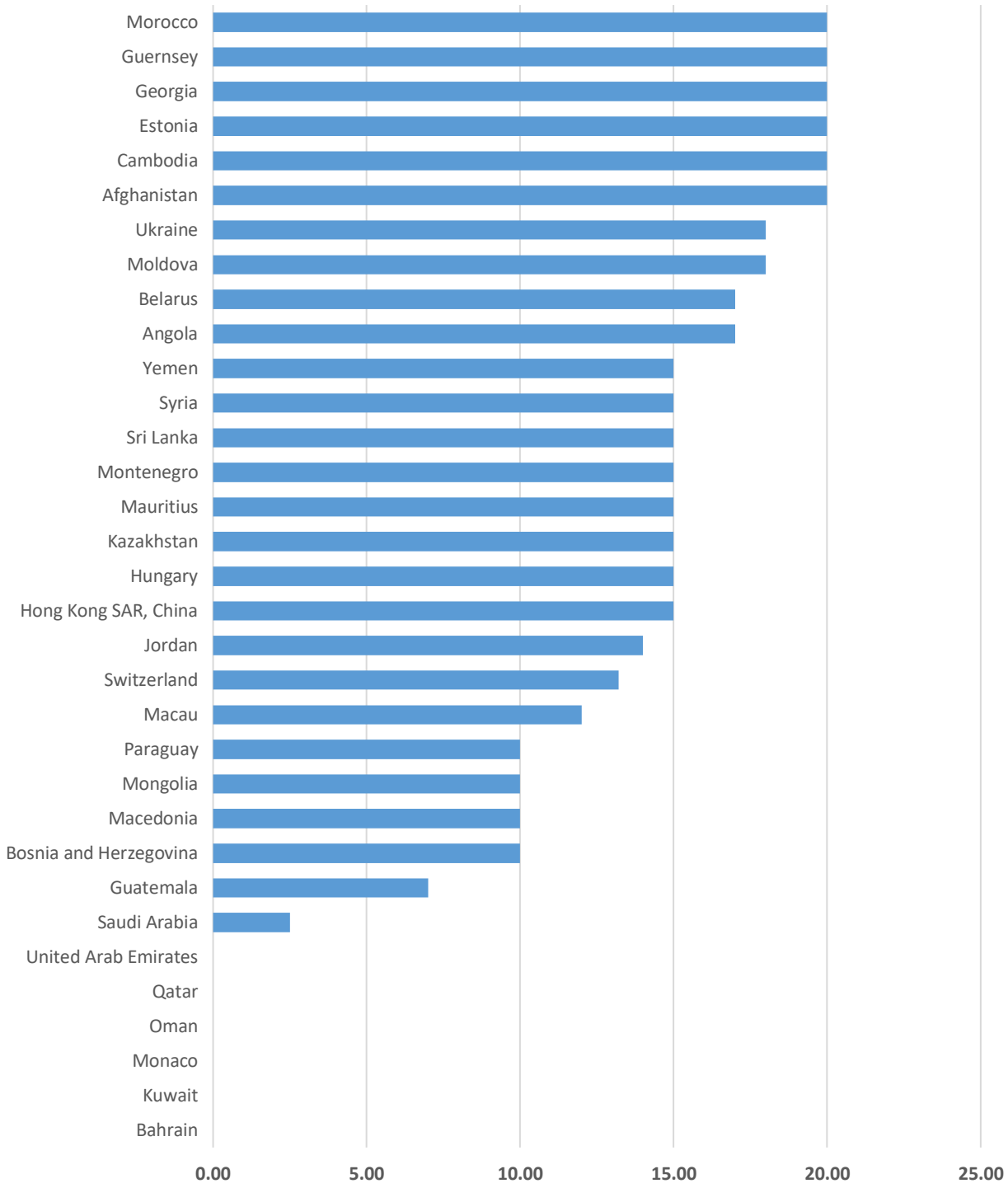
than in countries with some of the highest personal income taxes in the world, including Denmark, Germany, Ireland and Sweden.

In fact, many post-communist countries have extremely low personal income taxes. Belarus, Bosnia and Herzegovina, Estonia, Georgia, Hungary, Kazakhstan, Macedonia, Moldova, Mongolia, Montenegro and the Ukraine all have personal income taxes below 20%. There was no income tax return system under socialism and even today, three decades after the transition from communism, the income tax return system does not function fully. However, 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 (Figure 8).

Overall, if there is a relationship between tax rates and billionaire intensity, it is positive rather than negative (Figure 9). In multiple regression analysis of billionaire intensity involving such determinants as quality of life and tax rates, the latter turn out to be insignificant (Figure 7). It turns out that safety, security and quality of life matter more than the tax rate, and these quality of life characteristics are generally better 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 the 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 such as Scandinavian countries.

