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The super-rich in global perspective:

A quantitative analysis of the Forbes list of billionaires

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ABSTRACT

Why are there more super-rich people in some countries than in others? Extra-ordinary wealth is often regarded with envy and might raise the suspicion that it can only be accumulated with the help of a minimalist state that does not concern itself with the plight of the many. This raises the issue whether a high number of billionaires can co-exist with a high-taxing, interventionist, social and welfare spending government? These two questions are at the heart of this paper's analysis. To answer them we undertake a quantitative analysis of the global Forbes list of billionaires.

Introduction

What determines the accumulation of super-riches around the world? Table 1 provides an overview of the number of citizens from each country with an estimated wealth of over one billion US$ as listed in Forbes (2001, 2002, 2003) as a rounded average over the period 2001 to 2003. Clearly the big and rich countries dominate the top of the list. The most striking result is perhaps the exceptional number of billionaires in the US, which has far more super-rich people than any other country in the world. On the other hand, there are billionaires in many countries, including developing ones.

< Insert Table 1 about here >

Perhaps surprisingly, very little research has been undertaken to explain the variation in the incidence of extra-ordinary wealth. Indeed, this seems to be the first study looking at the issue from a global perspective. What does exist are single country studies analyzing in which sectors great fortunes were made and whether these sectors are characterized by restrictions to competition – see Siegfried and Roberts (1991) for the UK, Blitz and Siegfried (1992) for the US, Siegfried and Round (1994) for Australia, Hazledine and Siegfried (1997) for New Zealand. In all of these studies the economic sector was identified in which the fortunes were originally generated. Economist and economic historian experts were then asked to evaluate the degree of competitiveness in each sector. All country studies found that the fortunes were made in a great variety of sectors. Also, around two thirds of fortunes were made, contrary to what one might have expected, in sectors, which were judged as competitive by the experts.

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Research design

Our dependent variable is the number of billionaires in each country. To even out unusual anomalies of a specific year we use the rounded average over the period 2001 to 2003 as listed in Forbes (2001, 2002, 2003). The lists usually count a fortune held by various members of one family as one entry, which is appropriate for our purposes here as the fortune is likely to stem from the same source. The ownership of publicly traded companies is valued at share market prices. For privately held companies estimates of revenues and prevailing share price to revenue ratios for similar publicly-traded companies were used to estimate their value (Forbes, 17 March 2003: 140). Where available the estimated value of art collections, real estate etc. is also included.

Our first hypothesis is that a high incidence of extra-ordinary wealth is associated with the very core of economic freedom, namely the freedom to own property and to make use of it for one's own economic benefit. This is because human beings are characterized by great differences in entrepreneurial skill, intelligence, perseverance, leadership and other economically relevant human qualities. In countries where individuals are allowed to pursue their own economic interest these differences will invariably result in great and often extra-ordinary differences in economic wealth. We use the 'protection of property rights' sub-index of the US Heritage Foundation's (2003) Index of Economic Freedom (PROPERTYRIGHTS), which measures the security and enforcement of private property on a one to five scale. Unfortunately, the Heritage Foundation data goes only back in time until 1995 and we use the average values between 1995 and 2001. Of course, contemporaneous great wealth has often been created many years or even decades back and then bequeathed to the current generation's super rich. It is highly

likely that the extent of protection of property rights is strongly correlated over time. However, in the absence of actual historical data on the extent of private property protection, we use a further rather crude measure, namely the number of years a country's economy has been under Communist rule (YEARS COMMUNIST). To create this variable we used the assessment and data provided by Kornai (1992, table 1.1), extended by information taken from Keesing's Record of World Events.

Our second hypothesis is that even where the very core of economic freedom exists super fortunes cannot emerge if the economy is subject to a great extent of government intervention. High income and corporate taxes, high government expenditures, widespread government ownership of businesses and industries and large-scale government interference with wages and prices might prevent the creation of great wealth. We use a range of variables to measure "big" government. First, a measure of the fiscal burden a government imposes upon an economy (FISCALBURDEN), which assesses countries according to the level of the top income and corporate tax rates and the extent of government expenditures. Second, we use a measure of the extent of general government intervention into the economy (GOVINTERVENTION), which assesses government consumption and government ownership of businesses. Third comes a measure of wage and price controls (GOVCONTROL), which refers to the existence of minimum wage laws and government interference with the setting of prices. These three variables are also taken from Heritage Foundation (2003) and are all measured on a one to five scale. The fourth measure is taken from IMF (2002) and refers to the level of public social and other welfare expenditures relative to GDP (%SOCWELFARE). For all these variables the 1995 to 2001 average value was taken.

Our third hypothesis is that a high degree of competition in national economies is not a hindrance to the creation of super fortunes. This is somewhat difficult to test. On a global scale, we have no direct measure of the degree of general competition within national economies. However, we use the absence of tariff protection and non-tariff barriers as our measure of the degree of competition national economies are exposed to (TRADEOPEN). This variable is also measured on a one to five scale and taken from Heritage Foundation (2003). The rationale is that competition within an economy is higher the less protection exists against competitors from foreign countries.

