March 13

13th – 2025

First version

Oil countries

what kind of capitalism?

Martin Paldam, Aarhus University[1]

Jamel Saadaoui, Paris 8 University[2]

Abstract

The paper considers 18 OPEC countries that were low-income countries when oil was found. Oil has given the countries a special path to high income. Normally wealth leads to democracy, but in oil countries it leads to a consolidation of the previous authoritarian rule. Thus, in most cases, oil wealth leads to a conservative political and economic system. Especially the six oil countries on the Arab Peninsula have conservative socio-cultural values, and they are staunchly authoritarian. However, this does not mean that OPEC countries are oriented toward free market policies. They score poorly on legal quality and protection of property rights and consequently, they have some corruption. This gives centralized economic systems dominated by the ruling group. It is a capitalist system, but it is a special oil type of political capitalism.

[1] Department of Economics and Business, Fuglesangs Allé 4, DK-8210 Aarhus V. Phone: 45-87175545, email: mpaldam@econ.au.dk, home page: http://www.martin.paldam.dk.

[2] Dionysian Economics Lab, 2 rue de la Liberté, Saint-Denis, 93526, France, email : jamelsaadaoui@gmail.com, home page: https://www.jamelsaadaoui.com.

1. Introduction

This paper deals with the development of the economic and political system in oil countries that were LDCs (less developed countries) when oil was found.[3] The countries included are large oil exporters. Hence, they have turned wealthy, but the development path has been different from other wealthy countries, both on the economic and political side. The *special growth path* is characterized by a slow adjustment of institutions to the new wealth, for two reasons: (i) institutional *inertia*, and (ii) weak pressures for reforms.

The development of the political system is briefly summarized in sections 2.2 to 2.4, but otherwise the discussion concentrates on the economic system. The discussion is limited to 18 countries listed in Table 1. They are/were members of OPEC or closely associated with the organization. They will be compared with **25Western** countries, and **123Other** countries. The group of OPEC countries falls into two sub-groups: The **6AP** sub-group are the 6 oil countries on the Arab Peninsula, while the **12oO** sub-group are the other 12 OPEC countries, which turns into **11oO**, as data for Equatorial Guinea are often missing.

Most of the 18 countries were oil exporters before the formation of OPEC in 1960. Few have data before 1950, so the data used starts in 1950, which gives 1,050 observations. Six of the countries have had a socialist system,[4] but today only Venezuela remains socialist. Hence, most of these countries are rather conservative politically. The 6AP countries are among the most conservative countries in the world, when it comes to sociocultural values, and they are staunchly authoritarian. They are also more liberal in the economic sense than the 12oO. However, the economic systems of the OPEC countries are not particularly liberal. They have capitalist systems, but it is a special type of government dominated capitalism, see section 3.

The main reason for the public sector domination is that the (by far) largest company in all OPEC countries is the national oil and gas company. Furthermore, oil and gas have a large component of resource rent, giving a large inflow of foreign capital to the treasury of the ruler. This gives him power and allows large public expenditure. In addition, it appreciates the exchange rate, and hence it makes the production of other goods uncompetitive on the world market. Thus, the economy develops a different structure than in other countries.

[3] Countries that were already DCs (developed countries) when oil was found are excluded.

[4] Algeria, Angola, Congo Br, Iraq, Libya, and Venezuela have had periods with socialism. The three Arab countries had Arab Socialism; see Takriti and Safieddine (2022). Arab socialism is not well defined, but it did contain public ownership of natural resources and large businesses, plus land reform. Only one of the countries listed (Iran) had been independent throughout. The socialist strategies may be a reaction to their old Western colonial masters.

Table 1. The 18 OPEC countries analyzed

Country	Member	Type	Regime before oil	After
The 6AP countries on the Arab Peninsula, traditional kingdoms, strong spatial effects				
Bahrain (a)	Not (a)	Arab, Muslim	Emirate	Emirate
Kuwait	Start	Arab, Muslim	Emirate	Emirate
Oman (a)	Not (a)	Arab, Muslim	Kingdom	Kingdom
Qatar	1961-19	Arab, Muslim	Kingdom	Kingdom
Saudi Arabia	Start	Arab, Muslim	Kingdom	Kingdom
UAE	1967	Arab, Muslim	Emirates	Emirates
The 12 oO countries, for other OPEC, mostly military or other authoritarian, weak spatial effects				
Algeria	1969	Arab, Muslim	French Colony	Military/Autocracy
Angola	In and out	Africa, Catholic	Portuguese Colony	One party/Democracy
Congo Br	2018	Africa, Catholic	French Colony	Mixed
Ecuador	In and out	Latin America, Catholic	Military/democracy	Military/democracy
Equatorial Guinea	2017	Africa, Catholic	Spanish/Authoritarian	Authoritarian
Gabon	In and out	Africa, Catholic	French Colony	Autocracy
Indonesia	In and out	Asian, Muslim	Autocracy	Autocracy/Democracy
Iran	Start	Persian, Muslim (Shia)	Kingdom	Kingdom/Theocracy
Iraq	Start	Arab, Muslim	Kingdom/Military	Military/
Libya	1962	Arab, Muslim	Kingdom	Military
Nigeria	1971	Africa, Muslim/Christian	British Colony	Military/Democracy
Venezuela	Start	Latin America, Catholic	Military/democracy	Military/Democracy

OPEC is the Organization of Petroleum Exporting Countries. Bahrain and Oman are associated with OPEC and included. Equatorial Guinea is missing some data. Congo Br (Brazzaville) is officially République du Congo. Brunei is also a wealthy oil exporter but is not an OPEC member and misses most data, so it is not included. *Start* means that the country is a founding member of OPEC.

The analysis below builds on a book, (Paldam, 2021) and two papers, (Paldam, 2025) looks at the missing democratic transition in the OPEC/MENA/Arab countries, while (Paldam, 2025) analyze the democratic transition in other countries.

Sections 2 and 3 give a survey of development in the OPEC countries relative to other countries, where section 3 looks at the economic system using data for the five areas of the Fraser index of economic freedom. Section 4 discusses the logic of the economic systems in the countries, and section 5 concludes.

2. Stylized facts: The development over income and time

The purpose of this section and the next is to show the path of the economic and political system. It is done by comparing the path of income, the political system, the economic system, and corruption for the four groups of countries already mentioned: 6AP, 12oO, 25West, 123Others.

2.1 Income

Figure 1 shows the paths of economic development measured by income ln(gdp), where gdp is the GDP per capita in real PPP prices (2011 international $). The four groups are in 2 pairs. The

6AP countries and the 25West are equally wealthy, and so are the 12oO countries and the 125Others. Figure 1b shows the real oil price. There is a clear connection between the black curves for the OPEC and the oil price.