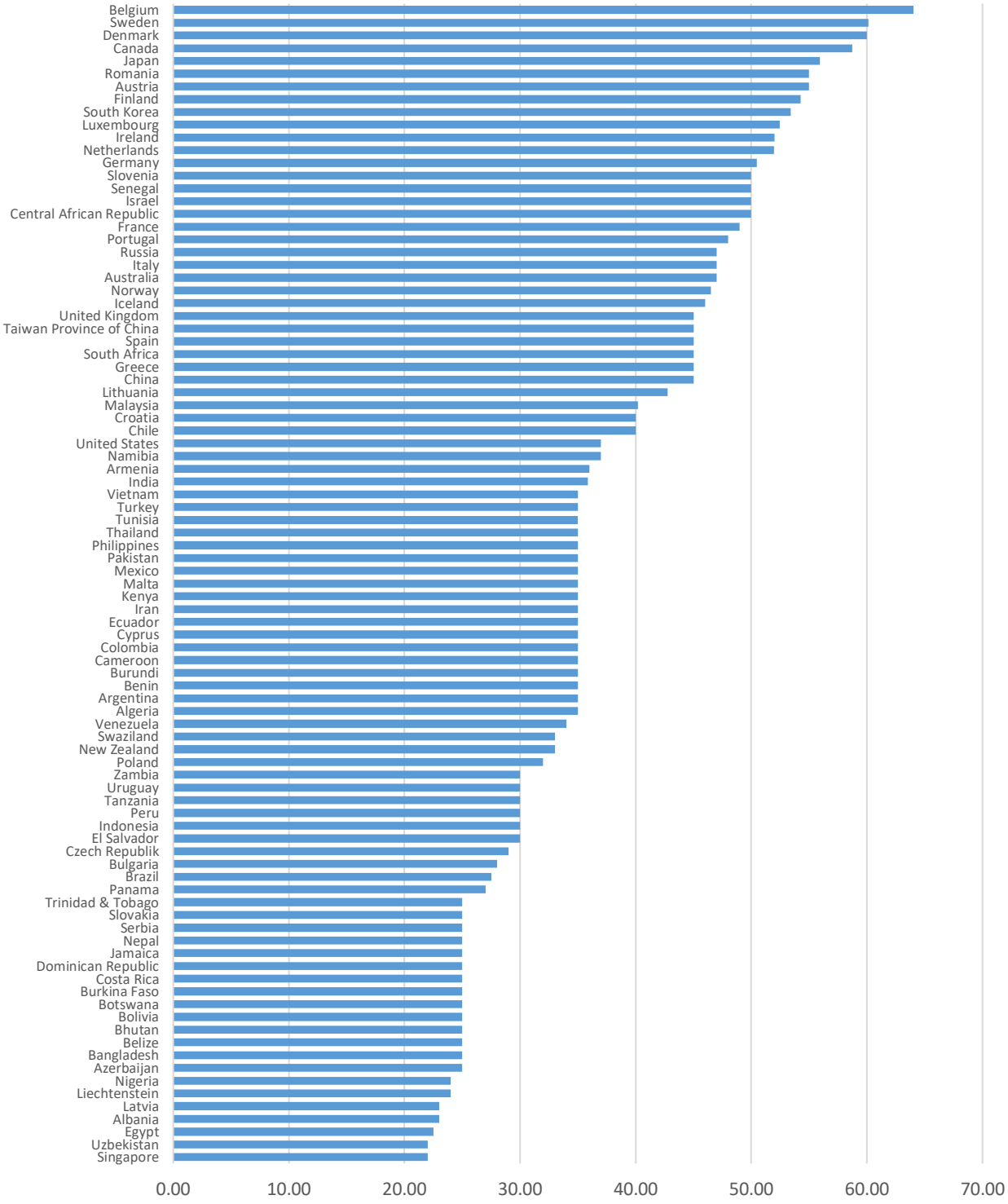
Figure 7. Countries with personal income tax rate of 20% and less



Source: List of countries by tax rates, Wikipedia, May 15, 2018.[4]

[4] (https://en.wikipedia.org/wiki/List_of_countries_by_tax_rates).

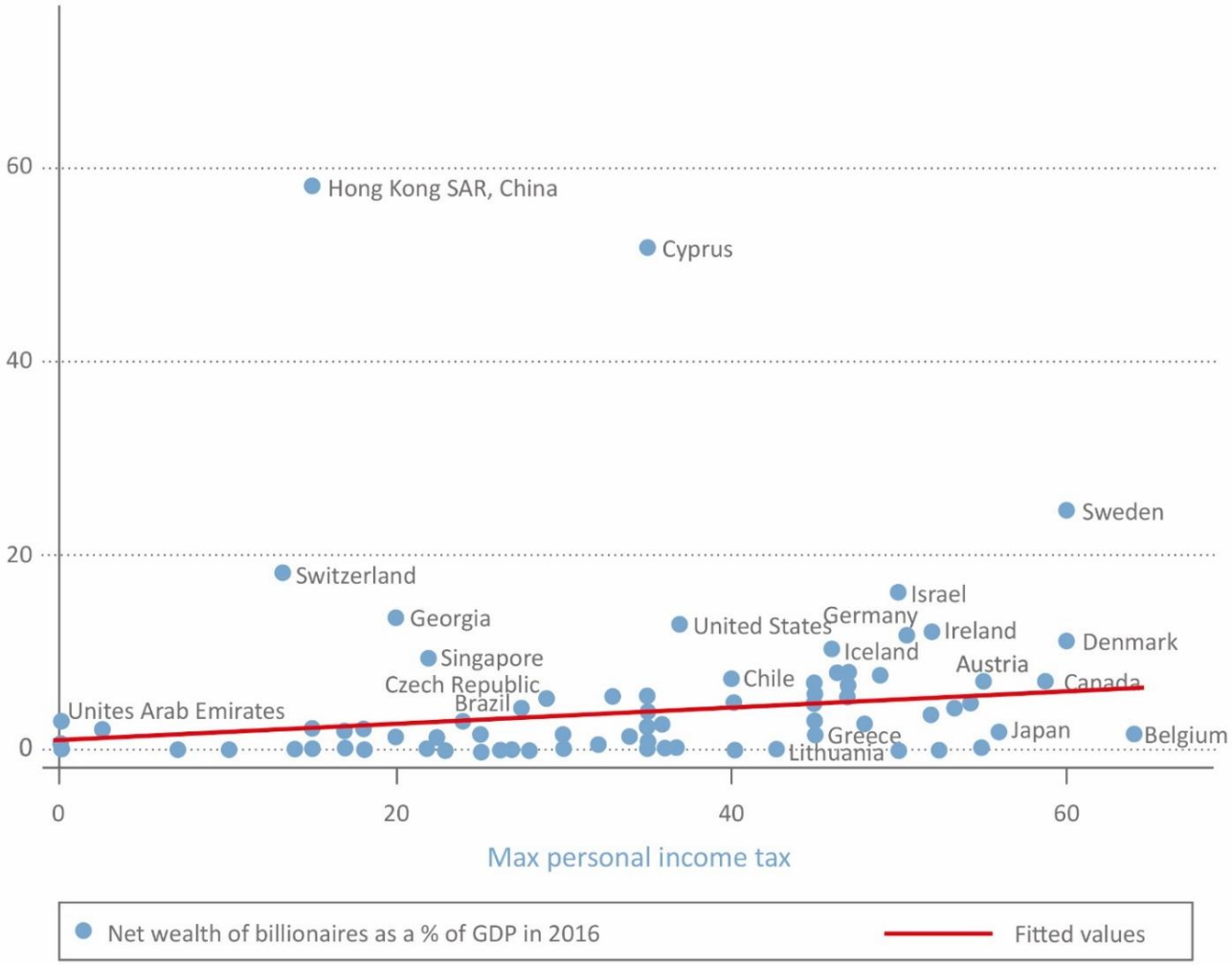
Figure 8. Countries with personal income tax rates above 20%



Source: List of countries by tax rate, Wikipedia, 15 May 2018.[5]