A number of further control variables are included. The rationale for including population size is simply that more populous countries are likely to have more super riches than small countries (data from World Bank, 2003). The association with per capita income is not so clear-cut, but it might be easier to accumulate great wealth in an economy where people are generally wealthy, but of course much less wealthy than the super rich (data from Heston, Summers and Aten, 2002). In Weberian tradition, a Protestant culture might promote a work ethic that is conducive to the accumulation of wealth. Also, such a culture might view economic success not with suspicion, but as the just consequence of righteous behavior. The percentage of population that is Protestant (%PROTESTANT) is taken from Parker (2000). A US dummy variable is included to account for its special role. The OECD dummy captures any structural differences between developed and developing countries, which might exist. Both population size and per capita income enter the regressions in logged form to render their distributions less skewed.

A model with the number of billionaires in each country as the dependent variable cannot simply be estimated with ordinary least squares (OLS). This is

because the dependent variable is only partly continuous with positive probability mass at the value of zero. An appropriate estimator for such a model is the Tobit estimator.

Results

Column I of table 2 tests our hypotheses. Due to its lower availability, %SOCWELFARE is only added to the model in column II. The two regression results show very little difference even though the sample is smaller in column II.

< Insert Table 2 about here >

The estimates clearly suggest evidence in favor of our first hypothesis. A greater guarantee of private property is positively associated, whereas a higher number of years under Socialist/Communist dictatorship is negatively associated with the incidence of great wealth. On the basis of our results we reject our second hypothesis, however. Neither a higher fiscal burden, nor a greater extent of government intervention, nor a greater extent of governmental interference with prices and wages has a negative effect on the incidence of great wealth. The same is true for higher social and other welfare expenditures. One might wonder whether this result is perhaps due to the correlation of these variables. However, entering them either separately or in combinations of one, two or three does not change the results.

The TRADEOPEN variable coefficient is positive and statistically significant in column I and marginally insignificant in column II. Our estimation results therefore suggest that trade openness is conducive to the accumulation of great wealth or at least not detrimental to it. In as much as trade openness captures the degree of competition prevailing in national economies, this result suggests that a high degree of competition does not represent a barrier to the accumulation of great fortunes.

As concerns our further control variables, we find the expected positive impact of population size and per capita income. The US dummy is highly statistically significant, confirming the special position of this country that even a cursory glance at table 1 would already reveal (deleting the US from the sample leads to very similar results for the other variables). Interestingly, however, the OECD dummy is highly insignificant, suggesting that there is no fundamental difference between developed and developing countries, of course conditional on our other explanatory variables. The accumulation of great fortunes is not facilitated by a Protestant work ethic and culture as measured by %PROTESTANT.

Conclusion

The accumulation of great fortunes creates uneasiness, envy and concern in many people. Whatever might speak against such fortunes, our results demonstrate that their existence is not incompatible with an interventionist government spending a great deal of the national income on social and other welfare purposes. Great fortunes also do not seem to be dependent on a low degree of competition. The protection and enforcement or private property is key and it is easier to accumulate great wealth in richer than in poorer countries.

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Table 1. Billionaires worldwide.

United States	230
Germany	32
Japan	24
Canada	14
France	13
Italy	13
United Kingdom	12
Switzerland	12
Hong Kong	11
Mexico	11
Russia	10
Saudi Arabia	7
Spain	7
Brazil	5
India	5
Sweden	5
Turkey	5
Malaysia	4
Singapore	4
Taiwan	4
Australia	3
Israel	3
Netherlands	3
Philippines	3
Argentina	2
Chile	2
Denmark	2
Greece	2
Ireland	2
South Africa	2
South Korea	2
Thailand	2
Venezuela	2
Belgium	1
China	1
Colombia	1
Indonesia	1
Kuwait	1
Lebanon	1
Liechtenstein	1
Norway	1
Portugal	1
United Arab Emirates	1
All other countries	0

Source: Rounded average from Forbes (2001, 2002, 2003).

Table 2. Estimation results.

	(1)	(2)
PROPERTYRIGHTS	2.451	2.744
	(1.95)*	(1.90)*
YEARS COMMUNIST	-0.096	-0.093
	(1.99)**	(1.76)*
FISCALBURDEN	1.356	0.808
	(1.33)	(0.65)
GOVINTERVENTION	-1.235	-1.376
	(1.18)	(1.10)
GOVCONTROL	0.979	0.694
	(0.74)	(0.47)
%SOCWELFARE		-0.041
		(0.56)
TRADEOPEN	2.080	1.942
	(1.90)*	(1.51)
ln GDP p.c.	6.166	6.076
	(4.60)***	(3.60)***
ln POPULATION	5.821	5.893
	(8.44)***	(7.77)***
US-DUMMY	203.912	204.169
	(39.88)***	(37.56)***
OECD-DUMMY	0.598	1.401
	(0.26)	(0.53)
%PROTESTANT	-0.022	-0.027
	(0.67)	(0.75)
Constant	-135.353	-138.002
	(7.29)***	(6.32)***
Pseudo R-squared	.5049	.5002
Observations	147	130

Note: Dependent variable is # BILLIONAIRES. Tobit left-censored estimation.

Absolute t-values in brackets. * significant at 90% ** at 95% *** at 99% level.