

The development of the economic system in the long run: From political to market capitalism

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Abstract:

The long-run/cross-country pattern in the economic system of countries is analyzed. A key change is from political to market capitalism. Political capitalism is also known as state capture, and crony capitalism. This triplet describes economic systems where political insiders use their power to make money. This means collusion, corruption, and coercion, so it requires some control over opposition, media, and legal system, which limits democracy. The state capture index is a measure of the triplet. It is roughly proportional to the corruption index. Market capitalism is measured by the economic freedom index. These indices and the democracy index are strongly intercorrelated as they have similar transitions. That is, they have an underlying relation to income. In the long run countries develop from poor authoritarians with political capitalism and corruption to wealthy democracies with market capitalism and honesty.

Keywords: Political capitalism, state capture, crony capitalism, corruption, democracy.

JEL: H1, K2, P51.

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1. Introduction: Political versus market capitalism

The paper asks how the economic system of countries changes with development in a cross-country/long-run perspective. It concentrates on the market sector, i.e., the ‘private’ sector producing goods and services to be sold on the market. Thus, the paper deals with political versus market capitalism in the private sector. Political capitalism will appear to be the dominating economic system in LDCs (less developed countries). It will be shown that it changes to market capitalism in DCs (developed countries).

A handful of closely related concepts deal with political capitalism, it is state capture, crony capitalism, kleptocracy, and stationary banditry. It means that political insiders use their power to become rich; see Table 2 below. The Appendix shows that (at least) the first three form a triplet that is hard to distinguish in practice. Section 2 and the Appendix define the triplet.

S, the **state capture** index (from Kaufmann 2024) is a measure of all three members of the triplet. The paper uses four additional variables, which are listed in bold below. One is **y**, **income** defined as the (natural) logarithm to gdp, which is the real GDP/GNI per capita in PPP prices (from the Maddison Project). The remaining three are institutional indices.

In market capitalism production is made by private firms in fair competition.⁴ Economic theory predicts that with perfect competition such systems are optimal – with well-known qualifications – as regards efficiency. The best attempt to measure the closeness to this ideal is **E**, the **economic freedom** index (from Fraser Institute). If the measures for the two kinds of capitalism were perfect, they should have a correlation of -1. However, institutional indices are imperfect, and **S** is a relative index with values around a constant international level, while **E** is an absolute index that includes substantial international trends, but even then, the **S** and **E** indices have a correlation -0.7 (see Table 4). This is substantial but still sufficiently low so that the effects of the two variables differ as will appear.

The key mechanism whereby political insiders make money is by giving monopolies to ‘friends’. Monopoly takes many forms such as tariffs or rigged auctions – it always generates profit to the monopolist, who may pay for the favor, so a mutually profitable collusion can be built. To the extent it happens openly, and by a published law, it may be legal. However, it often has a secret and illegal part. This is corruption and coercion, giving the large positive correlation between **S** and **T**, the **corruption** index (from Transparency International).

⁴ Some of the firms in the market may be public. However, managers of public firms easily become political insiders using their power in their business. So, we assume that the firms are private, with limited political power.

Collusion, corruption, and coercion may be exposed by the media and opposition and punished by the legal system. Thus, the triplet thrives better in authoritarian systems where the insiders are above the law and can control journalists, political opponents, police, and judges. In such systems it is tempting for the ruler to collude with business and become seriously rich.⁵ This explains the large (negative) correlation of S and V , the **democracy** index (polyarchy from V-Dem project).

The triplet harms efficiency, but the main effect is the redistribution to political insiders from the rest of the population, which it dislikes. This explains why the family of related terms has increasingly derogatory. Table 1 gives a normative classification of outcomes for the institutional variables. This classification seems to tally with the one of most people. The conclusion in section 5 discusses the normative aspects of the analysis.⁶

The four institutional indices are imperfect approximations to theoretical concepts. However, they are independently compiled, and large cross-country data samples are available. Table 4 below shows that the five variables are highly correlated in a way that makes sense.

Section 2 is a brief introduction to transition theory and the kernel technique used to reveal transitions. Section 3 reports some descriptive statistics. Section 4 looks at the relation of the S index – and the E , T and V indices – to income, while section 5 considers the relations of S to corruption and democracy, and section 6 concludes. The Appendix surveys variables and sources and the definitions of the three triplets. The second section of the references lists three background notes that document claims in the paper, these notes are referred to as B(2025) and B(2026a to c).

It is important to say from the start that the analysis looks at the long run. Thus, there is much that is not analyzed. This is a paper, not a book. The kernel tools are not common in comparative macro. They are chosen to reveal common trends in country groups.

Table 1. Normative classifying of values for four institutional indices

Institution Variable	Economic system			Political system V , democracy
	S , triplet	E , economic freedom	T , corruption	
Assessed good	Low	High	Low	High
Assessed bad	High	Low	High	Low

⁵ Some authoritarian strongmen care for power only, but most become rich. It is a problem for the strongman to keep his loot if he is deposed, hence the demand for safe heavens abroad.

⁶ The World Values Survey includes an item asking about the preference for public vs. private ownership to business. It is analyzed by Bjørnskov and Paldam (2012). The preference for private ownership grows with income.

2. Transition theory and the kernel tool ⁷

Researchers trying to generalize economic history (such as Maddison (2001) and Galor (2011)) find that the economy has two basic steady states: a traditional and a modern, which are connected by a transition lasting 1-2 centuries. All Socio-economic variables have transitions. This gives underlying curves for an increasing variable that looks as , which in the first difference becomes , where the horizontal axis is income. For a decreasing variable the curves are mirror images relative to the income axis. When the transition curves are estimated the data scatter substantially around the curve, but they often have narrow 95% confidence intervals indicating that the scatter is random in a long-run perspective.