[5] https://en.wikipedia.org/wiki/List_of_countries_by_tax_rates

Figure 9. Personal income tax rates and net wealth of billionaires as a % of PPP GDP in 2018



Source: List of countries by tax rate, Wikipedia, 15 May 2018.[6]

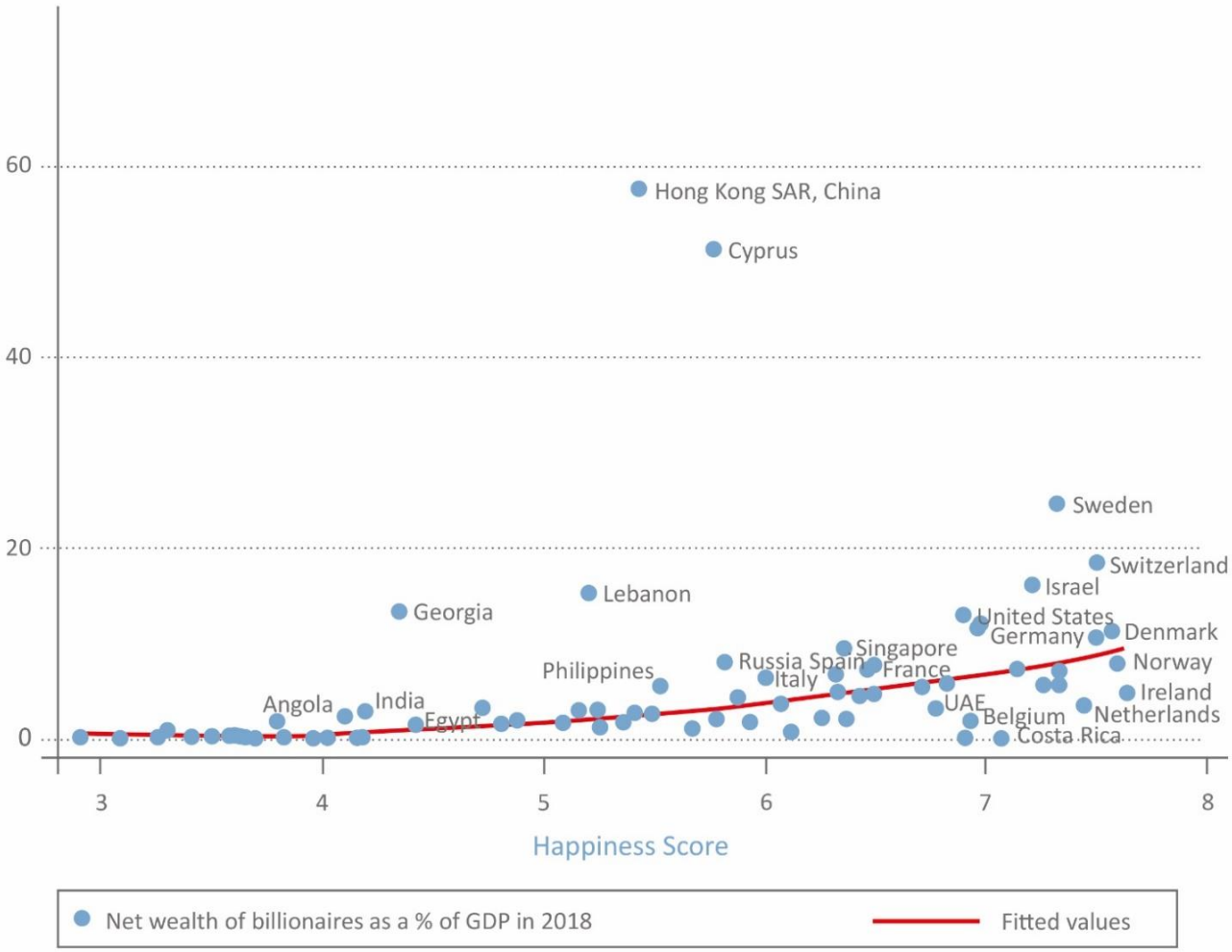
4. Happiness index

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

[6] https://en.wikipedia.org/wiki/List_of_countries_by_tax_rates

Unfortunately, happiness is not measured in microstate and territorial tax havens, such as Guernsey, Liechtenstein and Monaco, so the regression results reported here do not take these countries into account. However, in the 150+ countries for which data on happiness are available, there is a strong correlation between the happiness index and billionaire intensity (Figure 10).[7]