Figure 1. Income in the OPEC countries comparatively

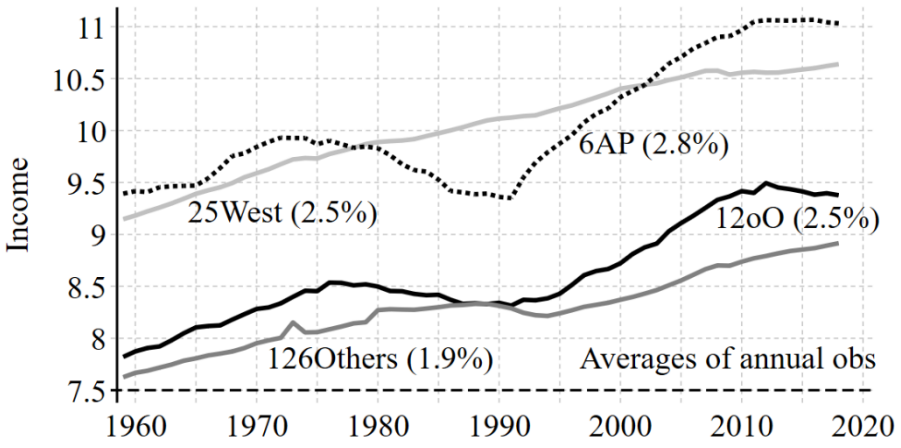
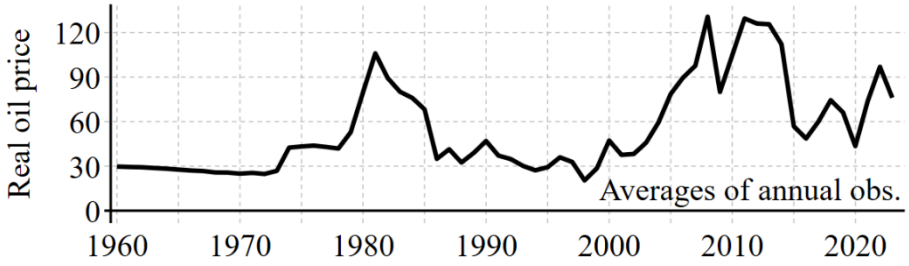


Figure 1b. Index for the real price of oil



The color scheme on Figure 1a is also used in Figures 4, 6 to 10. The two OPEC groups are in black, with 6AP dashed. The 25West is light gray and the 123Others are in dark gray. Parenthesis holds growth rates. Figure 1b is based on US statistics for oil prices and the consumer price index.

Table 2 compares the level of income in oil countries and comparable countries. This can be done, with some sense, for the MENA group of countries, for the African countries, and for the Latin American countries. In all three country groups it is obvious that the oil countries are wealthier, and as Figure 1 shows they also grow marginally faster, but they do develop some problems as will be discussed.

The political economy of the resource curse and Dutch disease is analyzed in a large literature, started by Corden (1984). It discusses whether abundant resources are a blessing or a curse, see Ploeg (2011) and Paldam (2013). The difference column in Table 2 suggests that it is a large blessing. But as we go along some less favorable consequences will appear. The data

for the non-oil groups is used as the comparative case below.

Table 2. The difference between oil countries and other countries

	Oil		Non-oil		Difference
	N	Income ($)	N	Income ($)	Income (ratio)
MENA	10	10.444 (34,343)	8	9.094 (8,903)	1.350 (3.9)
Africa (SS)	5	9.309 (11,031)	38	7.662 (7,662)	1.647 (5.2)
Latin America	6	9.526 (13,717)	20	9.162 (9,528)	0.364 (1.4)

N is the number of countries in the group. Parentheses hold averages in $ 2011 fixed prices. The ratio in the last column is the ratio of the two $ numbers. Thus, it is also the antilog to the difference. The 6 Latin American oil countries are Brazil, Colombia Ecuador, Mexico, Trinidad, and Venezuela, where only Ecuador and Venezuela are OPEC countries. MENA is the Middle East and North Africa, which are 16 Arab countries, Iran, and Turkey.

2.2 The political system: The missing democratic transition

Democracy indices are controversial, so the analysis uses two indices, Polity and Polyarchy (see sources). They have different scales, aggregate (somewhat) different indicators, and give pictures that differ a little.[5] Figures 2 and 3 make them comparable by a conversion to a percentage of the range of the indices. ***Polity*** is measured on the scale [-10, 10]. Thus, the range is 20, so it is converted to $P = (100/20)(Polity + 10)$. ***Polyarchy*** is measured on a scale]0, 1[, so they are converted to $V = 100Polyarchy$. *P* and *V* are used throughout.

Figure 2. The development of the political system over income in the OPEC countries

Figure 2a. Polity

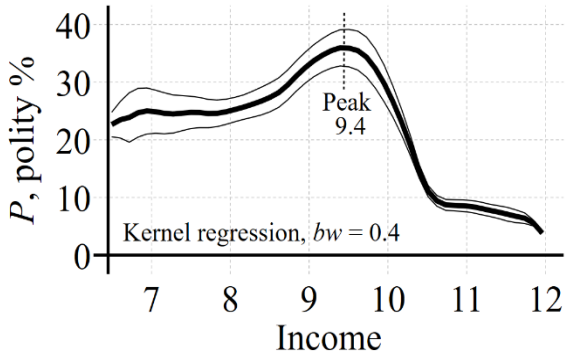
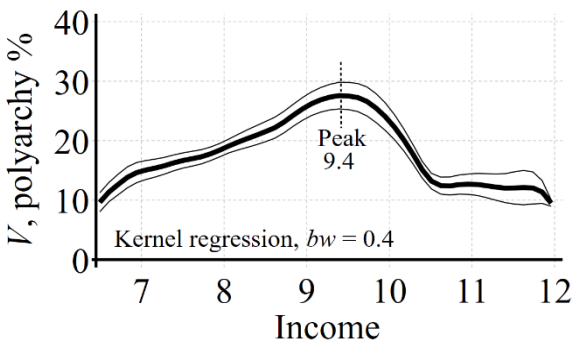


Figure 2b. Polyarchy



Some of the analysis is done by kernel regression that gives a smoothed moving average with a fixed bandwidth (*bw*). This technique is well known in other fields, but little used in

[5] In addition, they are conceptually different. *V,* increases if political power is more shared amongst citizens. *P,* increases if the political process is more open and competitive. In practice they are strongly correlated.

comparative macro analysis. [6] The bold kernel curves are surrounded by thin curves giving the 95% confidence intervals.

When income rises from the traditional to the modern level in non-OPEC countries the political system moves from an authoritarian (kingdom) to a democratic system, around a common transition path ⌒. This is the democratic transition that is very robust in the data.

Figure 2 shows that when income rises in oil countries, it causes a hump-shaped path in the political system ∩, peaking at income 9.4, which ends up in strongly authoritarian systems. Thus, the political systems in OPEC and other countries have diverged. This has given rise to considerable political tensions.

2.3 Political system stability

Table 3 reports gross and net changes, in the left and right panels. Look at the polity part: The 6AP countries move 1.16 percentage points in average of the range for the 329 observations. However, the average net movement is zero, so the 6AP countries do not change regime in the years covered – the movements are pure zigzag, so that they cancel each other out over time.

Not surprisingly, all groups have smaller net than gross changes pointing to zigzag movements. The differences are larger for the two OPEC groups – here the net changes are insignificant. Thus, the OPEC countries have strong conservative forces keeping the political system constant. It is important for long run predictions if it a steady state or a temporary status quo equilibrium.

Table 3. The stability of the two democracy indices, 1950-2018

	Gross changes First differences numerically				Net changes First differences			
	6AP	12oO	25West	125Other	6AP	12oO	25West	125Other
	P, polity %				*P*, polity %			
Average	**1.16**	**2.30**	**0.30**	**2.25**	0.00	0.14	0.11	**0.47**
Standard error	(0.19)	(0.34)	(0.07)	(0.12)	(0.21)	(0.35)	(0.07)	(0.12)
	V, polyarchy %				*V*, polyarchy %			
Average	**1.37**	**1.45**	**0.53**	**1.69**	0.15	0.22	**0.31**	**0.42**
Standard error	(0.20)	(0.14)	(0.06)	(0.06)	0.21	0.15	(0.06)	(0.06)
	Number of first differences				Number of first differences			
For both indices	329	703	1,549	6,059	329	703	1,549	6,059

The traditional steady state is at about 20% and the modern about 90%. The bold estimates are significant.