The shape of the transition curves follows from the two (or more) sector growth models where the modern sector starts as a few small islands with high productivity that gradually grow until the whole economy is modernized. At the beginning where economy diverges from the traditional steady state the modern sector has a small weight in the economy, so growth is low. At the end the economy converges to the moderate growth of the modern economy. In the middle there is a growth premium from the movement of production factors to the modern sector, see Gundlach and Paldam (2020) for empirical and formal demonstrations.

2.1 *Transition of institutions and the problems of confluence and causality*

This also applies to institutions. However, they do not and cannot react to development in the short run but often depend upon political actions. In a short-run perspective such actions are exogenous, but in a long-run perspective are endogenous. Figure 4 below shows that the four institutional indices, E , S , T and V discussed, all have transitions that look amazingly similar, and much like the well-known demographic and agricultural transitions.

This appears as confluence in the long-run development. It explains the large problems of multicollinearity in the large literature on growth regressions, which makes it difficult to sort out causality.

However, we would like to know the causal structure between the variables. Especially as many claims have been made about the causality. Macro variables aggregate many primary

⁷ This section builds on Paldam (2021) that discuss theory and methods in some detail, and analyze the variables V , T and E , showing that their transitions are very robust. The transition in V , the polyarchy democracy index, is complex as the V data has an unusual statistical structure, with long and variable stability spells (within 0.05 index points). In average the spells last 18.5 years but then it jumps due to a random triggering event. The *jumps model* show that the underlying transition curve is an attractor for the jumps.

indicators which are likely to have different causal links, so we must be modest and only look for the main causal direction between the variables. Transition theory claims that it is from income to the institutions, see *ibid*. However, the primacy-of-institutions school claims the reverse causality as indicated by its name.⁸

Transition theory claims *equivalence*: long time-series and wide cross-country samples tell the same story. A transition is a time series process, but long time series are rare. As transitions are a general process in all countries, they will also appear in cross-country samples covering countries in a wide income range. The relative time series, S and T , are constant over time, so transitions can only be identified in cross-country data. Both V and y are available over more than two centuries confirming equivalence, see *ibid*.

2.2 *The tool of kernel regressions on unified panel data – detecting general patterns*

Figures 3, 4, 6, 7, and 8 below are kernel regression on the unified data of the panels analyzed. That is, the panel X_{it} is stacked over countries, giving a vector X_j . The vector has many elements, but no natural order. The kernel analyzing the two vectors X_j and Y_j where the elements are in the same order. The kernel regression $X = K^X(Y, bw)$ starts by ordering X_j and Y_j by Y . Then it calculates a smoothed MA-process on X with a constant bandwidth, bw that must be estimated. This is easy as the kernel-curve generated has a form that varies in a predictable and smooth way to the bw . The ‘best’ kernel curve is normally robust to a range of bws . The program used (lpoly in stata) give first estimate that is in this range.

The sorting scrambles the countries, so this method detects common long-run trends in the data. The kernel curve is drawn in bold, and it is surrounded by thin 95% confidence intervals. If they are narrow the observations scatter randomly around the curve. This is normally the case if the OPEC countries are omitted, so they require special treatment, see *ibid*.

Kernel curves assume no functional form and no economic theory. An economic theory claims a causal structure and predicts its form. Hence, it is a test of a theory of a curve with the form predicted can be drawn within the confidence intervals of the kernel. It is a strong test if the confidence intervals are narrow and the theoretical prediction is distinct. Thus, a kernel curve may support – even strongly support – a theory, and the causality it claims.

⁸ The NGOs compiling the indices are normally zealots fighting for cause: Transparency international claims that corruption is not only morally bad, but it also causes low growth. The Fraser institute claims that economic freedom is not only morally good, but it also causes high income, etc.

2.3 Kernel pairs may indicate causality

It is common that two theories exist suggesting the opposite causal directions between X and Y . Theory (i) is $X = X(Y)$, where $Y \rightarrow X$ estimated by the kernel $X = K^X(Y, bw)$. Theory (ii) is $Y = Y(X)$, where $X \rightarrow Y$ estimated by the kernel $Y = K^Y(X, bw)$.

The kernel pair $[K^X(Y, bw), K^Y(X, bw)]$ often looks amazingly different, as (i) sorts the data by Y , and (ii) sorts by X . It may be obvious that one is the *obverse*, looking as it should be its theory, and the other is the *reverse* that does not look as it should by its theory. The reverse may just look like a (weak) mirrored reflection of the obverse; see Figure 3 below. In this case the kernel pair provides a (strong) test of the obverse theory and hence confirms the causality it claims.

If the two variables X and Y have a low correlation it is possible that the two kernels support both theories. If the correlation is moderate it is likely that one of the kernel curves, dominates and is the obverse. However, sometimes both kernels in the pair look equally good. Then the pair show simultaneity.

The authors have looked at many cases of kernel pairs. They sometimes speak clearly, but they may also give weak answers, as do formal causality tests.

A main problem using the kernel technique is that it is bulky to present. This is the reason for the background papers B(2026b and c) documenting a total of 13 kernel pairs.

3. The *S* index

The key variable in this paper is the *S* index that is new in growth and development theory. As mentioned, it measures the triplet of political and crony capitalism and state capture.

The Appendix shows that state capture is indistinguishable from political and crony capitalism. It is possible that definitions may be made that allow a distinction, but as far as the authors know it has not happened. Thus, we will work with the definition in Table 2.

There are, of course, always political insiders, but in low-*S* countries they do not include businesspeople, and insiders live by official salaries and pensions (by published scales) that does not make them rich. They do live well but not in great splendor, and they have no need to escape abroad when they lose power.

Table 2. A two-step definition of the triplet of political capitalism, state capture and crony capitalism

Political insiders are politicians, administrators, and businessmen with some power over the political system.
The triplet occurs when a significant part of GDP is acquired by political insiders using their power.