Figure 10. Happiness index and billionaire intensity in 2017–2018



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

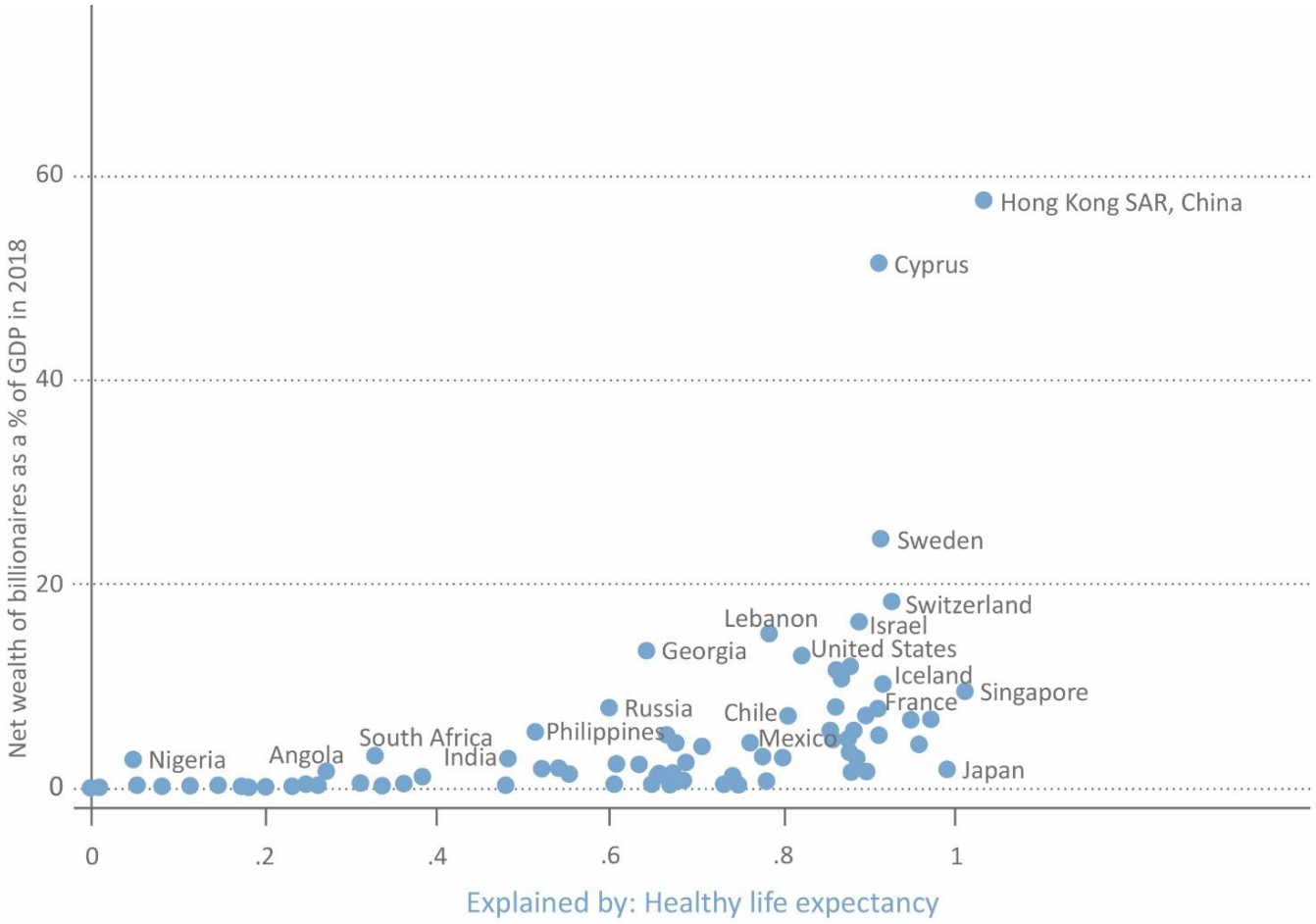
[7] There are reasons to believe that inclusion of these countries/territories will not change the results because their happiness indices, if measured, will turn out to be pretty high and support the general correlation.

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 (based on responses to the question about relatives or friends that can be counted on to help when in need)
- freedom index (based on responses to the question about the freedom to choose what to 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 (based on responses to the questions about how widespread corruption is in 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 the billionaire intensity. The best explanatory power is the healthy life expectancy indicator (Figure 11).

Figure 11. Happiness score in 2018 and murder rate (per 100,000 inhabitants) in 2016



Source: *World Happiness Report*, 'The Forbes World's Billionaires List'

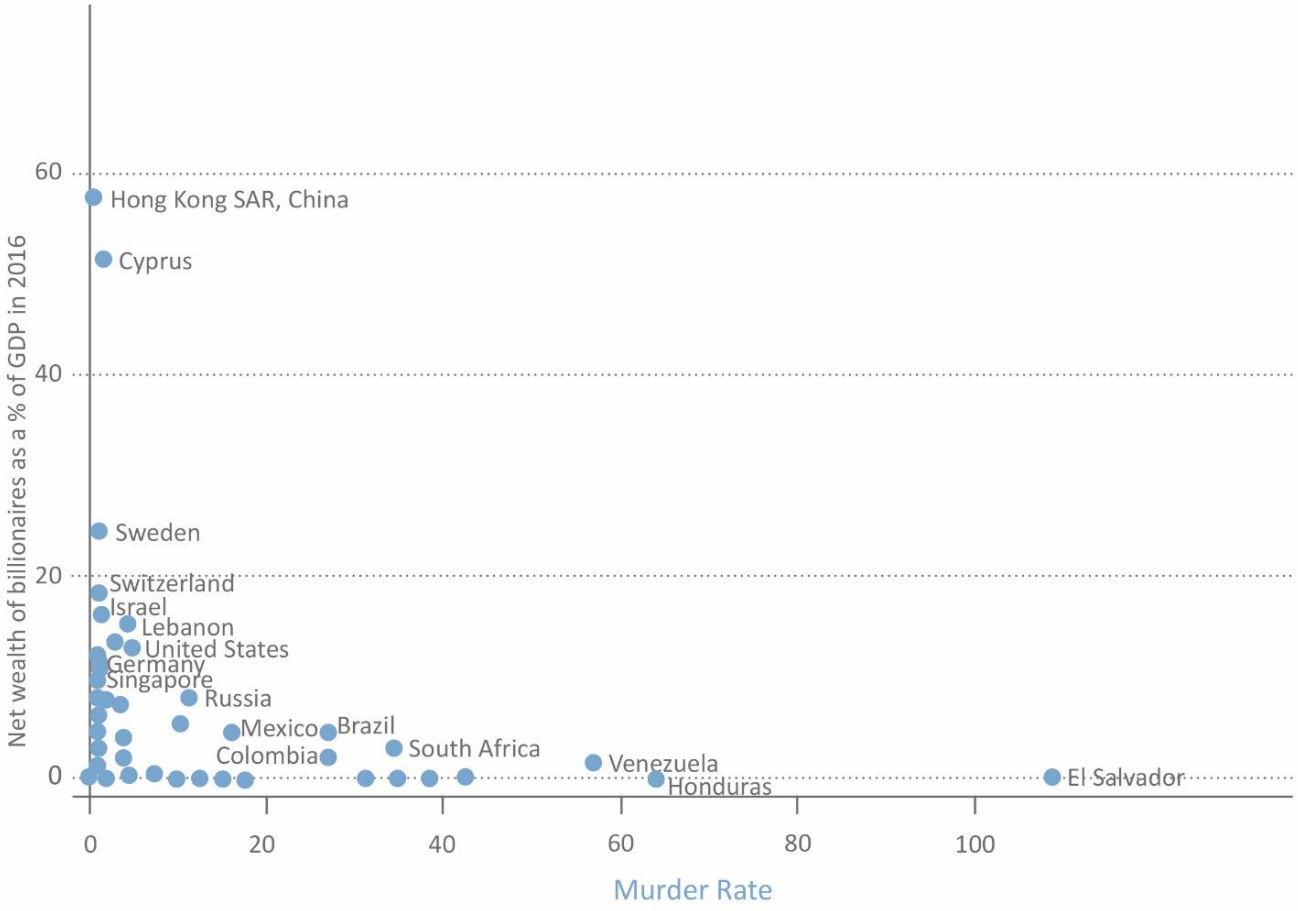
The best regression equation explains the billionaire intensity using the corruption index (negative impact),[8] the freedom index (negative impact), healthy life expectancy and generosity. Social support also had a negative impact on billionaire intensity for one regression (Table 2).