[6] The use of the technique is explained in Paldam (2021), The kernel regressions are made with the stata command lpoly, using the defaults including the Epanechnikov kernel. The program calculates an estimate of the best bandwidth. It is normally possible to find a slightly better one after a few experiments.

Table 3 also tells two stories about the non-OPEC countries. The democratic transition was already done in the West in 1950, except for a few South European countries where the transition took place in the early 1970s. In the 124Others the net movement is highly significant at about 0.45 % in both indices, indicating the average speed of the democratic transition. As the full democratic transition is about 70% (in % of the full range) it will take 150 years at this speed. However, most countries in the group have already progressed some of the way.

2.4 The path of the political system over time

Income rises over time, so the two democracy indices should fall over time. However, Figure 3 shows they have increased. However, the increase is small, especially for the V-index.[7]

Note that both curves and the curves in Figure 2 are in the bottom half of the range. The confidence intervals in Figure 2 are narrower, so Figure 2 is better determined.

Figure 3. The development of the political system over time in the OPEC countries

Figure 3a. Polity

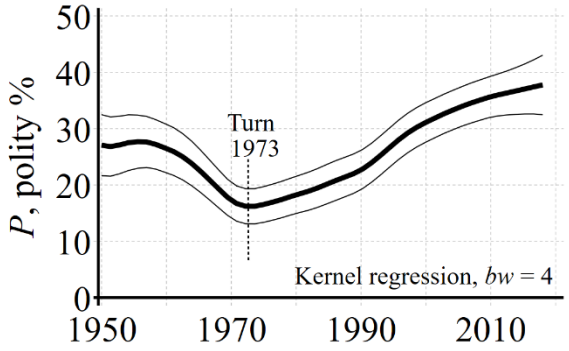
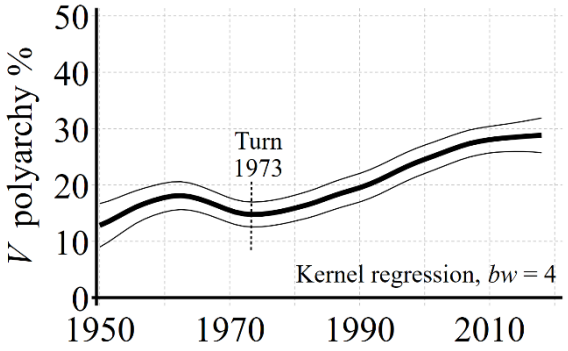


Figure 3b. Polyarchy



2.5 The economic system, overview using the Fraser index

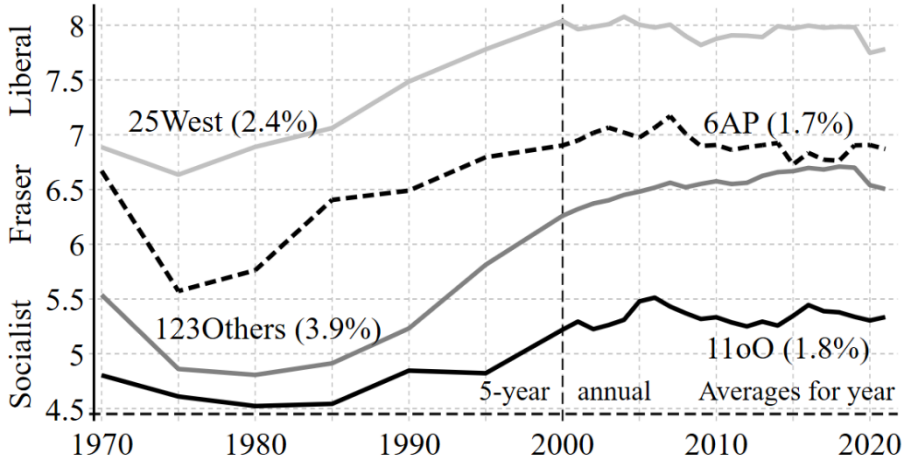
Figure 4 introduces the path of the economic system from a comparative perspective. The Fraser EF index is made in cooperation with a net of libertarian think tanks. The index measures the freedom to run a private business,[8] on a scale from 0 to 10. A socialist economic system or a system with no law and order gives low scores, and a free-market system with law and order gives high scores. The index used 5-year intervals from 1970 to 2000 and annual observations since then. The index started with data for 93 countries and now it covers 165 countries. Patterns

[7] Both curves explain little of the variation, so there is ample space for both trends. When the curves of Figures 2 and 3 are estimated for the non-OPEC countries they explain much more and have a much better correspondence.
[8] The paper uses the term liberal in the European way for a market economy, with free trade, and law and order.

in the data may be due to the sample increase. This is not the case for the curves in Figure 4.

O'Reilly and Murphy (2025) test the unit-root properties of political institutions and economic freedom. The countries that do not have mean reversion in their political institutions have to be carefully observed in future studies, as the question of how economic freedom could help to achieve the democratic transition could be key in explaining the kind of capitalism in these countries.

Figure 4. Fraser index, ***EF***, for the economic system of the OPEC countries comparatively



The EF-index has no data for Equatorial Guinea, so 12oO becomes 11oO. In addition to socialism, the index also punishes lack of law and order, and hence high corruption. The observations are for 5-year periods until 2000, where they become annual. The parenthesis holds the average annual growth rate for the variable.

The EF index and the libertarian philosophy behind its construction are explained in several reports that can be downloaded from the Fraser Institute home page (references). The 25West has high scores as expected, while 123Others are less liberal. The difference was above 2 Fraser points in 1980-90, but since then, it has fallen to about 1.2 from 2010. Thus, there was a liberalization from 1985-2010 in the big group of other countries. Liberalization requires painful adjustments in the short run to obtain long-run gains, see section 3.5.

Oil countries do not feel the need to adjust, and the two groups of OPEC countries only partly follow the world trend in liberalization. They are also quite different. The 6AP countries are about 1.4 Fraser points lower than the 25West, and the difference is slowly growing. They are much more conservative in socio-cultural areas, and as seen above they are much more authoritarian politically.

The 11oO countries are the least liberal group, and they liberalize as slowly as the 6AP group. The group includes Venezuela that is the last socialist OPEC country with no economic

growth since the early 1950s. Thus, Figure 4 shows that the index for OPEC countries is not particularly high. It is below the average index for the 123Other countries since the early 1990s. Likewise, it is notable that in the period of liberal reforms they were small in both OPEC groups.

2.6 Does oil cause corruption

Table 4 shows the honesty/corruption-index for the country groups. The data are from Transparency International going from 2003-23, where most OPEC countries are included.

As expected, the 25West has the lowest corruption, while the 125Other countries are somewhat lower. Corruption data has a strong but late transition, so it is at a level between 2 and 3 in poor and middle-income countries, it rises slowly to between 4 and 5 in the higher middle-income countries, and finally, it rises to 8-9 in high-income countries.

Table 4. The level of honesty/corruption in the four groups, 1995-2023

	6AP	12oO	25West	125Other
Average	5.30	2.45	7.58	3.69
Standard error	0.09	0.04	0.05	0.03
Countries	6	12	25	137
Observations	126	248	702	3,114

The groups are trendless. The index uses the interval [0, 10] from extreme corruption to extreme honesty. All groups are different at the 0.01% level by a t-test. Countries with less than 10 observations are deleted.