3.1. *Some descriptive statistics. Relative and absolute indices*

The *S* index covers the 25 years since 1997, every third year until 2021, for 171 countries. Thus, there are $9 \times 171 = 1,539$ *S* data. The OPEC group of 18 countries are deleted at present as they are analyzed elsewhere, *ibid*. Some countries are missing observations for one of the other indices. The balanced sample used has 1,051 observations for five series (*E*, *S*, *T*, *V*, and *y*), and 137 countries. It is termed the Main sample.

S uses a percentage score]0,100[. The index is calibrated so that the cross-country average is 50 and its standard deviation is 1.87 every year.⁹ Hence, the index shows relative country differences, but international trends cannot be analyzed. From 1997 to 2021, real GDP per capita in the world doubled, so there would surely have been trends if the measure allowed. How such trends may look can be assessed from Figure 5 below. While the *S* and the *T* indices are relative measures, *E*, *V*, and *y* are absolute measures with international trends over time.

⁹ Kaufmann (2024), presenting the index, does not dwell on this issue, but just writes on p. 13 that ‘averages were then normalized and converted to range from 0 (low capture) to 100 (high).’

Figure 1 shows the distribution of the 1,539 observations for S (the triplet). The graph singles out the West as the black bars. It is compared with the distribution of the 1,514 observations for E (economic freedom) observations. The two distributions are clearly different. While the S -distribution is rather flat, the E -distribution looks more normal, but it has a tail to the left.

Figure 1. Frequencies (%) for all S and E data. Black bars are for West

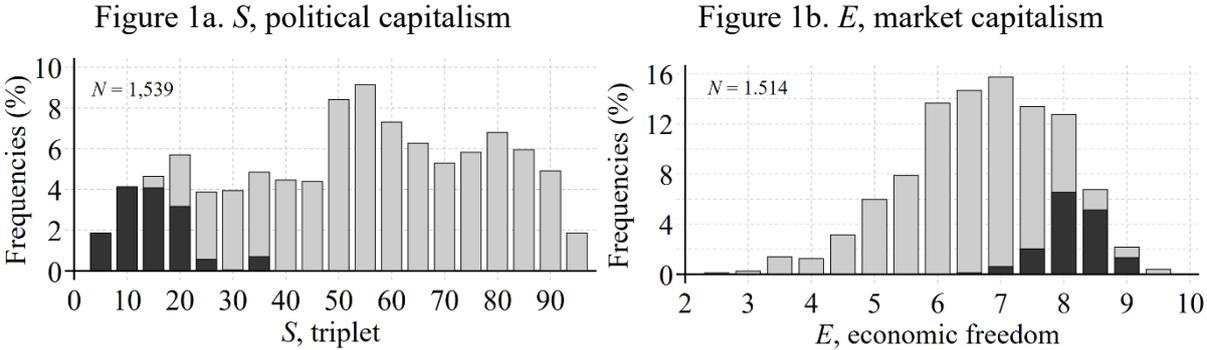


Table 3. Average S index in the main country groups

Group	Counts		S , state capture Av (std)	Outlier in group		y , income Av (std)
	N	N_c		Low	High	
Africa SS	423	47	61.5 (17.8)	Cabo Verde	Eq. Guinea	7.71 (0.89)
Asia	252	28	51.7 (19.9)	Japan	North Korea	8.97 (0.90)
Latin America	216	24	52.6 (19.0)	Uruguay	Haiti	9.09 (0.44)
MENA	162	18	65.3 (14.5)	Tunesia	Syria	9.66 (0.98)
Post-socialist	261	29	50.3 (23.4)	Slovenia	Turkmenistan	9.35 (0.64)
West	225	25	12.1 (6.8)	Netherlands	Israel/USA	10.52 (0.30)
OPEC	162	18	67.3 (13.6)	Kuwait	Eq. Guinea	9.69 (1.02)

N is number of observations; N_c is the number of countries: $N = 9N_c$. OPEC countries are also in one of the groups – mostly in MENA. In the West Israel and USA have large military-industrial complexes and hence relatively high S scores. Eq. Guinea is Equatorial Guinea.

Table 3 shows averages for S for the major country groups. The West is the most deviating group as expected from Figure 1. To the others side OPEC deviates most, but it is not a strong outlier.

3.2. *The correlations of the five variables, and some regressions*

This section uses the Main sample, Part A in Table 4 reports the 10 pairwise correlations on the unified data for S , T , E , V , and y . This combines long-run between-country and short-run within-country effects. Section B looks at within-country effects. They are smaller, but about half of

the correlation survives in four of the ten cases. Thus, the time span of 25 years gives at most half of the adjustment.

Table 4. The correlation between the five variables

Index	Measuring	Type	A: Unified data					B: Within-country results					
			<i>S</i>	<i>T</i>	<i>E</i>	<i>V</i>	<i>y</i>	<i>S</i>	<i>T</i>	<i>E</i>	<i>V</i>	<i>y</i>	
<i>S</i>	Triplet	R	1					1					
<i>T</i>	Corruption	R	0.84	1				0.10	1				
<i>E</i>	Market capitalism	A	-0.70	-0.77	1			-0.05	-0.32	1			
<i>V</i>	Democracy	A	-0.84	-0.67	0.66	1		-0.43	-0.04	0.10	1		
<i>y</i>	Income	A	-0.68	-0.77	0.76	0.62	1	-0.07	-0.28	0.39	0.06	1	

Section A is calculated for all $N = 1,051$ non-OPEC observations with data for all four variables. Section B for the within-country results are averages of correlation calculated independently for all 131 countries with more than five observations. The data for OPEC are analyzed in Paldam and Saadaoui (2025). Type R (relative) calibrates the index to have a constant average across countries every year. Type A (absolute) has international trends.

