7. The Three Pillars Model for the Long Run

This chapter looks at the full Polity *P*-data set from 1800 to 2016, and presents The Three Pillars Model, explaining ***why*** the Democratic Transition comes about (s1). The long data series confirm equivalence (s2): The long data series tell the same transition story as the cross-country data in Chapter 4. The long run is illustrated by 10 nutshell country stories (s3) and by some long-run descriptive graphs (s4). Finally, the long *P*-series are used to identify the spells of system constancy (s5), which allows a second look at regime consolidations (s6).

7.1 The Three Pillars Model

The Democratic Transition has happened across the world, in countries with different cultures, religions and history. Thus, there must be a basic theory that explains why development is very likely to cause a change to democracy.

Nearly all traditional political systems were some sort of kingdom that had been stable for a handful of centuries. It was based upon ***three pillars*** that normally worked together: Pillar 1 was a hereditary ***king*** from a royal dynasty. Pillar 2 was the ***feudal/military*** class,[1] which provided the top of the military. Pillar 3 was the ***Church***,[2] i.e. the organization of the national religion. Consequently, the ruling group was small. Sometimes power shifted between the pillars, and also dynasties were replaced, but the system was stable for at least a handful of centuries. Such systems are scored from −6 to −10 by the Polity index, and from 6 to 7 in the two Freedom House indices. In the old West, these systems existed in nearly all countries, and in South and East Asia systems were similar; see Figures 3d and 3g below for Japan and Thailand.

Kings often managed to claim some ‘divinity’ through their alliance with the Church, and the feudal lords had hereditary titles that made them ‘nobility’ with special privileges, etc. As the top clergy also came from the nobility, they lived in similar splendor. This all helped to make the power structure in society deeply entrenched.

The new colonies of the Americas did not have the same old power structure, but big landowners soon developed and in the sub-tropical and tropical countries, landowners had slaves. In Latin America the Catholic Church was strong The liberation of the colonies happened just

[1] The historical part of Binswanger *et al.* (1995) finds that most LICs had very durable feudal systems and so had the present HICs when they were LICs.
[2] Recall that for want of a better name ‘Church’ is used for the organization of a religion, while ‘church’ is a building.

before 1800 in the USA, and two decades later in Latin American countries during the Napoleonic Wars in Europe, when Spain was seriously weakened.

The Grand Transition undermined two of three pillars in the traditional power structure. Pillar 2: The Agricultural Transition reduced agriculture from about 50% of GDP to less than 5%. As argued in the introduction, this is a long-run causal link from income. It greatly reduced the economic power of the feudal class, and the privileges of the nobility were abolished. Pillar 3: The Religious Transition reduced religiosity by a factor 3. As will be discussed in Chapter 11, this is a long-run causal link from income. It reduced the power of the Church substantially.

Table 1. The 23 countries covered in 1800/10 and their successor countries 2008/18

	1800/10 mostly kingdoms			2008/18 mostly democracy		
No	Country	*P*	Political system	Country	*P*	Political system
1	Afghanistan	−6	Kingdom	Same	−1	Mixed
2	Austria	−10	Kingdom	Core of same	10	Democracy
3	Bavaria	−10	Kingdom	Germany	10	Democracy
4	China	−6	Kingdom	Same	−7	Communist
5	Denmark	−10	Kingdom	Same	10	Democracy
6	France	−8	Military/Emperor	Same	9	Democracy
7	Iran	−10	Kingdom	Same	−7	Theocracy
8	Japan	−10	Kingdom	Same	10	Democracy
9	Korea	1	Kingdom	South Korea	8	Democracy
10	Morocco	−5	Kingdom	Same	−5	Kingdom
11	Nepal	−6	Kingdom	Same	6	Democracy
12	Oman	−6	Kingdom	Same	−8	Kingdom
13	Portugal	−10	Kingdom	Same	10	Democracy
14	Prussia	−10	Kingdom	Germany	10	Democracy
15	Russia	−10	Kingdom	Russia	4	More democratic
16	Saxony	−10	Kingdom	Germany	10	Democracy
17	Spain	−10	Kingdom	Same	10	Democracy
18	Sweden	−10	Kingdom	Same	10	Democracy
19	Thailand	−10	Kingdom	Same	2	More democratic
20	Turkey	−10	Kingdom	Core of same	4	More democratic
21	UK	−2	Kingdom mixed	Same	9	Democracy
22	USA	5	Democracy	Same	9	Democracy
23	Würtemberg	−7	Kingdom	Germany	10	Democracy
	Average	−7.4			5.3	

Instead of agriculture, new sectors developed in trade and industry, mostly in the towns, which grew dramatically. New classes of capitalists and workers emerged, and with some lag, a big middle class developed. It became the main recipient of the vast increase in human capital. To the extent the old feudal class managed to be captains of the new industrial and trading firms, they could hold on to power, but mostly they did not. The new classes wanted political