The 6AP group is halfway between the 25West and 125Others, while the 12oO group is the lowest with rather high corruption, suggesting the oil wealth gives corruption. Anecdotal evidence supports this suggestion: Brazil and Mexico are two oil countries that have large state-owned oil companies: Petrobras and Pemex, respectively. The two companies are the two largest companies in Latin America. Thanks to the democratic system with a free press in the two countries, much is known about the wheeling and dealing of the two giants at the political level. It contains a great deal of corruption. These countries are not members of OPEC, so they are not included in the paper, but still, the two examples suggest that parastatals with massive money flows may become agents of corruption in countries with substantial corruption.

Thus, the OPEC countries are relatively corrupt for their income levels, but one may suspect that countries that got rich due to resource rents have kept many institutional traits at the level where they would have been without oil. That gives two explanations: (i) Oil as such further corruption, (ii) Corruption changes slowly, so there is likely to be institutional inertia. Figure 5a combined with Table 2 tries to sort out the two explanations by a crude assessment.

Figure 5. The pattern of corruption in the MENA group

Figure 5a. Line for oil countries

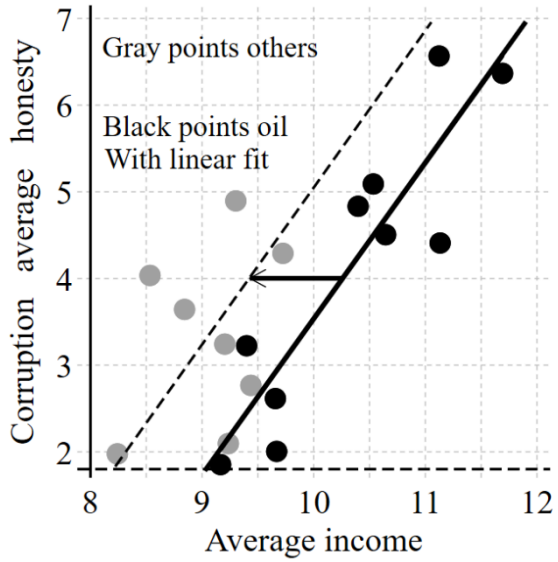
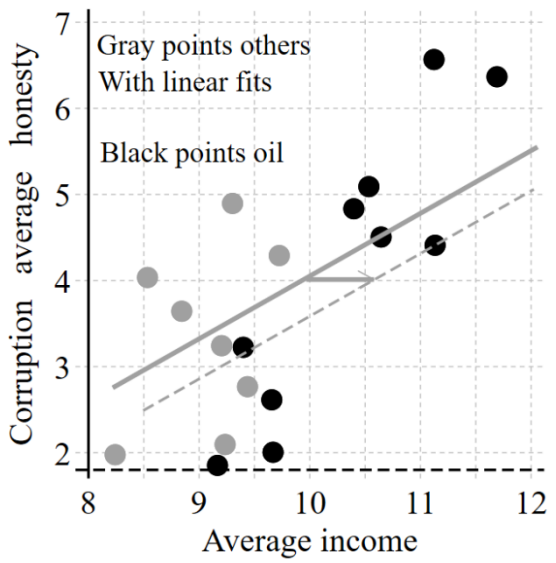


Figure 5b. Line for non-oil countries



Regressions show that the slopes on the lines are 1.80 (5.9) on Figure 5a, and 0.74 (0.5) on Figure (5b), so the line on Figure 1b is less well-defined. Parenthesis holds t-ratios. The points are averages for 2003-23, where the Transparency Index (TI) is complete.

Figure 5a looks at the 18 MENA countries in a corruption over income diagram. The points are divided into 8 gray non-oil and 10 black oil country points. The points show that with rising income, corruption falls as predicted. The average line through the oil points is to the right of the non-oil points. The black arrow shows how much the average line must move to the left to be in the middle of the gray points. It is approximately 0.75 income points, so half of the excess income is due to oil. So, the two theories explain the same amount of excess corruption in the MENA oil countries. Figure 5b calculates the same graph using the average line through the non-oil countries. here the line is flatter and less well determined. However, the gray arrow is approximately 0.6 income points, so the two estimates are similar.

Thus, both theories (i) or (ii) contribute to explaining the excess corruption in the OPEC countries, with almost the same weight to each theory.

3 The economic system: The five areas of the Fraser Index, EFA1-5

3.1 The relation of the five areas[9]

The Fraser index, ***EF***, from Figure 4 aggregates five areas, ***A***, which will be termed EFA1-5.

[9] Each area is covered by 5-15 indicators. They are described on the homepage of the index, see Fraser (references).

Table 5 shows the correlations between the areas and the TI index.[10] The pattern is similar in OPEC and Other countries, though it is slightly weaker in the OPEC data.

Table 5. Correlations of the observations for the 5 areas of the Fraser Index, 1995-2022
Above the diagonal for OPEC (N = 313), below the diagonal for Others (N = 2,927)

	EFA1	EFA2	EFA3	EFA4	EFA5	TI
EFA1, government size	1	0.15	0.17	0.24	0.25	-0.03
EFA2, legal quality	-0.25	1	0.70	0.71	0.71	0.80
EFA3, sound money	-0.04	0.59	1	0.57	0.57	0.64
EFA4, free to trade	-0.04	0.74	0.72	1	0.77	0.69
EFA5, regulation	-0.03	0.80	0.64	0.75	1	0.79
TI, honesty/corruption	-0.30	0.91	0.68	0.68	0.75	1

The data is cleaned for all rows where one or more observations for the areas are missing. A correlation analysis including more variable but (consequently) fewer observations is given in the Appendix, see also Table 7.

Area 1, government size, is uncorrelated or weakly negatively correlated with the other 4 areas that are positively and substantially intercorrelated.

The TI-index for honesty/corruption is included, even when it reduces the sample.[11] It is (moderately) negatively correlated with the EFA1 index. Thus, the larger the government sector, the less honest the country is. The remaining 4 areas are all positively related to the TI-index with substantial correlations. Thus, the more liberal a country is, the less corrupt it is. It is reassuring that the highest correlation is to legal quality, even when the two indices are independently compiled, using different indicators.

The 5 comparative graphs use the same scale on the axis for easier comparisons. The four groups are the 6AP in dashed black, the 11oO in solid back, the 25West in light gray and 125Others in dark gray.

The five graphs are robust, but two countries are often outliers: Iran and Venezuela. Iran has a unique theocratic system (Vahabi, 2024). Venezuela is the only truly populist/socialist country in the sample (Roy and Cheatham, 2024). A note is available demonstrating how the two countries deviate.

[10] The TI-index that is made independently of the Fraser index. It is reassuring that the TI index is highly correlated with the relevant areas of the Fraser index. This validates both indices.

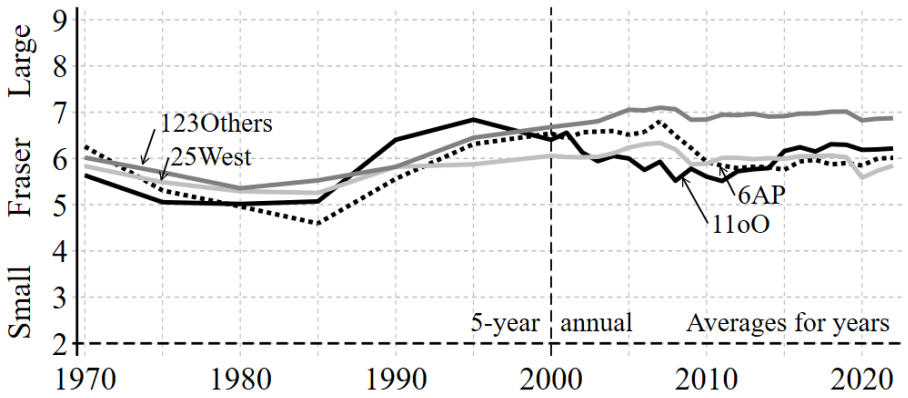
[11] The two correlation matrices using the larger sample, when the TI-index is deleted, are virtually the same. In addition, the two matrices are also similar for Spearman's rank correlation, so the matrices are not due to outliers or other deviations from normality of the series.