[8] "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, %) *, **, *** – Significant at 1%, 5% and 10% levels respectively.					
Equation **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 USD			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

The murder rate has a predictable negative impact on billionaire intensity (Figure 12), but in multiple regressions this variable only works along 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 12. 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 the Gini coefficient derived from household surveys. It seems that billionaires prefer countries with lower income inequalities and the presence of billionaires. Though the presence of billionaires increases income inequality at the very top of the income pyramid by definition, it does not increase general income inequality which 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 a country's GDP (per capita GDP is also important, but much less so).[9] The deviations from the predicted values are shown in Table 3 and Figure 13. Countries which significantly exceed their predicted number of billionaires (by 100% or more) include developed countries such as Canada, Germany, Israel, Spain and the UK, as well as the developing countries – 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 in Western Europe and the Czech Republic.

Table 3. Number of billionaires in various countries – actual and predicted by regression (see footnote 5)

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
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

[9] The relationship is non-linear:

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

y – PPP GDP per capita in thousand USD in 2005,
Y – PPP GDP in 2005 in trillions.

N= 181, $R^2 = 0.95$, all coefficients significant at 1% level. 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.

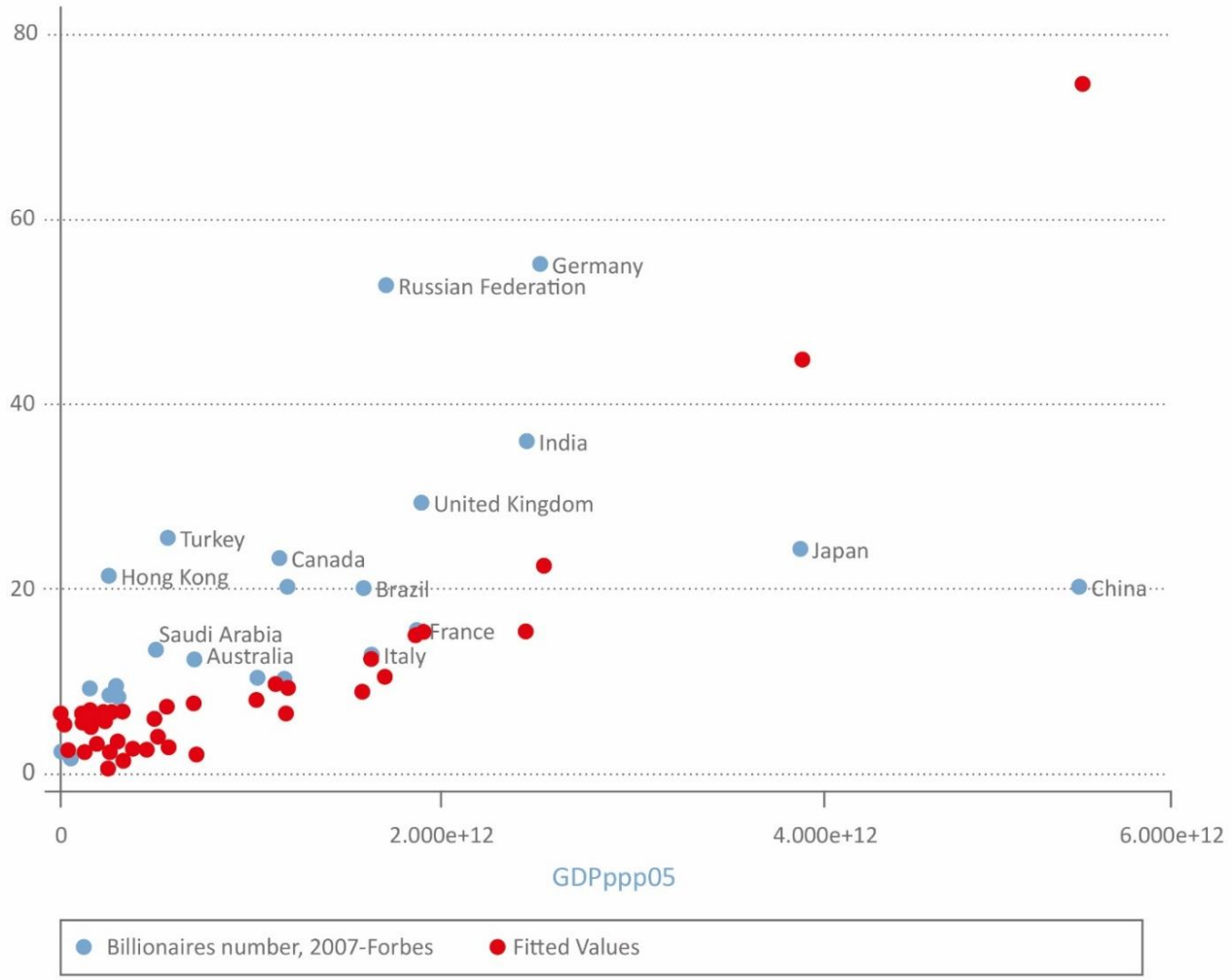
Norway	4	6	-2
Portugal	1	5	-4
Spain	20	9	11
Sweden	8	6	2
Switzerland	8	6	2
United Kingdom	29	15	14
SA	**36**	**15**	**21**
India	36	15	21
SSA	3	2	1
South Africa	3	2	1
MENA	**56**	**27**	**29**
Turkey	25	2	23
Saudi Arabia	13	5	8
UAE	5	6	-1
Kuwait	4	6	-2
Lebanon	4	2	2
Egypt, Arab Rep.	4	1	3
Oman	1	5	-4
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**

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 (MENA) which are characterised by a relatively even distribution of income and wealth. It appears as though 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 of the range, while in the latter they are low overall, but not at the very top.

Figure 13. Number of billionaires in 2007 and PPP GDP in 2005 (USD billions) by country



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

In 2007 for instance, China still had fewer 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%). It therefore appears that the Gini coefficient should not be considered 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 against 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 levels of corruption, inequality, freedom and social support, whereas the level of income and the level of taxation do not really matter.