Table 5. Explaining the *S* variable with/without FE, fixed effects for countries

Eq	Constant	<i>T</i>	<i>E</i>	<i>V</i>	<i>y</i>	FE	R ² adj	Net of 1 R ²
1	70.77 (17)					Yes	0.945	
2a	-9.32 (8)	9.76 (51)				No	0.712	-0.233
2b	50.01 (11)	2.56 (8)				Yes	0.948	0.003
3a	149.8 (45)		-15.67 (-32)			No	0.496	-0.449
3b	75.61 (16)		-1.23 (-2.6)			Yes	0.945	0.001
4a	93.7 (88)			-83.72 (-50)		No	0.706	-0.239
4b	86.39 (31)			-61.39 (-33)		Yes	0.975	0.030
5a	173.4 (40)				-14.12 (-30)	No	0.466	-0.479
5b	77.16 (11)				-1.22 (-1.5)	Yes	0.945	0.000
6a	27.96 (6)	6.38 (25)	0.83 (1.8)	-51.07 (-30)	0.65 (1.5)	No	0.849	-0.096
6b	59.20 (9)	2.15 (8)	0.30 (0.9)	-59.90 (-33)	1.64 (2.5)	Yes	0.976	0.032

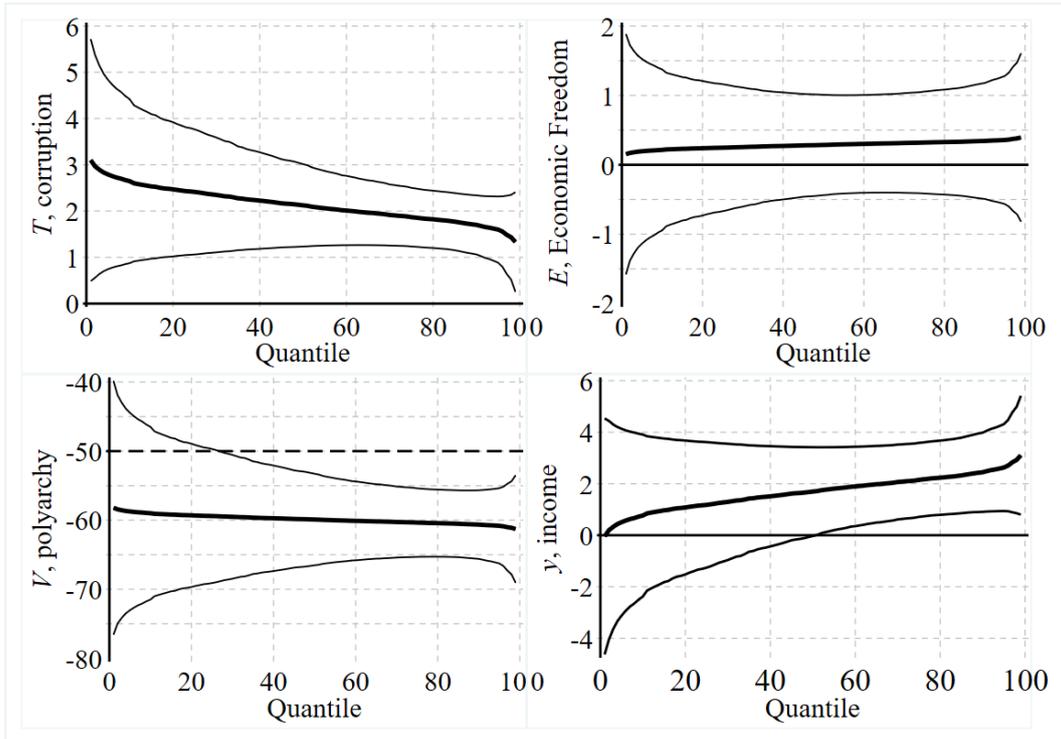
OLS regressions, unified data, $N = 1,051$. Eq is equation. Parentheses hold t-ratios rounded to the nearest integer if $t > 5$. Net R² is the difference between the R² adj in the row and in row 1. It shows what FE cannot explain.

Table 5 compares regressions without and with FE, fixed effects for countries. The fixed effects catch the cross-country differences, which we consider to be mainly due to income differences and thus the long run. The first row in the table is for fixed effects alone. They explain 94.5% of the variation. When one of the four variables is added, R² increases marginally from 0.001 to 0.032. Thus, the cross-country differences explain nearly everything. Another sign that tallies with this interpretation is that the FE makes the nice coefficient on income in (5a) disappear in (5b). The relative income differences change little over the 25 years.

3.3 An alternative estimate using panel quantile regressions with fixed effects

Figure 2 extends the four analyses in Table 5, which explains the S-variable by fixed effects and one of the variables: T , E , V , and y . It is now done using panel quantile regression with fixed effects (Rios-Avila, 2020).

Figure 2. Asymmetries in explaining the S-variable for state capture



The medians (50% quartile) on the four graphs are close to the result with FE in Table 5, as they should. The slopes give additional information. The 95% confidence intervals indicate that the coefficients are significantly different from zero, except for E and for the lowest quantiles of y . The two graphs on the left-hand side are both significant at all quantiles. The curves estimated have negative slopes, but they are not significant. The two graphs at the right-hand side are more dubious as they are mostly insignificant.

3.4 The small effect of population size

The paper uses country as a unit and disregards country-size. Table 6 shows a few experiments with the effect of country size measured by population. Pop is the natural logarithm to the population (in thousand). The analysis show that it is unproblematic to use the country as a unit.