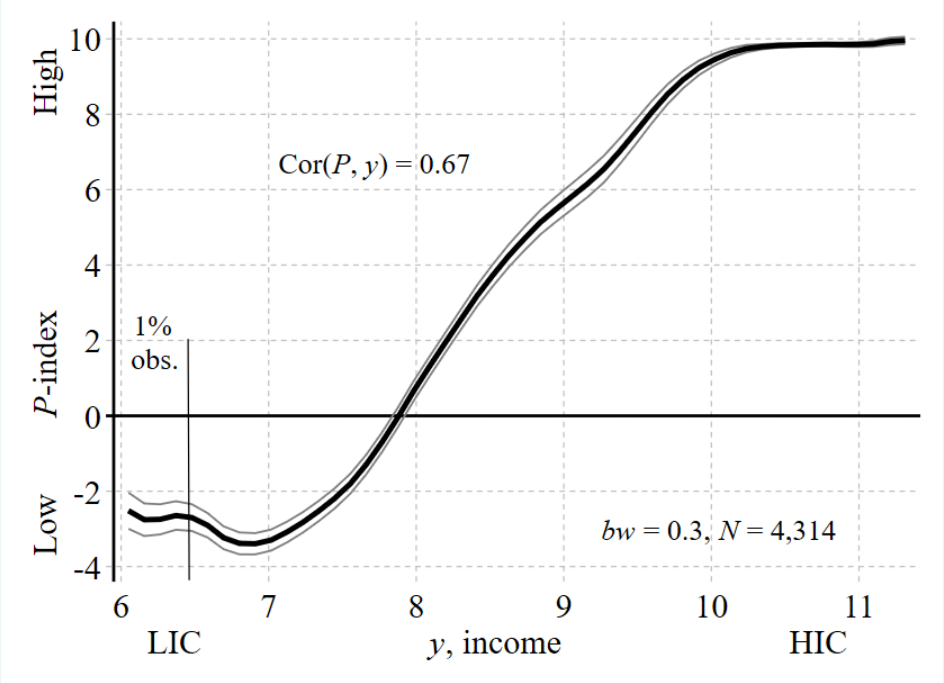
representation, and as they were large and concentrated in the towns, they could exercise considerable political pressures. Thus, it led to democracy, as illustrated by Table 1.The Three Pillars Model is certainly a strong model that explains why development causes democracy,[3] but the mechanism is fuzzy. Traditional systems had many variants, and so did the reform process. Old groups often tried to hold on to power, and changes required triggering events. Such events are rather diverse, as shown in Chapter 6.

7.2 Confirming equivalence: The transition curve in the long time series:

Figure 1 uses the data for the 25 countries (listed in the note to the table) where the (*P*, *y*)-data are available for more than 120 years. On average, the series have 172 observations.

As half the countries covered are western that modernized early, the kernel-curve has a wide flat section at the top as the curve for West on Figure 4.8, but otherwise it looks very much as Figure 4.4a. This is not surprising given the findings above, and it confirms the equivalence hypothesis for the Democratic Transition.

Figure 1. The Democratic Transition for the 25 countries with more than 120 observations



The 25 countries are Ecuador (120), Mexico (126), Bolivia (127), *Japan* (142), Argentina (145), Colombia (149), Uruguay (149), *Austria* (152), Peru (160), *Germany* (164), Belgium (165), Brazil (167), *Spain* (168), Greece (180), Norway (183), Venezuela (187), *Denmark* (192), *Portugal* (192), *France* (197), Netherlands (197), Chile (199), Italy (202), *UK* (217), *Sweden* (217), *USA* (217). Parentheses hold the number of observations for each country. Germany and Italy are mergers of a handful of old countries in 1870 and 1860, respectively. The long series for the two countries are averages for the old countries. The eight countries in italics are also included in Tables 1 and 2.

[3] The only exception is Singapore, where a full democratization has not happened yet.

7.3 The two centuries of the P-data: a set of nutshell historical cases

The *P*-index covers 23 countries from 1800/10, where the average *P*-score was −7.4. Some of the countries have changed, but Table 1 compares the old countries to the same country or its successor. In 2008/18, they had an average *P*-score of 5.3. Table 2 compares the first spells in the data for countries that remained longer and shorter in the traditional steady state.