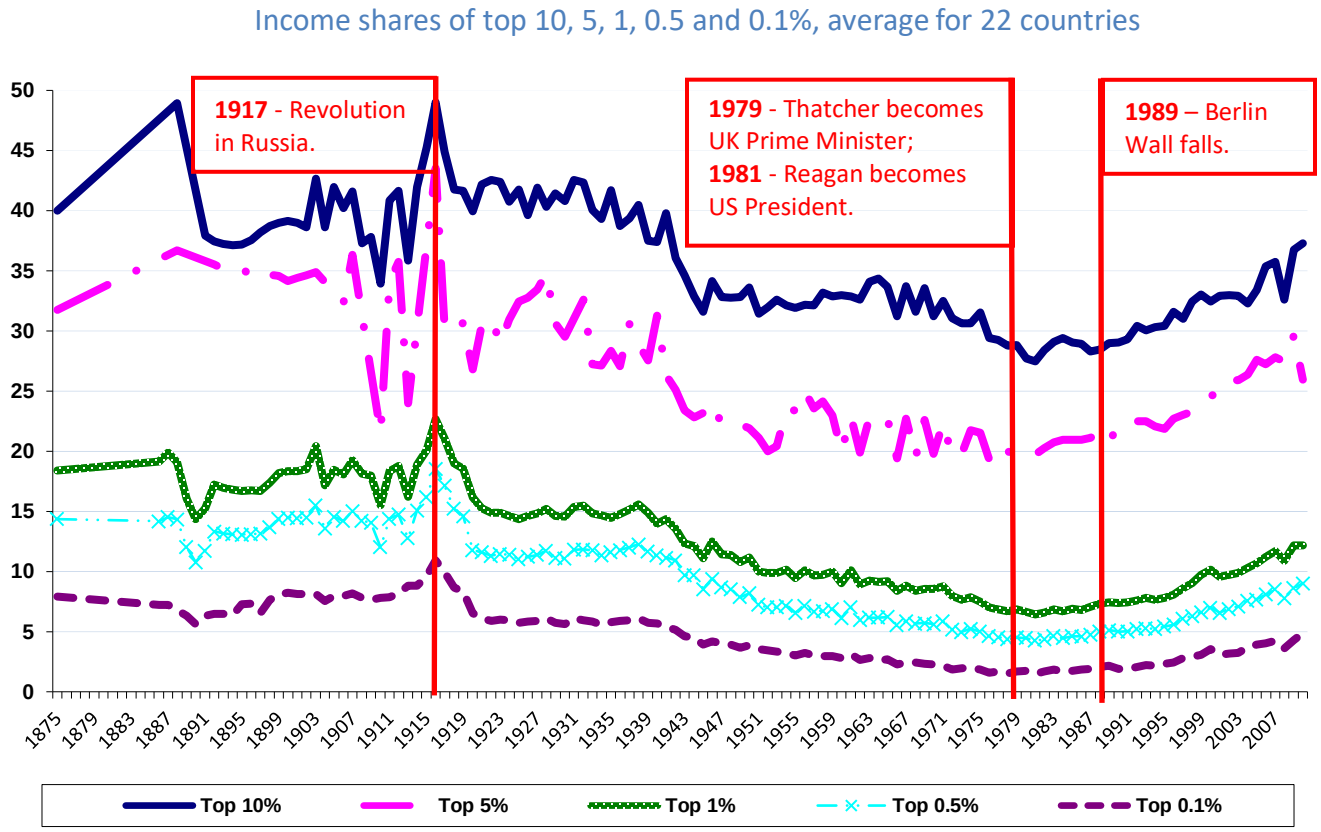
5. Long-term trends in income inequalities and billionaire intensity

Long term data suggests that inequality increased from antiquity to reach an all-time peak in the early twentieth century and then declined after the First World War and the 1917 Russian Revolution (Figure 14).

The destruction of communal and collectivist institutions, first carried out in European countries between the sixteenth and nineteenth centuries, such as through the enclosure movement in England, and extended by colonialism, was accompanied by increasing wealth and income inequality in most societies. Only during the Hobsbaum's 'short twentieth century' was the trend towards increased income and wealth inequality interrupted. This was probably because of the greater egalitarianism present in the socialist countries, where there were lower levels of inequality (with Gini coefficents of between 25% and 30% on average) and because of the checks experienced elsewhere to rising inequality through the growth of socialist and other egalitarian movements (Figures 14). However, since 1980, inequality has been growing again and is now close to historical highs (Jomo and Popov, 2016).

Inequality in many countries 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 inequality in most countries. To provide 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 and started climbing again in 1980, reaching 45% in 2005 (Figure 14).

Figure 14. Shares of top income groups in 22 major countries (unweighted average) in 1875–2010[10]