3.2 EFA1. Government size; see Figure 6

This is the deviating component of the Fraser index. Here the four curves are closest together. However, the similarity of the four curves is deceptive. There are large differences in the underlying indicators. The OPEC countries score high on indicators, which cover government expenditures and ownership of business, but they score low on taxes. They need only low taxes to finance these expenditures. In several of these countries there are no income taxes.

Figure 6. EFA1. Government size

Public expenditure and taxes including marginal taxes



3.3 EFA2. Legal quality and property rights protection; see Figure 7

Here the 5 groups are different, with the West as the extreme case of a strong legal system where property rights are private and protected, also to land; see Soto (2000).

Part of the legal complex is that it requires a democratic system to have a high-quality legal system; see the highly non-linear Figure 7b. The legal variable is similarly dependent on the political system in the range from 0 to 70, but then it bends upward. In authoritarian regimes, the legal system is integrated into the hieratical administrative system with the ruler at the apex.

Figure 7. EFA2. Legal system

Legal quality and property rights protection

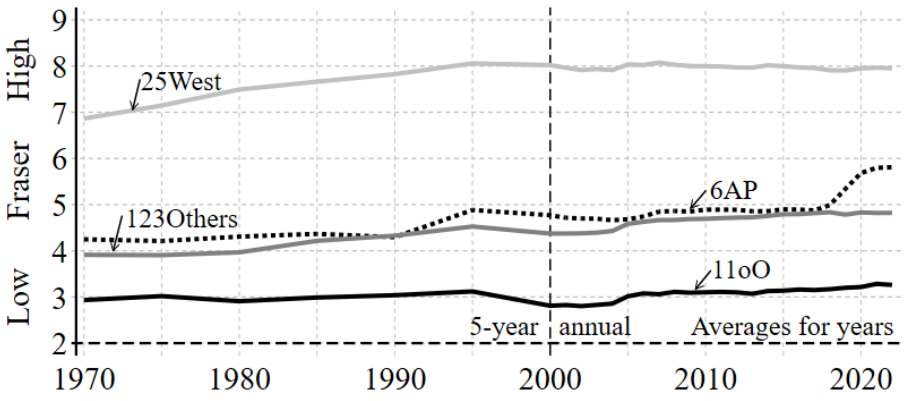
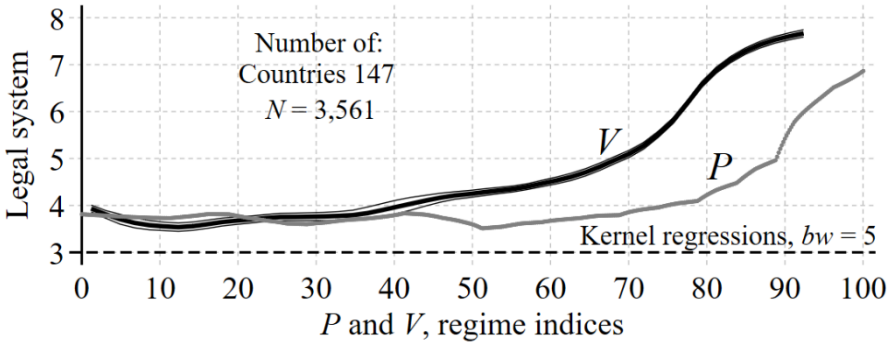


Figure 7b. The relation between the legal system and political regime

Vertical axis is the same as Figure 7.



These observations tally with the low position of the two groups of OPEC countries on Figure 7. Even when the 6AP countries are wealthy, they have a much lower quality legal system than the West, and the lowest curve is for the 11oO group. The Legal quality variable has a typical, but late transition. It differs between the main and the OPEC sample, where the curve is lower. Above, it was shown that legal quality is strongly correlated with corruption. This is not surprising but raises the question of causality. It also important that an – religiously justified – Arab/Muslim legal system has existed for more than a millennium.

Especially in large desert countries, private property to land is still under development, e.g., in Saudi Arabia, a new real estate registration law was enacted in May 2022 establishing a formal system of land registration. In addition, the gender legal rights adjustment in the index is also important, especially in the traditional Arab countries of the 6AP group.

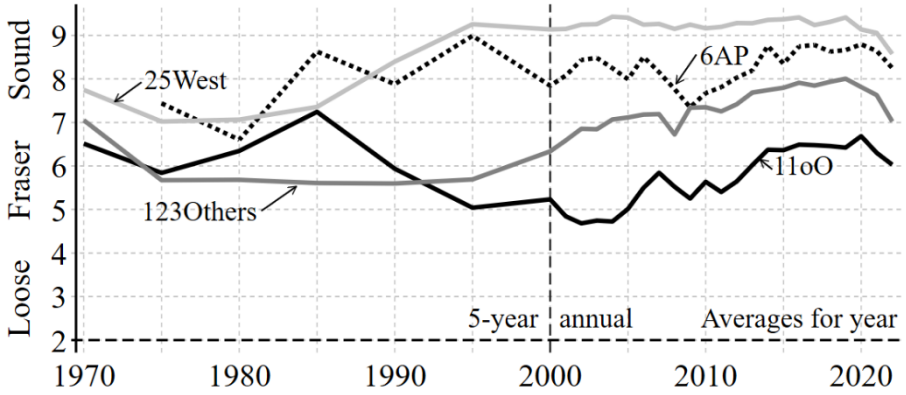
3.4 EFA3. Sound money; see Figure 8

The oil countries are not particularly successful in having sound money. The group behind the EF-index saw inflation as a particularly unjust tax, reflecting the strong influence of the school of monetarism in the group. Loose monetary policies has occurred in oil countries when oil prices jumps, as it generates expectation waves, it gives strong pressures from people to spend. It is unlikely that the capacity to implement public programs jumps correspondingly, and instead inflation jumps.

This is where Iran and especially Venezuela deviate from the average OPEC country. Venezuela has had one of the most spectacular inflations in the last decade. Another large inflation took place in Angola 1991-2002.

Figure 8. EFA3. Sound money

Money growth, Inflation, and its standard deviation

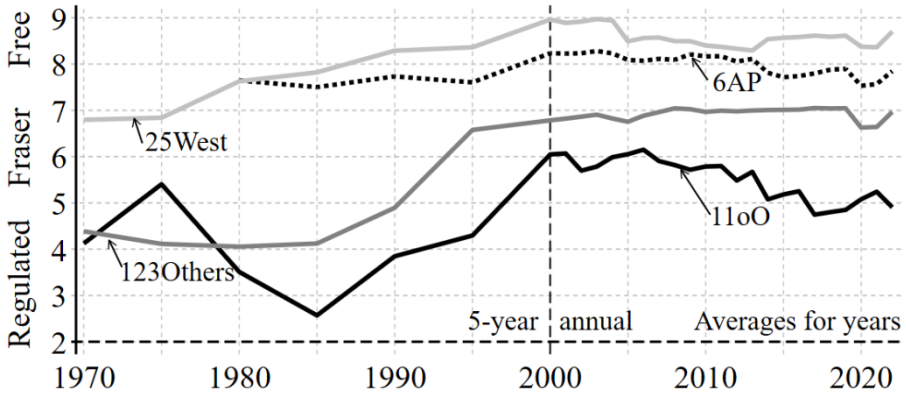


3.5 EFA4. Freedom to trade internationally; see Figure 9

While the West has an old tradition for free trade, the LDC world did for long pursue an ISI (import substitution industrialization) strategy that was also a part of Arab Socialism. And sure enough, a large gap between the free to trade component in the West and the Others developed from 1975 to 85. However, the experience with the ISI strategy showed that it led to large-scale rent seeking, see the classical paper Krueger (1974). With substantial lags, this led to a wave of liberalization from 1985. The Oil countries were large-scale exporters, and thus they could finance large-scale import as well, so even when the ISI school did have some effect (notably in Iraq, Algeria, and Venezuela) it was less important in the AP countries as seen in Figure 9.