Table 2. The first spell in countries that existed in 1800

Late leavers of the traditional steady state				Early leavers of the traditional steady state			
Country	Data from	*P*-score	Spell	Country	Data from	*P*-score	Spell
Ethiopia	1855	4	75	Austria	1800	−10	47
Afghanistan	1800	−8	135	Denmark	1800	−10	34
Bhutan	1907	−10	98	France	1800	−8	14
China	1800	−6	109	Portugal	1800	−10	6
Japan	1800	−10	58	Spain	1800	−10	9
Korea	1800	1	111	Sweden	1800	−10	9
Nepal	1800	−6	48	UK	1800	−2	37
Thailand	1800	−10	132	USA	1800	4	9
Iran	1800	−10	106	Baden	1800	−7	22
Morocco	1800	−6	113	Bavaria	1800	−10	18
Oman	1800	−6	157	Prussia	1800	−10	33
Turkey	1800	−10	76	Saxony	1800	10	23
Russia	1800	−10	105	Würtemburg	1800	−7	19
Average		−6.7	102	Average		−6.2	22

Data for Ethiopia and Bhutan start in 1855 and 1907, respectively, but both countries are much older. The score of +4 for Ethiopia in 1855 seems high. It was the year Tewrodos II defeated Zemene Mesafint and became emperor.

The graphs of Figures 2 and 3 give ten nutshell stories of the transition in countries where it is possible to make the long series by some interpolation of missing data, especially for income. The interpolated data appear as straight lines. This has caused some historical events to disappear, notably the Napoleonic wars that surely caused serious income losses in France and Spain. The same graphs have been made for Denmark, Italy and Portugal – they look very much as the figures presented.

Sweden, the UK and Japan had a one-way democratization, so that the G^P-ratio is 1 – there are no more movements in the *P*-index than necessary. The UK was the wealthiest country in the World in 1800, and also well ahead with the Democratic Transition. However, for the five other countries covered, the G^P-ratio is (much) larger than 1 – the *P*-index jumps up and down before it settles at the modern level (close to 10), and in some countries it has not settled yet.