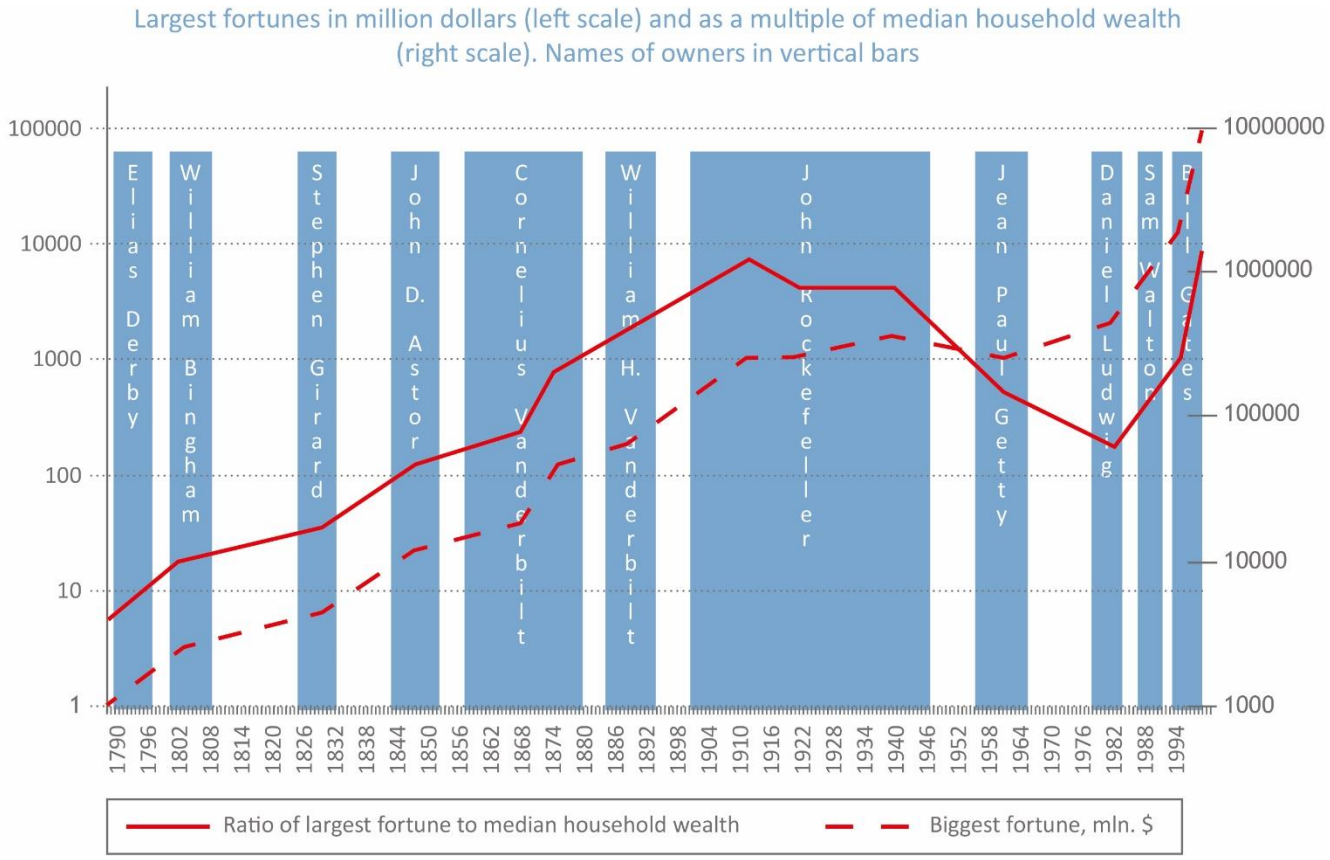


Source: Alvaredo, Facundo, Anthony B. Atkinson, Thomas Piketty and Emmanuel Saez, *The World Top Incomes Database*, http://g-mond.parisschoolofeconomics.eu/topincomes.

Insofar as can be discerned from the available data, the trends in long term billionaire intensity were similar to the changes in the shares of the top 10, 1 and 0.1% of total income. In the United States the ratio of the largest fortunes to the median wealth of households (Figure 15) increased from 1000 in 1790 (Elias Derby's wealth was then estimated to be worth USD 1 million) to 1,250,000 in 1912 (John D. Rockefeller's fortune of USD 1 billion), falling to 60,000 in 1982 (Daniel Ludwig's fortune of 'only' USD 2 billion), before increasing again to 1,416,000 in 1999 (the USD 85 billion fortune of Bill Gates).

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

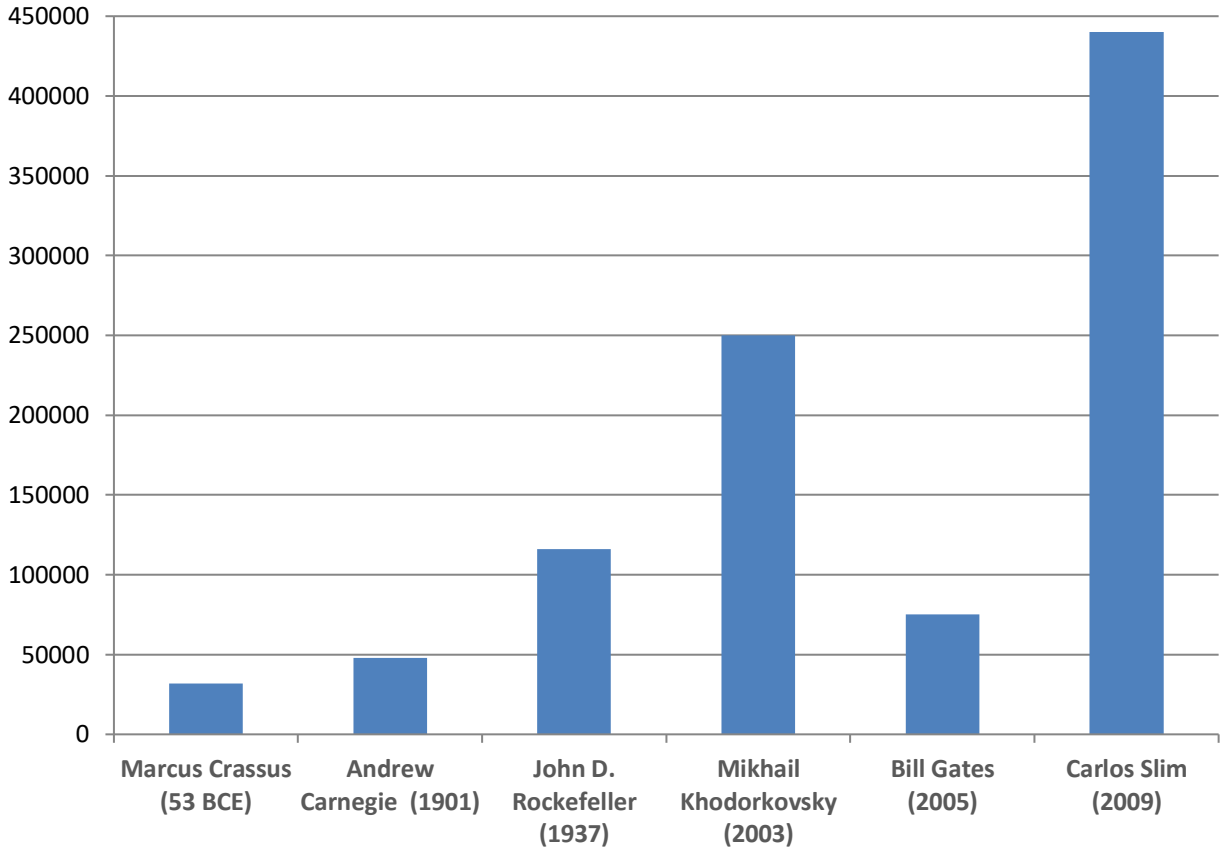
Figure 15. Largest fortunes in the US in USD millions and as a multiple of the median wealth of households, log scale



Source: Phillips (2002)

A comparison of the wealth of the richest tycoons in different countries in different epochs (Figure 16) provides 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 yet have reached the highest level of inequality ever observed in history, but we may still be moving in that direction.

