

## Steady state economic freedom

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### Abstract

This note projects forward into the distant future the number of countries existing under regimes of different levels of economic liberalism by deriving a transition probability matrix from Economic Freedom of the World data. Naively extrapolating trends from 1970-2020 suggests a modest majority of 165 countries will be economically free in the long-run steady state, with results driven by improvements in variables associated with the freedom to trade internationally and especially the quality of the legal system and property rights.

*Keywords:* economic freedom, institutional development, neoliberalism, economic liberalization

*JEL Classification Codes:* P10, P16, O43

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### 1. Introduction

This note prepares and analyzes economic freedom data in such a way that it can be operationalized in a transition probability matrix. It then uses the matrix to iteratively project the future proportions of countries in the world assessed to be various levels of economic freedom. The note simplistically but systematically projects forward future trends in economic liberalization in a novel way, although strongly drawing upon Murphy (2022).

Previous studies dealing with the time-series properties of economic freedom data are limited and include Sobel and Coyne (2011), who find that economic freedom cointegrates with other measures of institutions. Sobel (2017) assesses trends in economic freedom data and argues that slow, sustained liberalizations typically yield gains, while rapid changes usually imply its collapse. However, Lawson and Lawson (2020) find that countries that successfully liberalize faster see better economic performance; a particular motivating example can be found in Georgia (Lawson et al. 2019). Murphy (2019) describes recent liberalizing patterns in time series of both economic freedom and state building worldwide, finding some recent examples of sustained improvements in institutional quality. A systematic review of the literature on economic freedom (Lawson et al. 2020) finds evidence of convergence among countries in economic freedom over time, though convergence may also mean economically free countries regressing to the mean (e.g., March et al. 2017).

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Here, we will use the in-sample properties of economic freedom from 1970-2020 to depict the general trajectory of the data over the period. Countless objections could be made to this exercise, should the exercise be interpreted literally. We do not recommend the exercise to be interpreted literally, but as simply what it is: an extrapolation of the trends of this particular half century. Section II will describe the analysis in more detail and perform it. Section III will conclude.

## 2. Method and results

We use data from the *Economic Freedom of the World* (EFW) index (Gwartney et al. 2022), which provides data on free economic institutions from 1970-2020 for as many as 165 countries. Data is quinquennial<sup>1</sup> from 1970-2000 and yearly from 2000-2020, we will be using quinquennial from the full period 1970-2020. EFW data covers five “areas” of economic freedom which are meant to cover the complete definition of economic freedom: the [limited] size of government, the quality of the legal system and property rights, sound money, the freedom to trade internationally, and [limited] regulation. Countries are assigned scores on a (0,10) interval, with higher scores always corresponding to more economic freedom.

We rescale EFW data following Murphy (2022) by using the average and standard deviation from contemporary (i.e., 2020) data to score countries on a (0,1) scale, assessing each country-year *as if* it were a contemporary country. That is, we apply a cumulative distribution function (CDF) using the 2020 average and standard deviation to countries from all year. For instance, data for France from 1985 is scored as if it were a country in 2020. The data is then multiplied by 100 for purposes of readability. Finally, we place countries in five separate 20-point tranches (i.e., 0-20, 20-40, 40-60, 60-80, and 80-100) as if they were judged by the standards of 2020.

To provide intuitions for what these tranches mean, we will highlight countries that are right on the edge between them. On the border of the top and second tranche are Luxembourg (81.2), Montenegro (78.7), and Peru (80.0). On the border of the second and middle tranche are Kyrgyz Republic (59.7), Qatar (60.6), and Slovenia (61.0). On the border of the middle and fourth tranches are Ecuador (39.4), Fiji (40.3), and Lesotho (39.8). And on the border of the fourth and bottom tranches are Cote D’Ivoire (20.4), Malawi (19.4), and Pakistan (21.0).

We look at countries quinquennially from 1970-2020, and calculate the probability of each country transitioning from (or remaining in) one of the 20-point tranches to each of the tranches one period in the future. That is, a count was taken of which tranche a country began each five-year period, then where each country ended up (e.g., the number of countries that started a five-year period in the third tranche and ended up in the second tranche five years later), and this is then express as a percentage of all countries by starting tranche. The results and a transition probability matrix appear in Table 1. The top-right entry in the figure (0.899) means that there is an 89.9% chance that a country which was scored in the top tranche in the first period would again appear there in the next period (i.e., five years later). The next number down in the column (0.097) means that there is a 9.7% chance that the country declines to the second tranche. In the most recent 2020 data, 36 countries are in the top tranche, 40 are in the second, 28 are in the middle, 28 are in the fourth, and 33 are in the bottom.

We can then iterate that matrix to simulate the steady state of what would be achieved if the patterns observed from 1970-2020 continue to hold indefinitely.<sup>2</sup> Something approaching the steady state is achieved by 2100, but it does not fully hold until around 2200, at which point 96 of 165 countries are in the top tranche, 38 are in the second, 14 are in the middle, 8 are in the fourth, and 13 are in the bottom.