Figure 2 Some examples of the Democratic Transition, 1800-2016

Figure 2a. UK

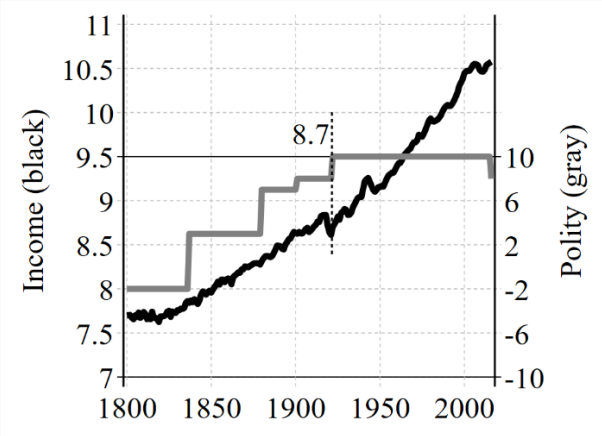


Figure 2b. Sweden

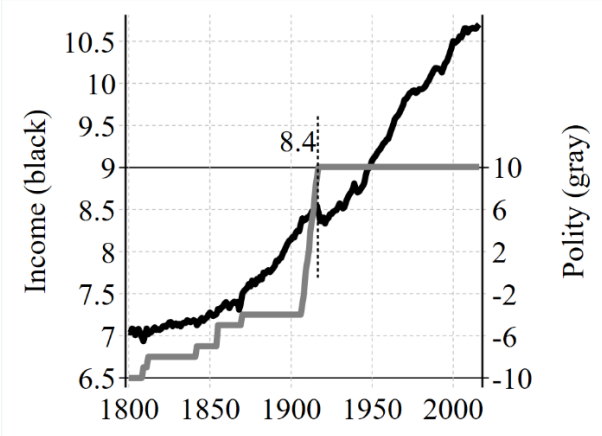


Figure 2c. Japan

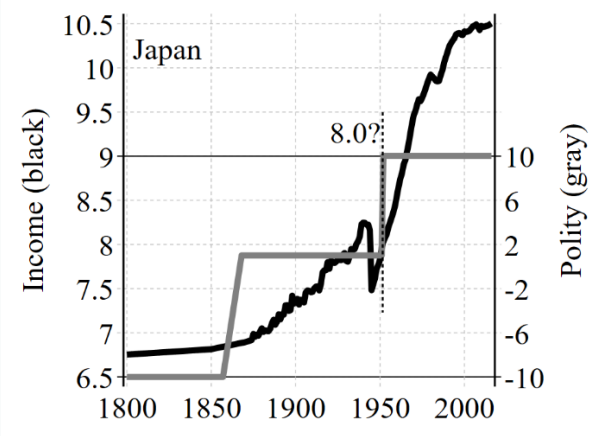


Figure 2d. Germany

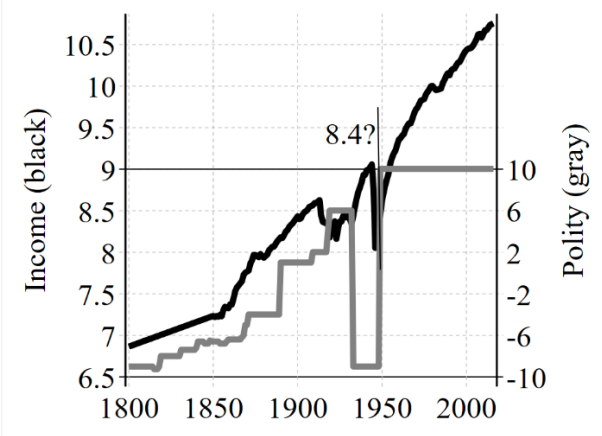


Figure 2e. France

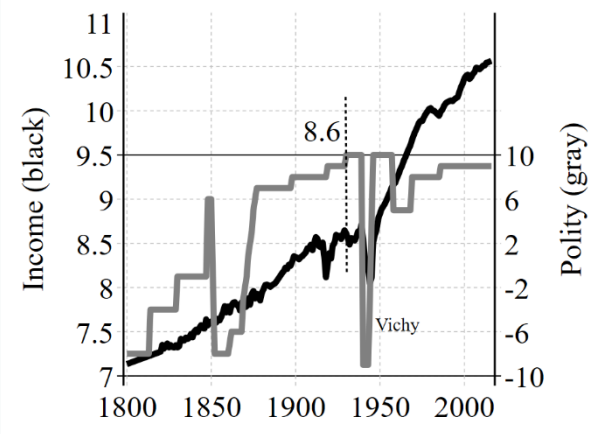
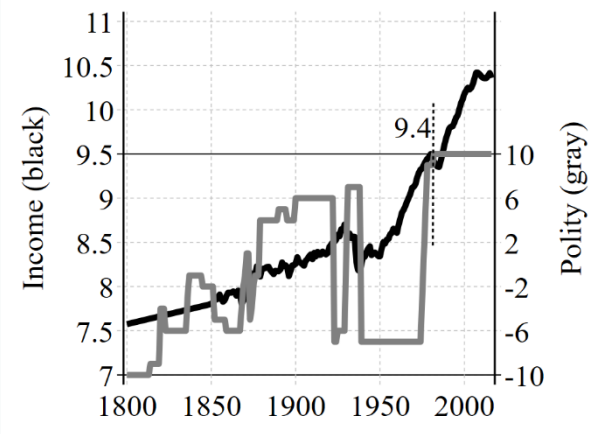


Figure 2f. Spain



The dashed vertical lines indicate where full democratization is reached. The number given is the income level where it happened. In most cases it gives about 100 years of democracy. The *P*-index for Germany before 1870 is an average for the five old German states. The ? indicates that the system change was influenced from abroad.

Germany and Japan were democratized after some push from the occupation powers after WWII (hence the '?' on the graphs), but the income level grew rapidly at that time, and the democratization soon consolidated. All nine nutshell stories show that full democracy occurred at $y = 8.6 \pm 0.3$, which is an income level around $ 5,500, or for a family of 4 about $ 22,000 (in 2010 fixed prices). At this level of income, democracy consolidated in most countries.