Table 6. Explaining S by Pop , population, for all $N = 1,449$ observations

	Constant	Pop	y	OPEC	Africa	West	FE	R2 adj
1	19.64 (3.0)	1.85 (4.6)					No	0.014
2	133.3 (19)	1.13 (3.6)	-11.31 (-26)				No	0.331
3	70.37 (3.7)	0.48 (0.4)	-0.67 (-1.0)				Yes	0.946
4	21.21 (4.3)	1.93 (7)		13.11 (9)	7.29 (6)	-40.02 (-29)	No	0.475
5	143.2 (19)	0.72 (2.7)	-11.23 (-20)	24.18 (1.7)	-10.31 (-8)	-24.54 (-17)	No	0.587
6	70.37 (3.7)	0.48 (0.4)	-0.67 (-1.0)	-7.12 (-1.1)	2.67 (1.1)	-48.21 (-13)	Yes	0.946

See Table 5. OPEC, Africa, and West are binary dummies. Pop is the natural logarithm to the population/1000. FE is fixed effects for countries.

The coefficient to Pop is mostly significant, but it contributes only about 0.01-0.02 points to the R^2 adj, and it vanishes when FE for countries is included. The relative sizes of country income and population have changed little over 25 years so the FE's are correlated to both Pop and y . West is the only explanatory variable remaining in regressions (2) and (5) that includes FE. Thus, there may be a positive effect – small countries have slightly more market capitalism than large countries. In other words, there is more competition in the markets of small countries. This is due to the stronger globalization in small countries.

4. The transitions in the four institutional indices

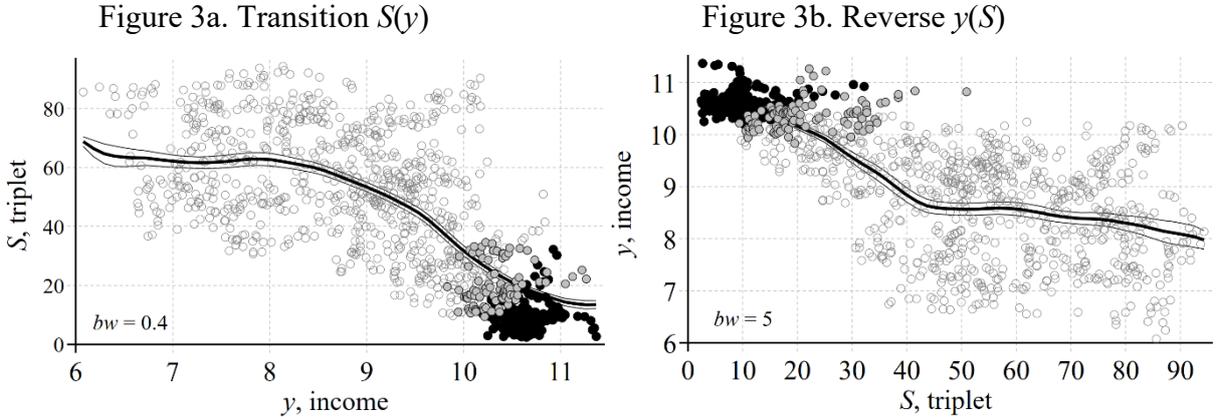
The main sample is mainly limited by the S-variable, while many more observations are available for E , T , V and y . Thus, the robustness of the transitions $E(y)$, $T(y)$ and $V(y)$ are analyzed on much more data elsewhere. However, the transition $S(y)$ is new. As it looks very much like the other transitions it will be concluded that it is equally robust-

4.1. The transition in the S index

The (S, y) kernel pair is shown in Figure 3. It is assessed that Figure 3a is the obverse kernel and Figure 3b is the reverse, giving a weak mirrored reflection. Figure 3a shows a typical transition curve of the underlying change of S as income grows. The point scatter shows that it is overlaid with a great deal of fuzziness in the short run. The figure shows a late transition, as further analyzed in the next section. The format of the graphs is reported in Table 7. When observations for the OPEC countries are included they stand out to the northeast on Figure 3a and to the southwest on Figure 3b, *ibid*.

Table 7. Legend to Figure 3

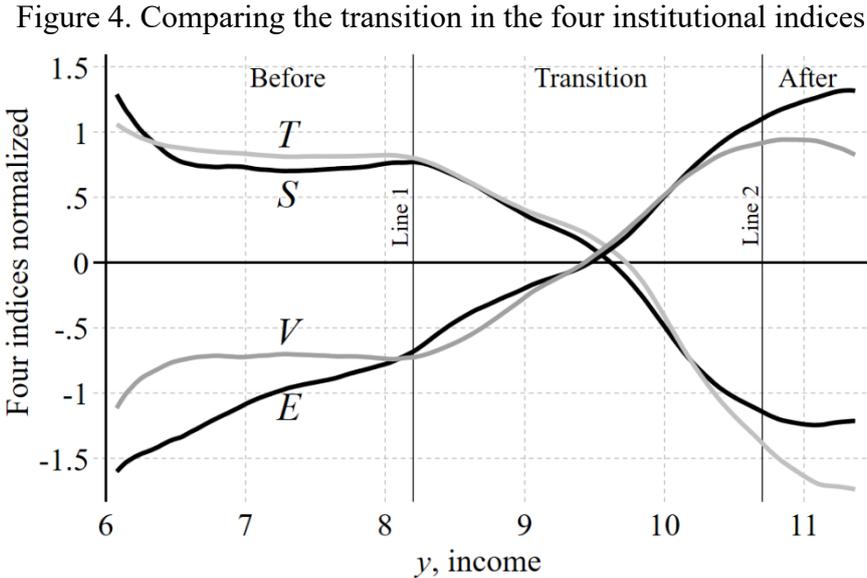
Black circles	Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, Netherlands, New Zealand, Norway, Sweden, Switzerland, UK, USA
Gray circles	(1) New West: Cyprus, Greece, Italy, Israel, Malta, Portugal, Spain. (2) East Asia: Japan, Hong Kong, Singapore, South Korea, Taiwan
Hollow circles	Others



$N = 1,051$. The bold kernel curves are surrounded by 95% confidence intervals, as in Figures 6 to 8.

