May 27th - 2025

The economic system of Arab countries with and without oil

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This note looks at 16 Arab countries. The Arab league has more countries, but the MENA countries in the Table are taken to be the core group that are most comparable. The note is an addendum to the **main paper**, Paldam and Saadaoui (2024), which shows how the economic system of oil countries differs from two groups of other countries, 25 Western countries and 123 other countries. The present compare the nine oil and seven non-oil Arab countries – from now termed O-Arab and N-Arab countries. As the purpose is to link up with the main paper, thus **{tn}** and **{fm}** refer to table n and figure m in the main paper.

The note also refers to Paldam (2024) shows that the political system of the OPEC/MENA/Arab countries have no Democratic transition. Two theories explain this: (T1) **The oil theory** that argues that oil wealth gives a socio-economic development than differ from a more broad-based development. (T2) **The institutional genes theory** that argues that thirteen hundred years of the Muslim package of institutions and culture in the MENA countries has left a strong legacy.

Table 1. The 16 Arab countries in the MENA region

N-Arab 7 Arab countries	O-Arab 9 Arab oil countries
1 Egypt	1 Algeria
2 Jordan	2 Bahrain
3 Lebanon	3 Iraq
4 Morocco	4 Kuwait
5 Syria	5 Libya
6 Tunisia	6 Oman
7 Yemen	7 Qatar
	8 Saudi Arabia
	9 UAE

O-Arab are OPEC members + Bahrain and Oman that are associated with OPEC.

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Table 2. Variables discussed

GDP,	Gross National Product/National income, in real PPP prices,
gdp	per capita. Source: Maddison project
y	Income, the natural logarithm to gdp same source
EF	Fraser Institute index of economic freedom. Range]0, 10[, thus ***rising*** for more freedom
	Source: https://efotw.org/?geozone=world&page=map&year=2022
	The index has five areas, analyzed in section #
SC	Index of state capture in percent. Range]0,100[, thus ***falling*** for less capture
	https://governanceactionhub.org/explorations/local-global-coordination-for-impact/state-capture-index/
TI	Transparency International index of honesty/corruption. Range]0, 10[, thus ***rising*** for less corruption
	Source https://www.transparency.org/en/cpi/2024

1. Income the Fraser index

Figure 1 shows the average income of the N- and O-Arab countries. The figure shows that the two country groups have a difference in income level of 1.07 in ln-points that amounts to 2.9 times in *gdp.* The O-Arab countries are almost three times richer than the N-Arab countries.