Figure 3. Four cases of incomplete or failed democratizations

Figure 3a. Thailand

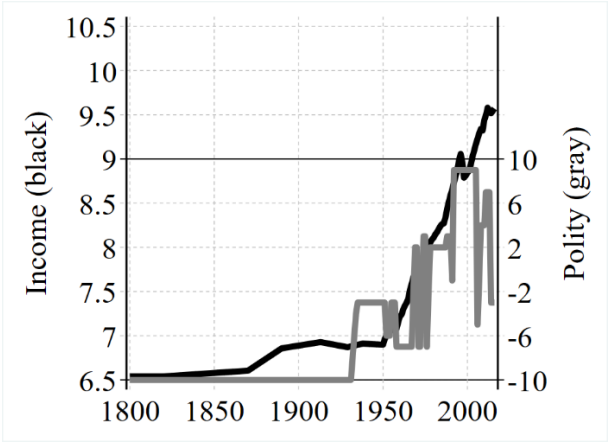


Figure 3b. Turkey

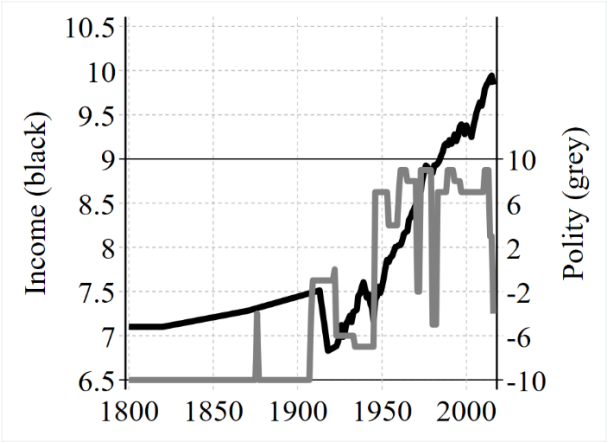


Figure 3c. China

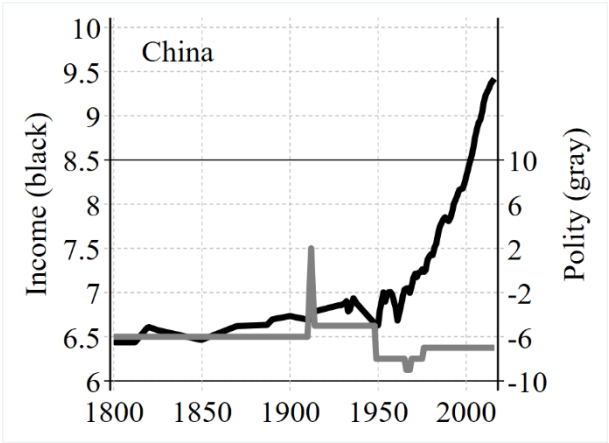
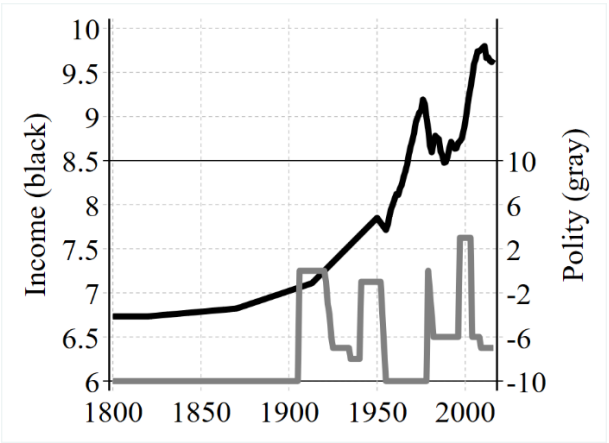


Figure 3d. Iran



Thailand (Figure 3a) and Turkey (Figure 3b) are countries in the process of democratization due to a late, but fast, modernization. They both look like a late and compressed version of France or Spain. My prognosis is that both countries will have consolidated democracies in 30 years, but both have passed the income of $y = 8.6$, where democratizations took place in the old wealthy countries. Like most of the countries, they have gross movements in the *P*-index that

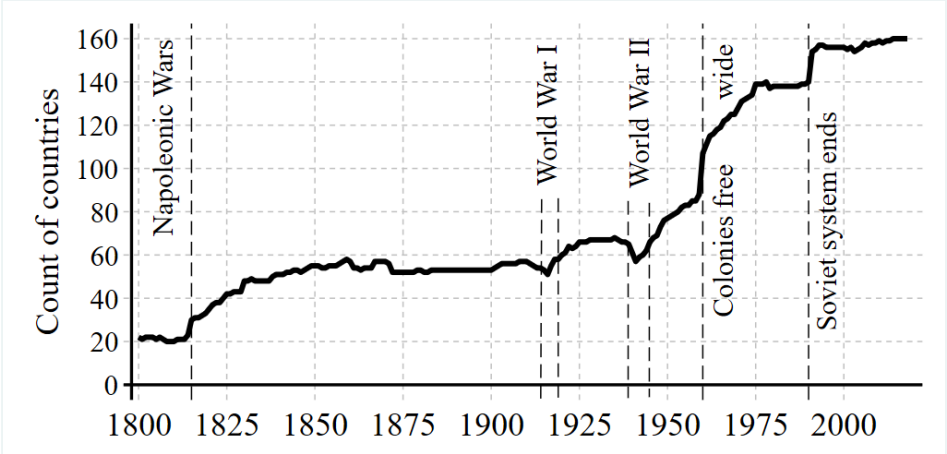
are much larger than necessary for the transition, so that the G^P-ratio is (much) larger than 1. This is an important point in Chapter 13.

Finally, China (Figure 3c) and Iran (Figure 3d) are both very old countries with no traditions for democracy. However, both countries have made (feeble) attempts at some stage. My prediction is that they will try again, and eventually succeed. Both countries have reached an income level where most countries have democratized.

7.4 The data for the long run – some descriptive graphs

As seen on Figure 4, the Polity-data only became wide in 1960, and in the 19th century many of the (few) countries have no income data; see Figure 1.2.