4.2. The transition in the nexus of the four institutional series: *S*, *T*, *E*, and *V*

Figure 5 compares the transition in four indices: The triplet from Figure 4a, corruption, economic freedom, and democracy. The data for each index is normalized to average zero and standard deviation one. The figure suggests that the indices have highly confluent transitions. The series change by two standard deviations – from -1 to $+1$ – when income moves from $y = 8$ to 11 . The movements are all in the direction of increasing welfare, as per Table 1.



$N = 1,051$ and $bw = 0.3$. The series are normalized to average zero and standard deviation one. The 95% confidence intervals for *S* are shown in Figure 3a. The other three transitions have similarly narrow confidence intervals.

The transition curves for *S*, *T*, and *V* are similar.¹⁰ The period ‘before’ to the left of Line 1 covers the low income and lower middle-income countries, while the area to the right of Line 2 is well into the high-income countries. Thus, the big transition of institutions – for *T*, *S*, and *V* – only starts when development is well under way, and the convergence to the modern level only ends when countries have been high income countries for some time. The conclusion is that development *precedes* institutional change.¹¹ To obtain the full changes in society caused by development, it is not only important to be wealthy, but it is necessary to be wealthy for some time, such as three to four decades.

¹⁰ With more data the transition in the *T*-index bend after $y = 10$ to become flat like the *S* and *V* curves, *ibid*.
¹¹ Countries as Portugal, South Korea, Spain, and Taiwan had substantial economic development before they democratized.

One may speculate that the colluding groups of political insiders that give high values for the *S* and *T* indices will only be broken when democracy and the associated goods of a free press and an independent legal system have been working for some time – the calculation in Table 4 suggests that 25 years are half the way.

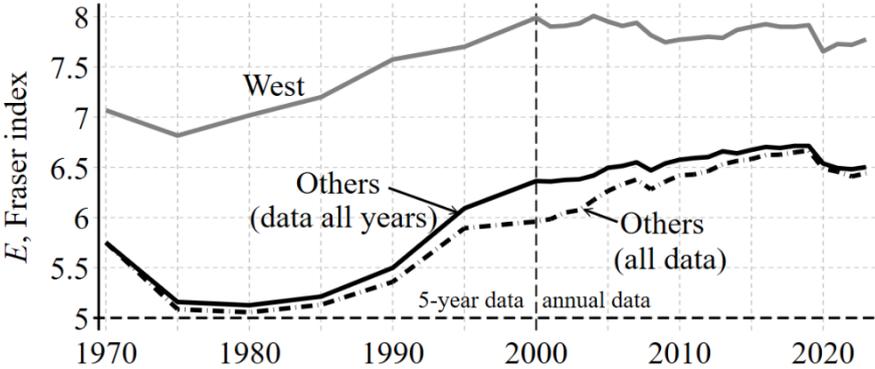
The only institutional variable that differs is *E*, economic freedom. It moves very much like the other three indices after Line 1, but it increases before, when the other indices are flat. This helps to explain why the correlation between *S* and *E* is only -0.70 in Table 4.

4.3 *A brief historical note on the path of the triplet*

Certain historical factors that gave high values for the triplets in the LDCs from 1960-90. The big freedom wave in Africa was around 1960.¹² After the big wave many ex-colonies wanted economic independence as well. That is, they wanted national control over industry, banking and trade, notably foreign trade. This gave political leaders control over the economy and made many politicians rich.

In addition, there were widespread beliefs in the infant industry argument and hence in the import substitution industrialization throughout the LDC world. This caused a further increase in the political element in the economic system, and large-scale rent seeking. These policies peaked in the 1980s, when it became increasingly clear that they led to large-scale rent seeking, i.e., high triplet values.

Figure 5. The development of the *E* index of economic freedom 1970 to 2023



¹² Spain and Portugal lost their Latin Americas empire during the Napoleonic wars. UK, France and the Netherlands lost their South Asias colonies after WWII. France and UK liberated their remaining colonies notably in Africa in 1960, while Russia kept its Central Asia and East European colonies until 1990.

Figure 5 shows these trends by the *E* index. It was at its lowest in 1975/85. Then it turned upward and from the late 1980s many countries – notably LDCs – become more market oriented. The wave became weaker after 2000, and there has been a little backsliding in 2019/21 in connection with the Covid crisis. Still most countries have some kind of capitalist system, but much of the capitalism was political capitalism. This even applies to countries as China, Laos, and Vietnam that, in principle, are socialist.

It is likely that if the *S* index had been designed to include trends, it would have looked like a reversed version of Figure 5. This would surely increase the negative correlation between the *S* and the *E* indices. However, the *E* index has the strongest movements before 1997, where the *S* index starts.

5. Three strong relations: $S(E)$, $S(T)$, and $S(V)$

Tables 5 and 6 showed that S is strongly connected to E , T and V . The three connections are analyzed in Figures 6, 7, and 8 that show the kernels $K^S(E, 0.4)$, $K^S(T, 0.4)$, and $K^S(V, 0.4)$ estimated on the Main sample. The correlations from Table 4 are reported on each graph. They use the format given in Tables 7 and 8. In the three cases, the kernel pairs are similar; see B(2026b). This suggests simultaneity, so the analysis does not point to a causal direction.