Figure 9. EFA4. Free to trade

Trade taxes, and trade restrictions black market exchange rates



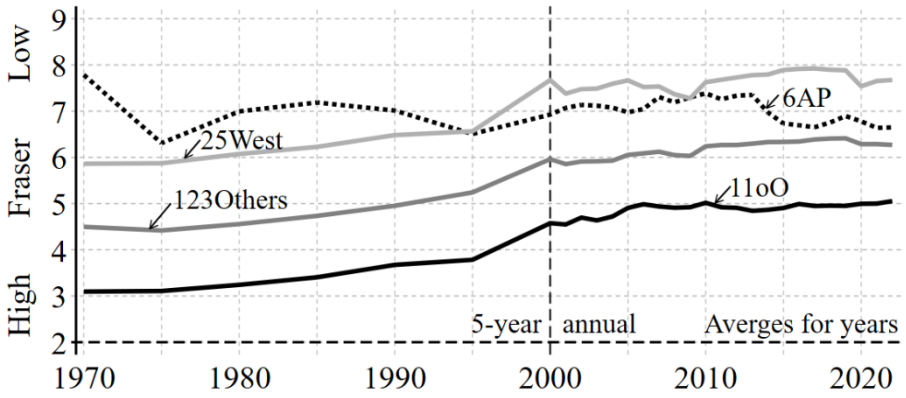
3.6 EFA5. Regulation of business, see Figure 10

This component is the most complex. The regulations that give distortions of marked outcomes are included. Much the same story as the one on freedom to trade internationally applies.

Part of the ISI-complex was great optimism as regards the ability of the authorities to regulate business and create pro development distortions of markets. This optimism is smaller today than it was in 1960-80.

Figure 10. EFA5. Regulation of business

Regulations in three main fields: credit, labor, and business in general



In addition, there was the strong legacy of imperialism. Most countries had been colonies and now they rule themselves. Part of the reaction to their former masters was to exercise a great deal of control over foreign firms, which were often from the countries of the old imperial masters, especially during the last period of Western imperialism.

The underlying indicators have a section about the regulations on the labor market, discussed below. The pattern on Figure 10 is much like the one on Figures 8 and 9, though the 4 curves are closer together. The oil countries are not so pro-business in their regulations.

Table 6. The stability of the economic system, 1970-2022

		Gross changes First differences numerically				Net changes First differences			
		6AP	12oO	25West	125Other	6AP	12oO	25West	125Other
Area 1	Av	**0.308**	**0.382**	**0.219**	**0.363**	0.027	0.030	0.000	**0.047**
	Se	(0.040)	(0.033)	(0.010)	(0.010)	(0.047)	(0.040)	(0.013)	(0.012)
Area 2	Av	**0.106**	**0.116**	**0.098**	**0.115**	**0.056**	0.012	**0.039**	**0.026**
	Se	(0.015)	(0.010)	(0.008)	(0.004)	(0.017)	(0.012)	(0.009)	(0.004)
Area 3	Av	**0.445**	**0.663**	**0.297**	**0.549**	0.028	0.009	0.029	0.033
	Se	(0.049)	(0.046)	(0.020)	(0.014)	(0.061)	(0.060)	(0.023)	(0.017)
Area 4	Av	**0.144**	**0.544**	**0.236**	**0.313**	-0.008	0.047	**0.068**	**0.082**
	Se	(0.018)	(0.063)	(0.015)	(0.012)	(0.022)	(0.076)	(0.018)	(0.013)
Area 5	Av	**0.223**	**0.212**	**0.199**	**0.236**	-0.007	**0.056**	**0.065**	**0.055**
	Se	(0.029)	(0.017)	(0.011)	(0.007)	(0.034)	(0.020)	(0.013)	(0.008)
	N Av	151	264	700	3,123	151	264	700	3,123

Av is average, Se is standard error. The table is constructed as Table 3. As some countries miss observations the *N* is an average. The bold results are significant. This table is confirmed by the correlation analysis in the Appendix.

3.7 The conservative nature of oil countries

Figures 4 and 8-10 showed that a big liberalization happened in most countries from 1975-80 to 2000-2010. Structural reforms are painful in the short run, but the decision makers in many countries came to feel that they had to reform.

Oil wealth means the reforms are less urgent. And even when oil countries are not particularly liberal, they are conservative as shown in Table 6. Though the gross changes are always significant the net changes are small and mostly insignificant in the oil countries.

3.8 The structure of the 10 variables: three factor analyses

The analysis has considered 9 variables. They do not overlap fully, but for 2,390 observations covering 145 countries the series overlap. In addition, the real growth rate is added. Table 7 shows three factor analyses of these data. The table is made to give two comparisons.

Table 7. For the 16 OPEC and 129 Others, and all 129 in 2018

	A. OPEC 16 countries, $N = 239$		B. Others 129 countries, $N = 2{,}150$		C. Others in 2018 For one year, 2018 $N = 129$	
	Factor1	Factor2	Factor1	Factor2	Factor1	Factor2
Eigenvalue	5.03	1.73	5.49	0.77	5.47	0.77
Cumulative prop.	0.72	0.97	0.84	0.96	0.81	0.92
	Factor loadings		Factor loadings		Factor loadings	
Income	**0.85**	-0.22	**0.94**	-0.19	**0.81**	0.21
TI, honesty/corrupt	**0.94**	-0.02	**0.88**	-0.28	**0.90**	0.02
EFA2, legal	**0.83**	0.32	**0.86**	0.06	**0.95**	0.07
EFA4, free trade	**0.76**	0.41	**0.84**	-0.07	**0.84**	0.14
EFA5, regulation	**0.85**	0.33	**0.82**	0.37	**0.87**	0.21
EFA3, money	**0.72**	0.30	**0.83**	-0.21	**0.70**	0.27
V, polyarchy	-0.62	**0.70**	**0.73**	-0.02	**0.82**	-0.48
P, polity	-0.73	**0.54**	**0.68**	0.57	**0.66**	-0.53
EFA1, public size	-0.06	**0.64**	0.00	-0.01	-0.22	0.04
Growth	0.02	0.14	-0.18	0.39	0.03	0.28

The gray shading indicates significant factors, i.e., factors with eigenvalues above 1. Prop. is proportion. Factor2 is fine in Part A, but dubious in B and C. If factor3 is included, it produces a small excess explanation, so that the cumulative proportion exceeds 1 a little. Thus, it makes no sense to include factor3.

(1) The factor analyses A and B are for OPEC and Others. They are similar for the first 6 variables, though most factor loadings are stronger for Others. However, in analysis B Factor1 also includes V and P. The two democracy indices are loading negatively in the OPEC sample where they form Factor2 together with EFA1, the size of government. The growth rate is not part of the factors.