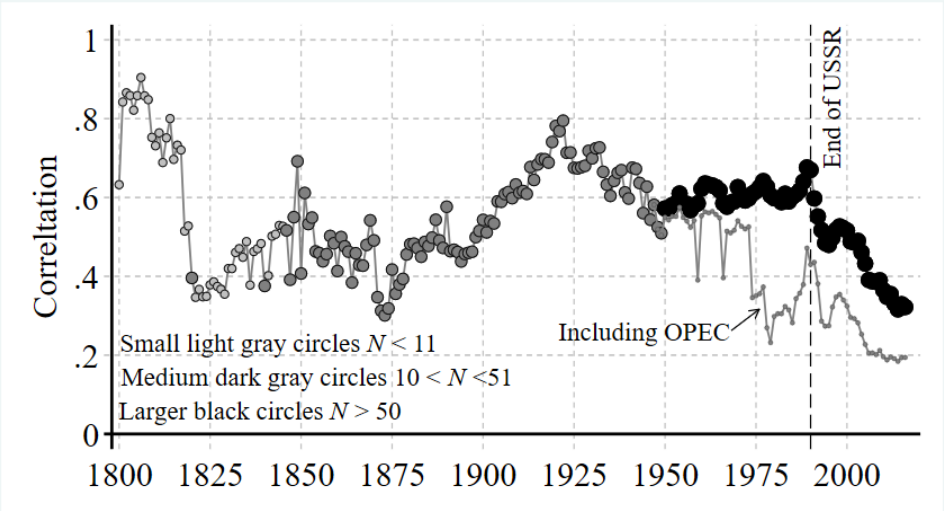
Figure 4. The number of countries included in the Polity index



As defined in Table 4.1, a ***sequence*** is a set of *P*-scores that change in the same direction in consecutive years; see also Chapter 5. The *P*-index reports reform processes that lead to a new system, as a sequence of equidistant changes. Most *P*-scores that last one year only are part of a sequence. I add all sequences that are followed by a constant *P*-score as part of the spell, also if one of the scores is zero. All spells found are reported in the net appendix, where sequences are highlighted in orange. The inclusion of the sequences increases the average spell by two years as most one year-spells disappear.

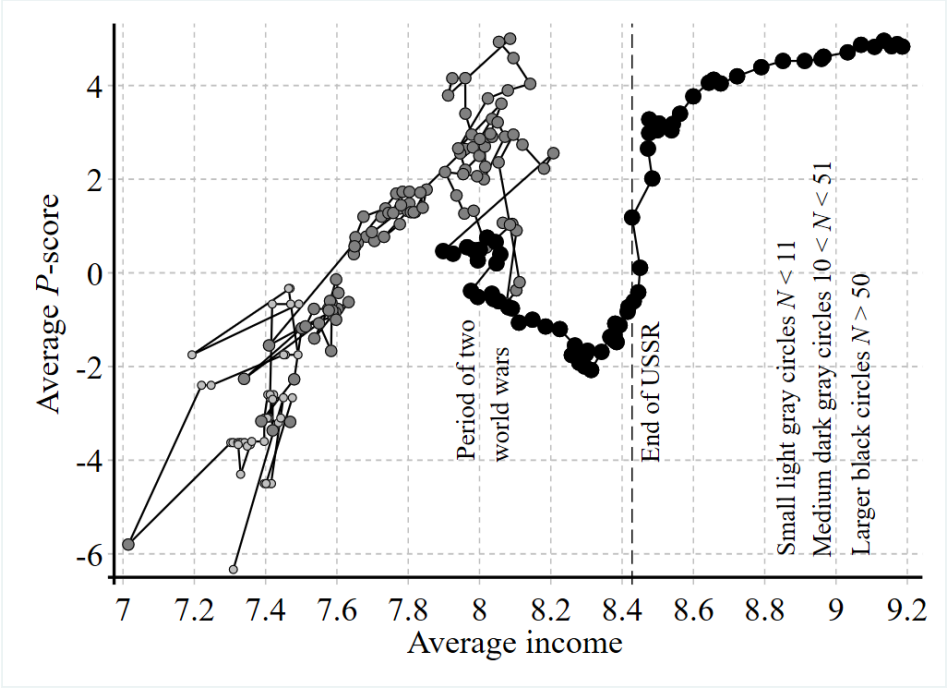
Already Table 1.3 reported that the correlation between the three political system indices and income is about 0.6. Figure 4 shows how the cross-country correlations vary over time. The average is close to 0.6. It is interesting that the correlation falls after 1990. The great wave of democracy makes the *P*-scores of countries more similar, even when income adjusts less fast. It is noteworthy that the thin data before 1900 still has substantial correlations.