5.1. The relation from economic freedom to the triplet

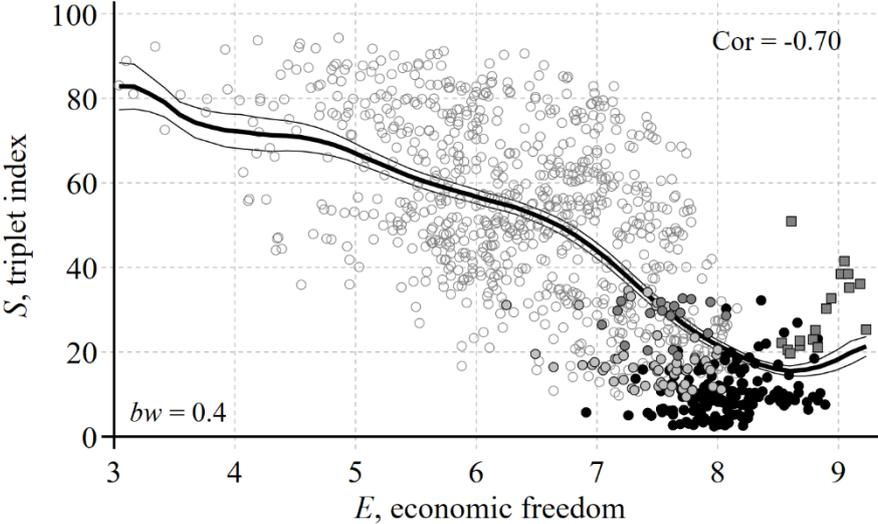
Figure 6 show that S and E are nicely correlated as discussed, but the correlation is far from perfect. As expected the West is in southeast corner as expected. The reason the kernel curve turns upward at the end is the two super-liberal countries Hong Kong and Singapore.

The three graphs show the two groups of convergers; see Table 7. They may get closer in the next couple of decades. Thus, they point to long lags of institutional adjustment.

Table 8. Legend to Figures 6-8. The countries are listed in Table 7

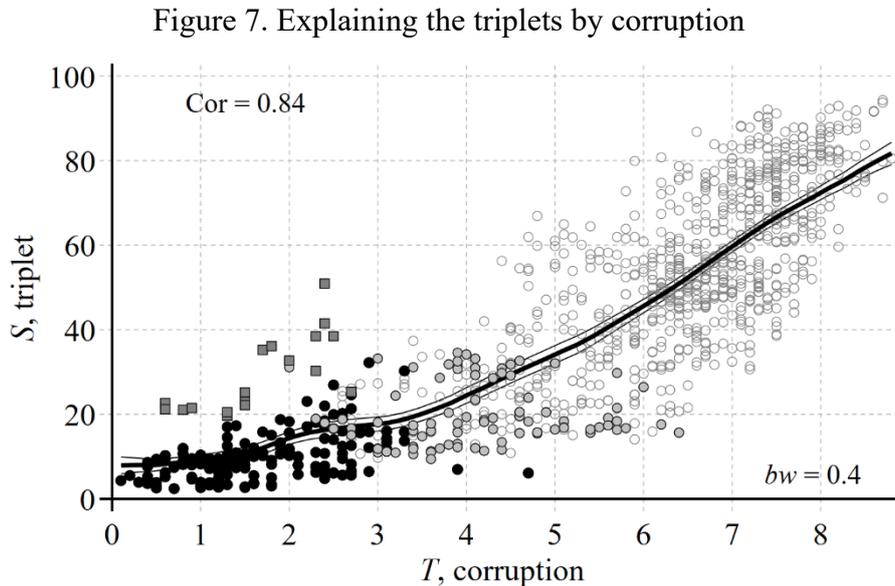
Black circles	Old West
Light gray	New West convergers
Dark gray	East Asian convergers
Circles	Democracies: Japan, S Korea, Taiwan
Squares	Authoritarian: Hong Kong, Singapore
Hollow circles	Others

Figure 6. Explaining the triplets by economic freedom



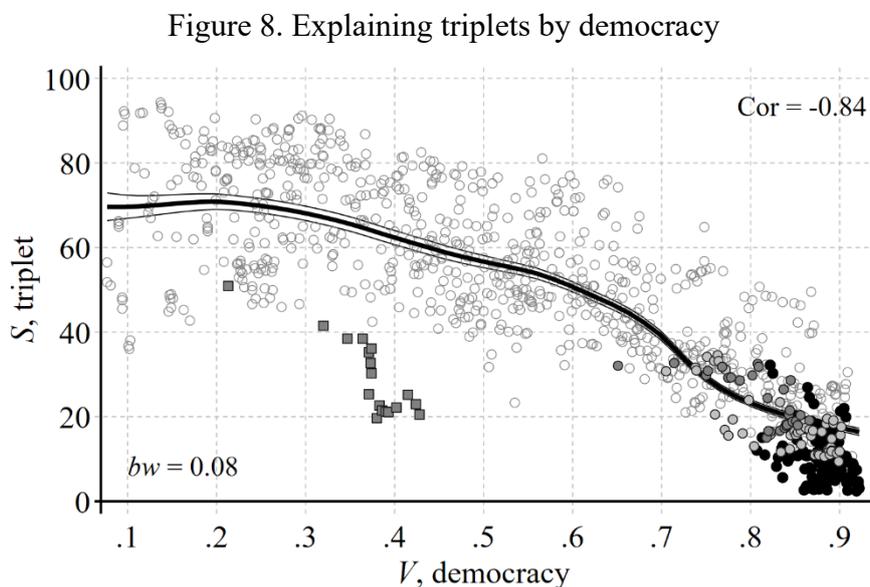
5.2. *The relation from corruption to the triplet*

Figure 7 shows that the relation between S , state capture, and T , corruption, is almost linear, so it is no wonder that the transition is the same for both variables. Once again, the West has low values, especially for the S index.



5.3. *The relation from democracy to the triplet*

Figure 8 demonstrates the non-linear path of the relation between S , state capture, and V , democracy. Once again, Hong Kong and Singapore stick out, due to the political regime. As expected, the West is close together at the preferable end for high democracy and market capitalism, and the convergers have democracy levels that are close to the old West.