Figure 16. 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 inequality 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 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 and was only temporarily interrupted in the twentieth century due to the destruction of capital during the two world wars, and for other reasons. According to this

logic, however, it is not clear why the sustained increase in capital rather than labour has not induced a decline in the rate of profit offsetting the effect of the capital growth (Milanovic, 2014). An alternative view, consistent with the trends noted above, is that a 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 came to pose less of a threat, income inequalities started to grow again (Jomo and 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 the world's richest citizens (423) each had over USD 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).

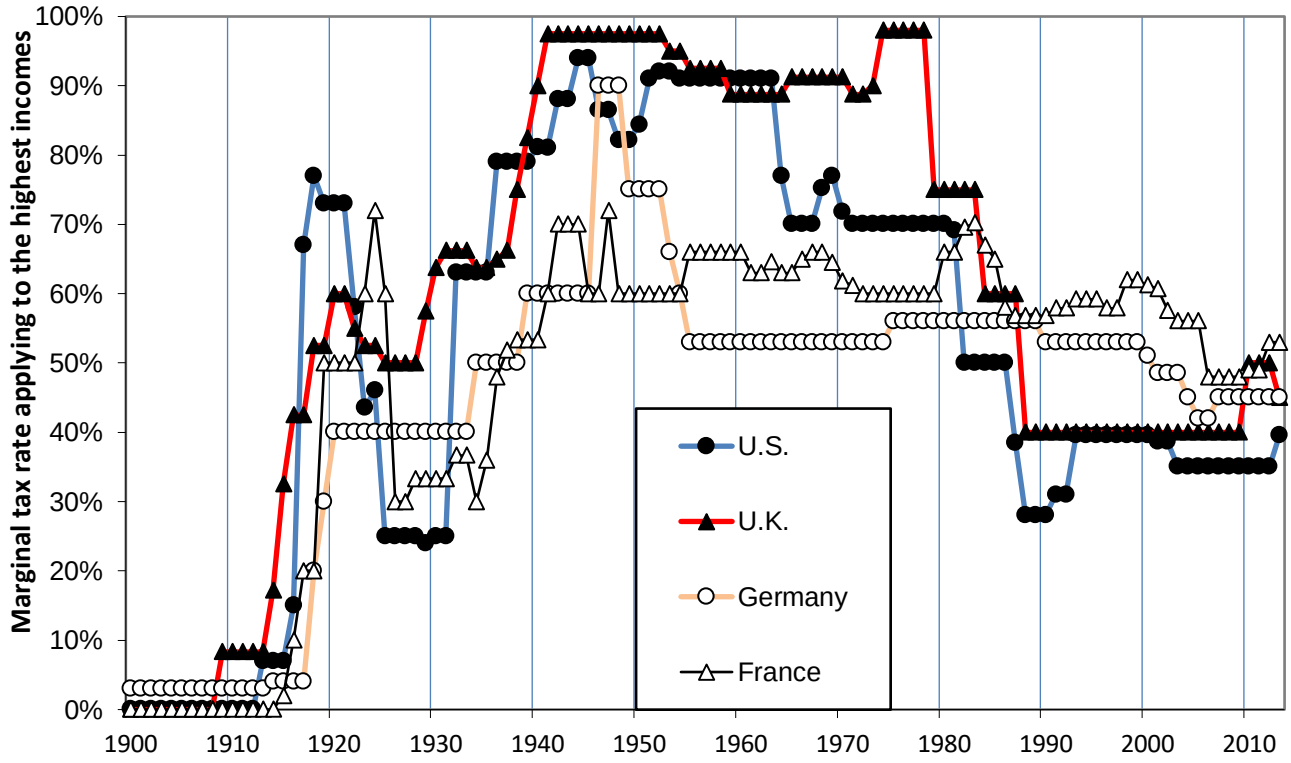
The recent rise in inequality has paralleled an increasing profit to capital ratio. During the post-war Golden Age, while profits were high, capital's success was usually shared with other social groups. In the 1950s and 1960s, for instance, wages, salaries and social security benefits grew alongside with rising profit margins. However, since the early 1980s, profit margins have increased hand-in-hand with rising inequality (Jomo and 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 to the world economy), these concerns have not yet materialized as practical policy measures. Economic policy in major Western countries seems to support this growing shift between rich and poor: marginal personal income tax rates have been lowered considerably since the early the 1980s (Figure 17).

Even though inequality appears to be growing at all levels, rising social tensions which could be linked to growing income and wealth inequality cannot be observed. The countries with the highest billionaire intensity are relatively better off than the others, have higher healthy life expectancy

and happiness indices than others, and relatively good income distribution, if the several or several dozen billionaires at the very top are not counted. How long will this last?

Figure 17. 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.[11]

[11] Website: piketty.pse.ens.fr/capital21c.

6. Conclusions

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 takes the '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 inequality. While by definition the presence of billionaires in a country increases income inequality at the very top of the income pyramid, it does not increase general income inequality.

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

7. 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 Søgaard (2013). The long-run history of income inequality in Denmark: Top incomes from 1870 to 2010. EPRU Working Paper Series 201301, 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 and 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.

Filip Novokmet, Thomas Piketty and 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/

Investment Migration Papers is a multi-disciplinary peer-reviewed academic publication dedicated to the analysis of the proliferation of citizenship and residence by investment around the world. The series aims to advance understanding of the law, politics, economics and history of investment migration, including residence and citizenship by investment. The papers analyse the processes and long-term implications of investment migration and examine how investment migration programmes function in different countries around the globe.

Two types of papers are published:

Research papers provide a venue for communicating high quality academic research in the field of investment migration.

Policy briefs provide a venue for practitioners and analysts to share their insights regarding relevant developments in a particular country/region of interest to the readers of the Papers.

Investment Migration Papers are published by the Investment Migration Council (IMC). The IMC is the worldwide association for Investor Immigration and Citizenship-by-Investment, bringing together the leading stakeholders in the field and giving the industry a voice. The IMC sets the standards on a global level and interacts with other professional associations, governments and international organisations in relation to investment migration. The IMC helps to improve public understanding of the issues faced by clients and governments in this area and promotes education and high professional standards among its members.

Investment Migration Council
16 rue Maunoir
1211 Geneva
Switzerland
+41 22 533 1333
info@investmentmigration.org