Figure 5. Cross-country correlations of *P* and *y* for each year from 1800 to 2016



The OPEC countries are deleted in the main calculation. If they are included, the curve shifts downward after 1950. When they are excluded, the correlation falls just before year 2000 as on Figure 4.9a.

Figure 6. Annual averages for *P* and *y*



The averages of *P* and *y* across countries for year t are termed $\bar{P}$ and $\bar{y}$. Figure 5 shows the path over time of the $(\bar{P}, \bar{y})$-set. The country composition changes greatly, but the curve still has a clear upward drift. The period of the two world wars sees a stagnation in the average income, and a rather chaotic period as regards political regimes. After the Second World War, the number of countries starts to rise and the average curve moves sideways. It is interesting to see that the big democratic wave in connection with the end of Soviet socialism appears as an upward shift in the curve.

7.5 Spells of constant regime, i.e., with a constant value of the P-index

A key fact of political regimes is that they often last a long time. To analyze how long needs long time series. Table 3 brings some statistics of the data for the spells. While the rest of the book concentrates on the period 1960-2016, the full Polity dataset 1800-2018 is used to estimate the spells. Recall that sequences that lead to a new system are included in the spell for that system.

Table 3. Some counts and descriptive statistics of the Polity data set

Country group (see net-appendix)	Countries	*N*	Spells	Avr	Std	*n*	*t*	*s*	*f*%
Africa, Sub Saharan	46	2,532	267	9.48	10.56	45	46	1	34.5
Asia and Oceania	28	2,461	179	13.75	22.78	20	35	1	31.3
Latin America including Caribbean	23	3,675	277	13.27	15.54	23	23	0	16.6
MENA, Middle East and North Africa	19	1,772	122	14.52	22.54	12	25	1	31.1
Post Socialist (see Table 3.1)	32	1,835	156	11.76	13.21	31	31	2	41.0
Western Europe and four overseas	24	3,882	158	24.57	29.47	12	35	1	30.4
Old German and Italian states before unification	11	607	31	19.58	15.87	7	4	11	71.0
Sums or averages for avr and std	183	16,764	1190	14.09	19.43	150	199	17	30.8

The data file of Polity 2018 contains N = 17,562 observations, but some are blank. Consequently, only N = 16,764 observations are used. The last four columns are for spell interruptions: n is for new countries, t for truncated spells, s for countries that end, and $f = 100(n + t + s)$/spells is the fraction (in %) of all spells that are interrupted.

The last four columns in the table are n for new countries, t for truncated spells, s for countries that end without a clear successor, and $f = 100(n + t + s)$/spells is the fraction (in %) of all spells that are interrupted. China has data from 1800 to 2018, but China did not start in 1800 and did not stop in 2018, thus China has two t's. East Germany started in 1949 and ended in 1989, thus East Germany has one n and one s. The sum $n + t + s = 386$ is twice the number of countries, as it should.

No less than 31% of all spells are interrupted. The standard method to handle truncated spells is to multiply by two. When it is done for the 199 spells with a t, the average of ***14.09*** increases to ***19.14***, but it does not seem reasonable for the 167 cases where the country is new (with n), or ends (with s) even when these cases do represent interrupted spells.

Figure 7 shows probit diagrams of the spells and the logarithmic spells. While the spells have a very skew distribution, the log spell distribution is close to normal. However, formal tests reject normality, also in the case of the logs. This is due to the integer representation of the *P*-score, which gives the step-curve shown. Consolidation takes time, and thus it gradually builds a still more solid status quo equilibrium. Regime duration – i.e. spells – must be a function of the duration itself. This gives the spells the almost log-normal distribution shown on Figure 7b.

Figure 7. Probit diagrams analyzing the distribution of the spells

Figure 7a. The spells

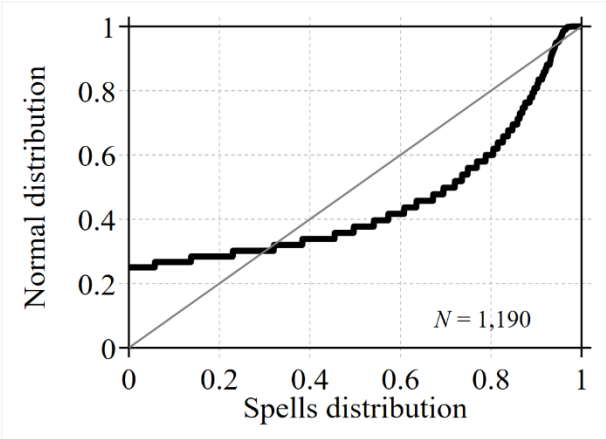
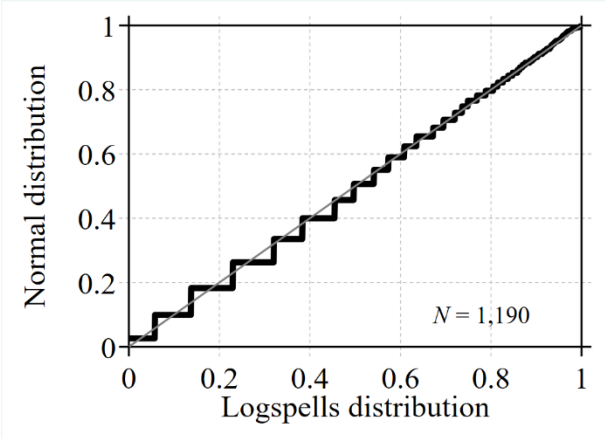