6. Conclusions, with some normative aspects

The triplet of political capitalism, state capture, and crony capitalism have overlapping definitions. It is possible that they may be defined in a way that makes them separate, but as of now they are indistinguishable in practice. Thus, the S index for state capture is an equally good measure for the triplet. The paper considers the cross-country (long-run) pattern in S relative to three other indices: T for corruption, E for market capitalism, and V for democracy. The four indices are highly correlated as all four have strong transitions shown by Figure 4.

Table 1 defined good institutions as low values of the triplet and corruption, and high values of economic freedom and democracy. Figure 4 demonstrates that good institutions go together and are strongly correlated with income. Two stories about causality between good institutions and income, can be told. They have important normative implications.

(A) The nice story is that virtue is rewarded. If a country chooses good institutions, it becomes rich. This is the primacy-of-institutions' view.¹³

(B) The reverse interpretation is that when a country becomes wealthy the other good outcomes follow, so it says that those who have will be given more. This is the transition view, which the authors claim is supported by most evidence, *ibid*. It is certainly supported by the fact that transition of institutions only happens after development is well under way. It tallies with the old claim that the structure of consumption is demand driven. Democracy, honesty, and economic freedom are goods with a positive income elasticity, so that income rises cause an increasing demand for these goods.

Once it starts the complex of institution is simultaneous. When democracy gradually leads to a free press and an independent legal system, this reduces collusion and corruption and vice versa. These simultaneous effects seem to be strongest at a relatively high income. Such complexity softens the distinction between (A) and (B).

The transition view does not explain where development comes from, but only its (largely) good consequences. Thus, it leaves us with the old question of finding the key to development from which everything follows.

¹³ Most development aid agencies in the West express similar ideas. Aid should be used to develop good institutions, and then development will follow.

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The reference *ibid* covers MP (2021, 2024, 2025a) and as regards the OPEC countries MP (2025b) and MP and Saadoui (2026).

Appendix

Table A1. Variables with sources

<i>S</i>	Measure the triplet of political capitalism, state capture and crony capitalism State capture. range]0, 100[, from Kaufmann (2024) Source: https://governanceactionhub.org
<i>T, TI</i>	Corruption, $T = 10 - TI$, where TI is Transparency international's honesty index, range]0, 10[Source: https://www.transparency.org/en/cpi/2024
<i>E</i>	Market capitalism proxy Economic Freedom index, range]0, 10[, from the Fraser institute Source: https://www.fraserinstitute.org
<i>V</i>	Democracy index Polyarchy. Scale: 2-3 decimals in the interval]0, 1[, from authoritarian to democratic Source: https://v-dem.net/
<i>GDP</i> <i>gdp</i> <i>y</i>	National accounts variables Gross Domestic Product, in fixed PPP, purchasing power parity, prices GDP per capita in fixed 2011 US\$. From the Maddison Project. Income, the natural logarithm to gdp. One logarithmic point is a gdp change of 2.72 times Source: https://www.ggdcc.net/maddison/maddison-project/home.htm
<i>Kx(y, bw)</i>	Kernel regression terminology Kernel regression of the relation $x = x(y)$, bw is the fixed bandwidth to be estimated Estimated by the command <code>lpoly</code> in Stata using the defaults

The][brackets refer to open intervals, where the limits are extremes/ideals that have not been/cannot be reached.

Definitions of Political capitalism, state capture and crony capitalism

Table A1 shows that the triplet of these concepts deal with issues that have been greatly discussed. The triplets are propagated by different groups, who reached their concept from different avenues, and with different theoretical frameworks in mind. There are few cross-concept references. The large discussion has led to related definitions of the concepts, making them a bit woolly. This appendix chases the definitions. We report some of the most prominent definitions and framed overviews of the definitions made by Google's Gemini AI program (14/8/2025). They include examples or alleged consequences of high/low values of the indices. Such extras are in {}-brackets.

Table A2. Google hits, the 18th of September 2025

Triplet concepts	Hits
Political capitalism	13 x 103
State capture	51 x 104
Crony capitalism	12 x 105

Political capitalism is defined by Holcombe (2018) in his book on the subject: 'It is an economic and political system in which the economic and political elite cooperate for their mutual benefit.' The AI overview of the related definitions is:

Political capitalism refers to an economic and political system where the wealthy and powerful collaborate to shape public policy for their mutual benefit, often at the expense of the broader public. {This system blurs the lines between the state and the market, with economic elites influencing government actions to maintain their privileged positions.}

Kaufmann (2024) defines the *S* index and the concept of state capture, ‘it occurs when individuals in government or corporations actively shape laws and institutions to serve their own interests.’ It uses a set of 18 indicators published by different agencies/NGOs. They differ from the ones used for *E*, *T*, and *V*. The AI overview of the related definitions is:

State capture is a form of systemic political corruption where private interests significantly influence a state's decision-making processes to their own advantage, often to the detriment of the public good. {This influence can involve shaping laws, policies, and regulations, and is often achieved through illicit means, such as bribery and other forms of corruption.}

Crony capitalism is defined by Rubin (2014) as ‘an economy in which success in business depends on close relationships between businesspeople and government officials.’¹⁴ It may be exhibited by favoritism in the distribution of legal permits, government grants, special tax breaks, or other forms of state interventions.’ The AI overview is:

Crony capitalism refers to an economic system where businesses thrive due to close relationships with political figures and government officials, rather than through fair competition or merit. {This can manifest as preferential treatment, special privileges, or even corruption, ultimately hindering economic progress and distorting market mechanisms.}

It is obvious that the three concepts have overlapping definitions, which are all covered by the definition in Table 2 above. It is hard to think of something that is covered by one triplet and not by the other two. It follows that the *S*-index also measures political capitalism and crony capitalism.

¹⁴ Rubins lucid article only mentions crony capitalism, but if the term is replaced by one of the other triplets nothing else change.