(2) The other comparison is between B and C, where C uses one observation per country. They are similar. So, it is the between-countries pattern that explains the pattern in Part B as well. There are

only 16 countries (as Libya and Equatorial Guinea are missing). So here the analysis with one observation per country makes little sense. But it is likely that the OPEC pattern is due to the cross-country differences as well.

4. Understanding the development of LDC oil countries

4.1 A oil sector is a small enclave producing resource rent

Oil prospecting and production are capital-intensive, high-tech operations, needing special expertise. It is available internationally, often in the form of turnkey projects with circulating staff of international technicians. It is unlikely that they will speak the local language. Oil installations are expensive and highly explosive, so they are heavily fenced. Especially in traditional Muslim countries, there is little socializing with local people at the family level, so most of the expat oil workers do not bring families and have their social life elsewhere. Thus, oil sectors are small international enclaves in the country, producing little domestic employment. As time goes by petrochemical complexes are added to the pure oil production, and some employment will result, but it takes time to build local expertise.

Thus, the main effect of the oil sector is that a large fraction of the world market price of oil is resource rent that is easy to tax. Thus, the treasury will be awash with funds. In authoritarian systems the treasury is under control of the ruler, who wants to remain in power.

The large funds available to the rulers will surely contribute to prolonging the life of regimes. Table 3 shows that the net regime changes are insignificant in the OPEC countries, even when the gross movements are less unusual. Thus, the regimes are subjected to the usual number of shocks, but it has an unusual amount of power allowing it to overcome the shocks. The failure of the Arab Spring illustrated this.

4.2 An illustration: Saudi Arabia[12]

By far the largest of the 6AP countries is Saudi Arabia, where oil provides about 45% of GDP. The national oil company is Aramco. It started production 80 years ago, and has made many efforts to branch out, notably by adding downstream production, such as refineries, and other chemical plants using oil as an ingredient.

Today, Aramco employs 73,000 people out of a population of 37 million. This is 0.2 % of the population. The company employs many expatriates, so the number of indigenous

[12] Based on the home page of Aramco, and world development indicators.

employees is smaller, but the typical Saudi employee supports a family, and many firms supply and service the oil industry. The corrections to the fraction are mostly upward, but it is challenging to reach an oil-sector of 1% of the population.

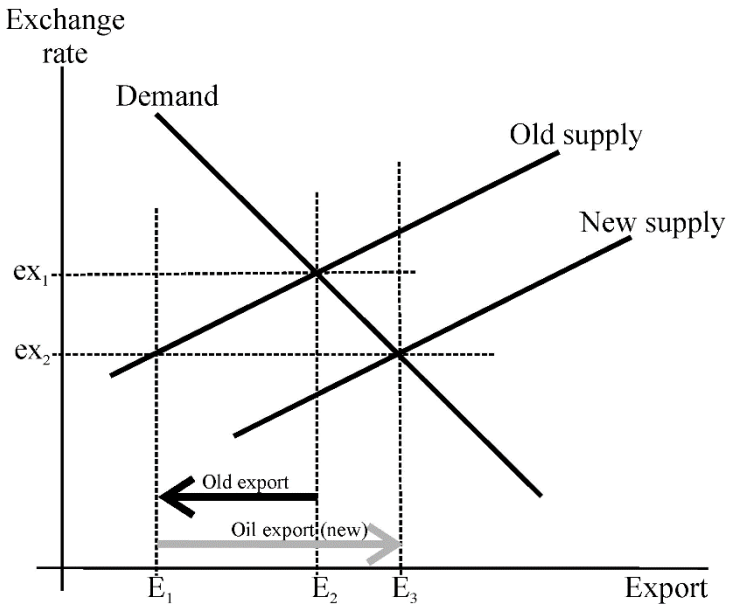
Obviously, the enclave nature of the oil sector is even more pronounced in smaller and newer oil countries.

4.3 Labor markets in oil countries

The oil sector gives a large inflow of foreign currency, and thus an appreciation of the local currency. Thus, domestic goods become more expensive than similar foreign goods. This is a loss of competitiveness, which reduces employment. This is drawn on Figure 11, which the reader will recall from first semester economics! The process whereby the new equilibrium is reached is faster under floating exchange rates, but it is reached anyhow.

The oil sector generates little employment, and the appreciation generates a substantial loss of employment, so employment falls. Fortunately, the state is so rich that it can compensate its friends, and thus it gets many friends.

Figure 11. Demand and supply of foreign exchange



Old and new supply of foreign exchange is from before oil was exported and after. The gray arrow is the gain new oil export that produces little employment. The black arrow is the loss of old production of goods competing with foreign goods, due to the exchange rate appreciation. It is employment heavy. Thus, there is likely to be a net loss of employment.

In addition, most of the OPEC countries, and particularly the 6AP countries, have a very

hot and arid climate, where manual work is unpleasant. The indigenous population can afford to employ guest workers from poor countries to do such work. Guest workers need a sponsor to obtain a temporary contract (the Kafala system), and sponsors get a nice fee paid by the worker. This makes many natives employment entrepreneurs, and it prevents the growth of an important indigenous labor class and thus adds to the general conservative ideology in the countries. Once a worker is a foreigner on a temporary contract the system of labor market regulations becomes parts of this contract, which in a system with low legal quality is of a dubious value.

These effects are much larger in small very oil rich countries, but less so in large countries with moderate oil reserves as Indonesia and Nigeria.

4.4 Political/economic power

Development is a process that takes place around a skeleton of long-run transitions. The democratic transition is a typical one, with the form ⌒ in the non-OPEC countries.[13] The flat sections of the curve are at the traditional and the modern steady states. The path between the two takes at least a century. The traditional political system was based on three pillars: King, feudal aristocracy, and Church, where the aristocracy supplied the top of the Kings Army and administration, and the top hierarchy of the Church, so power was concentrated in a small group of hereditary nobility. The key factors behind the democratic transition were that the agricultural transition undermined the feudal aristocracy, and the religious transition weakened the Church. Without the two supporting pillars, kings lost power as well.

As shown above the transition in oil countries is different, looking like ∩ as seen in Figure 2. In desert countries, feudalism is a system of traditional clan/regional leaders, but they are still weakened when income rises. However, the flow of resource rent into the king's treasury increases his power. So, although development in the beginning follows the normal processes it has a hump-shapes path with a turn after which it becomes more authoritarian. The peak is where the power of the king comes to dominate.

Most of the oil countries – especially the ones in the MENA area – have old and strong traditions for trade organized in the form of concentrated trading areas known as bazars or souqs. A large fraction of turnover in the tertiary sector takes place here. Thus, it also contains a great deal of power that is often organized in guild-like structures that are difficult to control politically. Modern development leads to supermarkets, department stores etc. That undermines

[13] See, Mansfield and Snyder (2002). Epstein et al (2006), Rodrik and Wacziarg (2005), and Paldam (2021, 2025)

the power of the bazar.

The oil companies in the OPEC countries started as branches of private multinationals, but as resource rent – produced by an enclave – is easy to identify and tax, most of the rent ended up in the treasuries of the rulers. Later, the oil companies became public. Consequently, the big agglomeration of wealth became the property of the national rulers, which in the 6AP countries were the traditional kings. In the 12oO countries the rulers were mostly military. Public ownership meant that the rulers became business leaders as well.

5. Conclusions

In the traditional steady state countries are authoritarian and the economic system has rather heavy regulations, i.e., a feudal system and tariffs on internal and external trade. The legal system is part of the rulers' administration, and thus not independent.