Figure 7b. The log to spells



7.6 A second look at regime consolidation (continuing section 6.1)

The two basic steady states should give stability at the traditional steady state for low *P*-scores and at the modern steady state for high *P*-scores. This was shown by Tables 2 and 3 that looked at the traditional steady state as much as is recorded. It implies that the average spells are larger at the two ends, and less stable in between.

Figure 8. Explaining the spell *S* by *P* in two ways

Figure 8a. Spell, *S*, explained by *P*

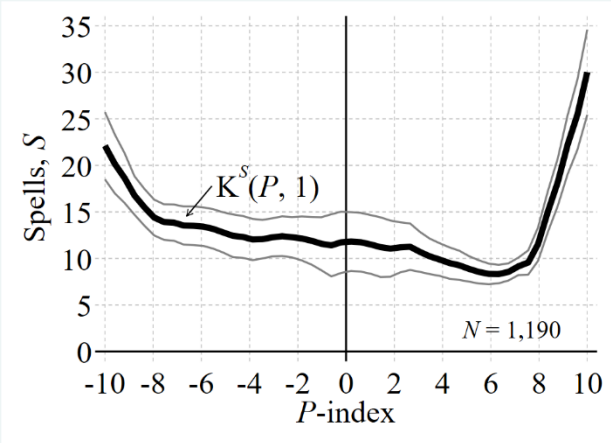


Figure 8b. Consolidation curves for spells

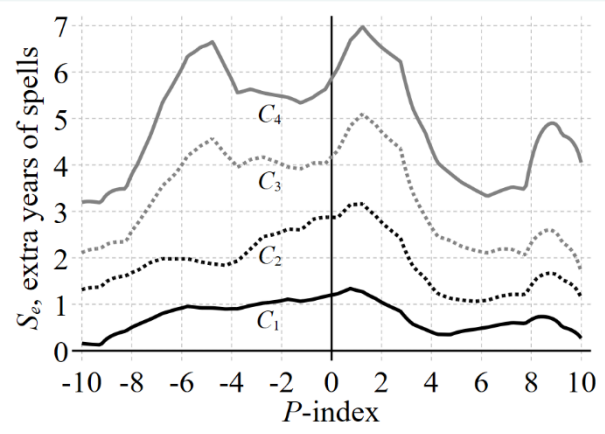


Figure 8a reports the spells *S* as a function of *P*. Figure 8b analyzes how many extra years the spells gain after 1, 2, 3 and 4 years of consolidation. The extra spell for regimes that have survived one year is the consolidation curve C_1. It is found from the kernel K_1 for all spells lasting more than 1 year. The extra years are calculated as $C_1 = K_1 - K_0$. The consolidation C_1 is not much more than 1 extra year (on the S_e-axis). The second consolidation curve C_2 is calculated from the kernel K_2 of all spells lasting more than 2 years, and then the extra is $C_2 = K_2 - K_0$. Now there is a clear hump above $S_e = 2$. C_3 and C_4 are similarly calculated. The hump above 3 for C_3 is already larger and for C_4. The hump over 4 is 2½ years extra for all *P*s from –6 to +4. For $P = 4$, K_0 is 10 years. It rises from 10 to 16½ years, after 4 years of consolidation.

Figure 8a confirms that the spells are longer at the two ends of the distribution. Especially at the high-end, spells grow dramatically. Even during the transition, the average regime still lasts 10 years, or even 14 years, if the truncations are corrected for.

Figure 8b is an analysis of system consolidation. It shows how much longer the spell becomes if it survives 1 year, 2 years, 3 years and 4 years. It does not matter much at the two ends anyhow, but it matters in the middle, where the average spell rises from about 10 years to 16½ years after 4 years of consolidation.

Table 1 showed that the standard deviation for the spells is larger than the average – no less than 19.4, but with 1190 spells, the standard error is still only 0.56, so the average is well established. The other chapters use the estimate that during the transition the average spell is roughly 15 years, when corrected for spell truncations. Both before and after the transition, the system stability is measured in centuries.