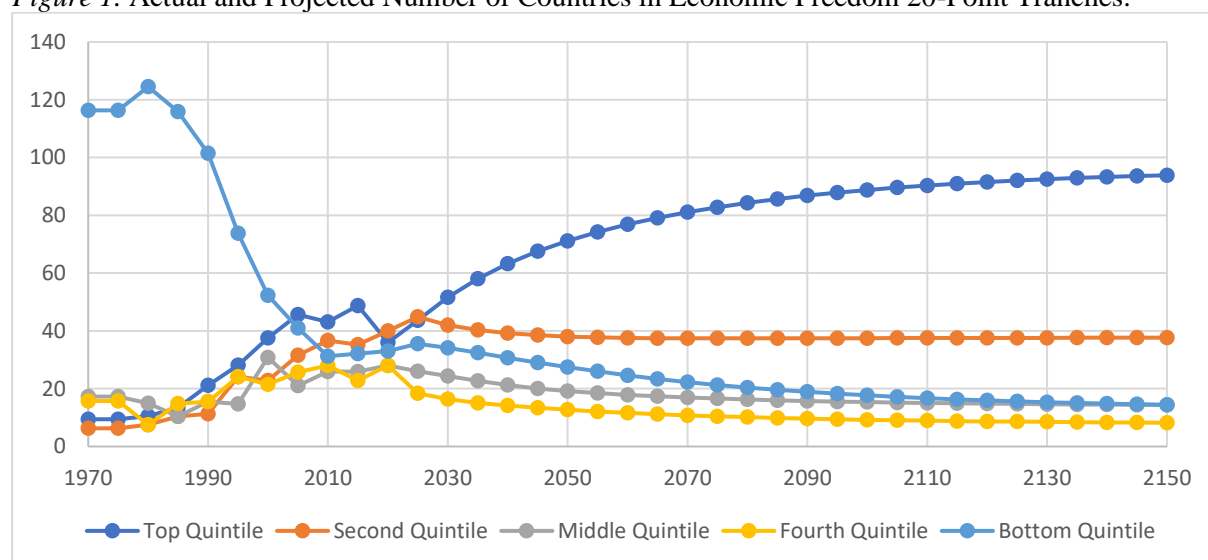
<sup>1</sup> That is, it is available for the years ending in 5’s and 0’s.

<sup>2</sup> A steady state will occur if and only if the matrix has an eigenvalue of one, and the values of the steady state are those of the eigenvector corresponding to the eigenvalue.

Table 1. Transition Probability Matrix of Economic Freedom, 1970-2020.

Probability in Following Period	0-20	20-40	40-60	60-80	80-100
80+	0.000	0.007	0.081	0.227	0.899
60-80	0.015	0.093	0.297	0.620	0.097
40-60	0.042	0.300	0.479	0.104	0.005
20-40	0.133	0.373	0.108	0.043	0.000
0-20	0.810	0.227	0.034	0.006	0.000

Figure 1. Actual and Projected Number of Countries in Economic Freedom 20-Point Tranches.



Note: Data through 2020 is actual, and data from 2025 forward is projected.

Both historical numbers of countries in each tranche and the projections (as described in the previous paragraph) appear in Figure 1, with data from 2020 and earlier reflecting actual data, and 2025 and onwards being projections. For earlier years when fewer countries receive an economic freedom score, the total number of countries is normalized to 165, and the ratios of countries in each tranche are used to synthetically adjust the time series to be internally consistent. The significant majority of countries was in the bottom tranche in 1970. Most have already exited the bottom, and the number of countries in the top tranche is projected to increase at the expense of the bottom three tranches. The number of second tranche countries will remain roughly unchanged. These projections inform us of the trajectory of economic freedom from 1970-2020 should it continue indefinitely.

The same procedure was performed on each of the areas of economic freedom, scoring the areas by country using a CDF multiplied by 100 and categorizing countries into 20-point tranches. In Table 2, the steady state for each area of economic freedom is reported (years vary as to when the precise value rounded to the integer is reached for each area, but it does not consequentially differ from what is reached by 2100). The largest gain projected is in the quality of the legal system and property rights, which is the most fundamentally “institutional” area of the index. This result is somewhat surprising given pessimistic outlooks expressed regarding similar data (Andrews et al. 2017: 14-24). Further reform is also anticipated in the freedom to trade internationally, and to a lesser extent, in [limited] regulation. Little improvement is projected for the [limited] size of government and sound money. Concerning the [limited] size of government, this is unsurprising given the lack of scholarly or policy consensus on the desirability of reducing the size of government. Concerning sound money, this may actually relate to the lack of room for further improvement (note that this data corresponds to 2020, before the onset of recent inflation), i.e., the liberalizations to take place already took place.

Table 2. Steady State Number of Countries in Each Area of Economic Freedom.

<i>Probability in Following Period</i>	<i>Top tranche</i>	<i>Second tranche</i>	<i>Middle tranche</i>	<i>Fourth tranche</i>	<i>Bottom tranche</i>
<i>[Limited] Size of Government</i>	39	32	31	27	37
<i>Legal System &amp; Property Rights</i>	122	24	9	7	3
<i>Sound Money</i>	39	51	23	15	37
<i>Freedom to Trade Internationally</i>	76	32	17	19	22
<i>[Limited] Regulation</i>	57	40	30	20	20

### 3. Concluding remarks

Popular writers and academic scribblers tend to make broad pronouncements concerning the fate of liberalism, from the left (Klein 2007), the center (Acemoglu and Robinson 2019), and the right (Boudreaux 2015). Rather than developing another competing narrative concerning liberalism, this note extrapolates from historical trends. Should trends from 1970-2020 persist, we will observe the proportion of countries with clearly liberal economic institutions to increase from a bit more than a fifth to a modest majority of all countries in the steady state.

While the neoliberal era of 1980-2000 (or perhaps 1980-2008) is a significant fraction of our sample, the sample also includes the stagnation or decline in the 1970s, as well as 9/11, the Great Recession, the rise of populism, and at least the beginnings of COVID-19 (though not Russia's invasion of Ukraine). None of these recent events buttressed economic freedom, regardless of the claims by Klein (2007). But a simple return to normalcy could actually be sufficient to vindicate these naïve, long-run projections. Or perhaps, all we need is a return to normalcy corresponding to the average level of disaster and adversity the world experienced from 1970 to 2020, for worldwide liberalization to reassert itself.

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