As mentioned, most countries have a democratic transition, where the early stage may be characterized as political capitalism. This is a period where few companies grew dramatically, often greatly helped by rent seeking due to influence into the political system. In the USA, it is known as the Gilded Age, and in Northern Europe it was the age of Gründer capitalism. During that period the agricultural transition weakened the old feudal system, which became replaced with a capitalist market system. As production grew in many sectors, industrial concentration fell and trade unions emerged, so a more broad-based democratic system emerged.

In the OPEC countries the development has been different. The early development of the oil sector in LDCs was dominated by branches of foreign multinationals, which were large relative to the national economy and hence powerful. However, the power of foreign companies is always of dubious strength, and now branches of the oil companies have turned into firms with public majority owners in the OPEC countries, so the dominating companies in the OPEC countries are controlled by the governments, and their international organization OPEC.

Sources:

Aramco (home page), https://www.aramco.com/en

Fraser Index of Economic Freedom, https://efotw.org/?geozone=world&page=map&year=2022

Maddison project, source of *gdp, y,* and *g,* https://www.ggdc.net/maddison/maddison-project/home.htm

OPEC (home page) https://www.opec.org/opec_web/en/

Polity Democracy index, source of P-index, https://www.systemicpeace.org/polityproject.html

Polyarchy Democracy Index, from V-Dem project, source of V-index, https://v-dem.net/

Transparency International corruption Index, https://www.transparency.org/en/cpi/2024

US data, https://data.sfgov.org/Economy-and-Community/US-Census-Bureau-Data/d53k-r35r/about_data

World Development Indicators, https://databank.worldbank.org/source/world-development-indicators

References:

Corden, W.M., 1984. Booming sector and Dutch Disease economics: Survey and Consolidation. *Oxford Economic Papers* 36, 359–380

Eldabawi, I., Makdisi, S., 2017. *Democratic Transitions in the Arab World*. Cambridge UP, Cambridge UK

Epstein, D.L., Bates, R., Goldstone, J., Kristensen, I., O'Halloran, S., 2006. Democratic transitions. *American Journal of Political Science* 50, 551-69

Krueger, A.O., 1974. The political economy of the rent-seeking society. *American Economic Review* 64(3), 291-303

Mansfield, E. D., & Snyder, J. (2002). Democratic transitions, institutional strength, and war. *International organization* 56, 297-337

O'Reilly, C., Murphy, R.,H., 2025. Freedom from unit roots? The time series properties of democracy and economic freedom. *Journal of Comparative Economics,* https://doi.org/10.1016/j.jce.2025.02.003

Paldam, M., 2013. The political economy of Dutch Disease: A survey. Chapter 10, p 179-196 in Cabrillo, F., Puchades-Navarro, M.A., eds., *Constitutional Economics and Public Institutions*. Elgar, Cheltenham

Paldam, M., 2021. *The Grand Pattern of Development and the Transition of Institutions*. Cambridge UP, New York

Paldam, M., 2024a. Income, Growth, and Democracy. Looking for the main causal directions in the nexus. *European Journal of Political Economy* 83, 102532

Paldam, M., 2024b. The OPEC/MENA/Arab nexus and the missing democratic transition. Http://martin.paldam.dk/GT-Main2.php

Paldam, M., 2025. The long-run path of the democratic transition. The inevitable collapse of the three pillars model. To appear in Kyklos. Http://martin.paldam.dk/GT-Main2.php

Ploeg, van der, F., 2011. Natural Resources: curse or Blessing? *Journal of Economic Literature* 49(2), 366–420

Rodrik, D., Wacziarg, R., 2005. Do democratic transitions produce bad economic outcomes? *American Economic Review* 95, 50-5

Roy, D., Cheatham, A., 2024. *Venezuela: the Rise and Fall of a Petrostate*. Council on Foreign Relations, available

from https://www.cfr.org/backgrounder/venezuela-crisis

Soto, de H., 2000. *The Mystery of Capital. Why Capitalism Triumph in the West and Fails Everywhere Else.* Bantam Press, London

Takriti, A.T., Safieddine, H., 2022. *Arab Socialism*. Chapter 21 pp 474-516 in Linden, van der, M., *The Cambridge History of Socialism* vol II. Cambridge UP, Cambridge U.K.

Vahabi, M., 2024. Islamic revolution and Anfal. *Public Choice 200*, 383–401

Appendix: The structure of the 10 variables

Table 5 was a correlation analysis of the five areas of the Fraser Index and the TI-honesty/ corruption index. The analysis has looked at four more series, and the real growth rate has also been included to show why it was not included in the main paper. Table A1 reports two correlation matrices for these variables. It replicates the pattern from Table 7.

The OPEC sample above the diagonal has two clusters corresponding to the two factors. Factor1 contains Income, EF3, EF4, AF5, EF2, and TI. The 15 correlations are almost as large as the corresponding 15 correlations for Others. Factor2 is the three variables *V*, *P*, and EFA1, which are the two democracy indices and the government size. Factor1 and Factor2 have negative correlations to each other.

In the Others sample the two factors join up to one, as all correlations are substantial and positive. Here both FEA1 and FEA2 have negative correlations to TI.

Table A1. The correlations above the diagonal are for the OPEC sample, while the ones below are for the Others sample

	Income	EFA3	EFA4	EFA5	EFA2	TI	*V*	*P*	EFA1	Growth
Income	1	0.52	0.54	0.62	0.69	0.85	-0.62	-0.70	-0.25	-0.14
EFA3, money	0.64	1	0.62	0.74	0.73	0.65	-0.26	-0.36	0.16	0.05
EFA4, free trade	0.74	0.75	1	0.81	0.77	0.70	-0.20	-0.36	0.24	0.15
EFA5, regulation	0.72	0.66	0.77	1	0.76	0.81	-0.33	-0.46	0.19	0.08
EFA2, legal qua.	0.82	0.61	0.76	0.81	1	0.76	-0.24	-0.42	0.12	0.02
TI, honesty/cor	0.75	0.60	0.70	0.75	0.91	1	-0.59	-0.64	-0.11	0.01
V, polyarchy	0.60	0.52	0.67	0.59	0.73	0.67	1	0.90	0.47	0.01
P, polity	0.43	0.43	0.58	0.49	0.55	0.46	0.86	1	0.33	0.03
EFA1, gov. size	-0.24	-0.04	-0.03	-0.03	-0.29	-0.35	-0.13	0.04	1	0.1
Growth	0.01	-0.04	0.03	0.04	0.04	-0.03	-0.03	-0.01	0.03	1

The consistent series for all 10 variables reduce the sample to 145 countries and N = 2,389 obs., divided into 16 OPEC and 129 Other countries with N = 239 and 2,150 obs. respectively. The same data as used for Table 7.

Figure A1 shows the income dependency of the five EFAs by kernel regressions as a function of income. The black curves are for the OPEC sample where N = 239, which ae rather modest, especially as it merges the 6AP and the 10oO samples (recall that both Libya and Equatorial Guinea are missing). The OPEC curves are surrounded by 95% confidence intervals. Most of the curves show the two levels of the wealthy 6AP group and the lower level of the oO-group.

For comparison, the five diagrams also show the curves for Others, where N = 2,389. Here the 95% confidence intervals are not shown but they are much lower than for the OPEC curves. It appears that EF2 – EF5 have transition curves as expected. The data contains few observations for low-income countries, so the flat curve expected for traditional societies is unclear. As expected, the curve for EFA1 deviates, and shows a strange hump shape. The key observation from Figure A1 is that the OPEC curves are always significantly lower than the curve for Others. EFA2, legal quality, is not only lower but increasing so.

Figure A1. The path of the areas of the EF index for OPEC and Others. Kernel regressions.