Figure 1 {f1}. Income measured as the logarithm to real gpd per capita

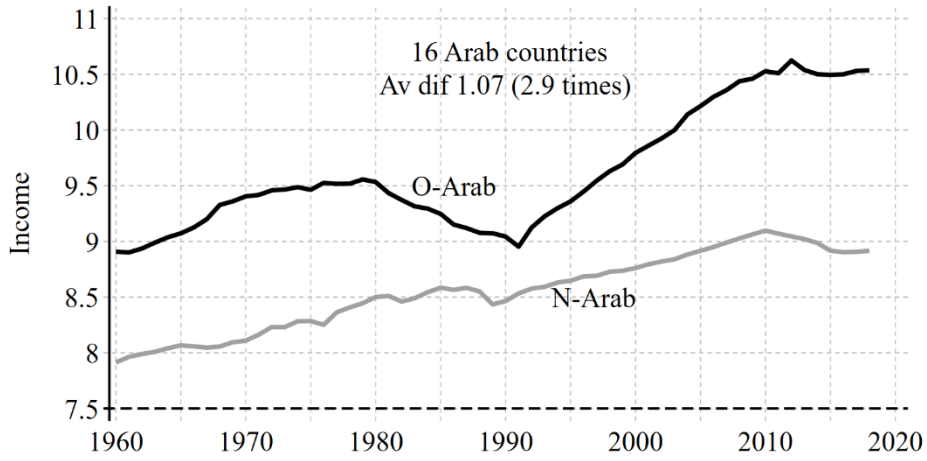


Figure 2 (f4). The aggregate Fraser index

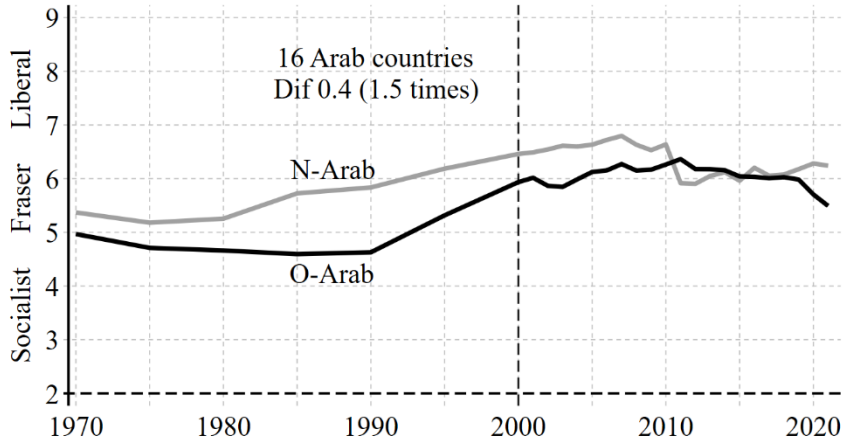


Figure 3 is the same graph for the Fraser Economic Freedom index. Here the difference is smaller, and the N-Arab countries are the most liberal, i.e., closest the market capitalism, though not much closer.

Figures 3 and 4 are made with kernel regressions om unified data, as explained in Paldam (2021). It is a method that is eminently suited to reveal transition curves (that are a function of income). It shows the long-run average path of a variable as a function of income.

Figure 3 shows that economic freedom increases with income: The increase is almost linear and about 0.6 Fraser point for one income point (i.e., 2.7 times). The OPEC curve is also (almost linear), but a little lower. This may be due to institutional inertia, as the start of an oil wealth is a jump in income that institutions have to catch up with.

2. Three times three pictures of the development of the economic system

The next three pages contain three graphs each analyzing the development in one index giving an aspect of the economic system: The Fraser index, the SC for state capture, and the TI index for corruption. Tables 3 to 5 summarize the three pages.

Table 3. The three figures (1). The transition in Main and OPEC samples

Figure	Index	Sample	Form of kernel curve
3.1	EF	Main	An almost linear rising transition curve with a slope of $dEF/dy \approx 0.6$
		OPEC	Almost parallel one EF point lower
4.1	SC	Main	A perfect falling transition curve: Flat at SC ≈ 65 at y = 6 to 8. Then a fall that levels out at SC ≈ 7
		OPEC	Higher and falling less, so divergence resulting in a gap of 40 points
5.1	TI	Main	Main: A fine rising transition curve rising from 2.5 to 8.2
		OPEC	OPEC lower and rising slower, thus some divergence ending at 2-3 points

Table 4. The three figures (2). The position of the O-Arab sample in OPEC transition from (1)

Figure	Index	Sample	Form of kernel curve
3.2	EF	Arab	Gray points. Significantly higher than others
4.2	SC	Arab	Gray points. Insignificantly lower than others
5.2	TI	Arab	Gray points. Significantly higher than others

Table 5. The three figures (3): comparing the N and O-Arab samples

Figure	Index	Sample	Form of kernel curve
3.2	EF	N-Arab	Gray points. Significantly higher than O-Arab
4.2	SC	N.-Arab	Gray points. Borderline significantly lower than O-Arab
5.2	TI	N-Arab	Gray points. Significantly higher than O-Arab

This all show that both OPEC and Arab countries lags behind in development. And both theory (T1) and (T2) are needed to understand why.

Figure 3**. Fraser EF index**. Kernel regressions (with bw = 0.5) for the transition

Figure 3.1. All but OPEC.

For OPEC see 5.2

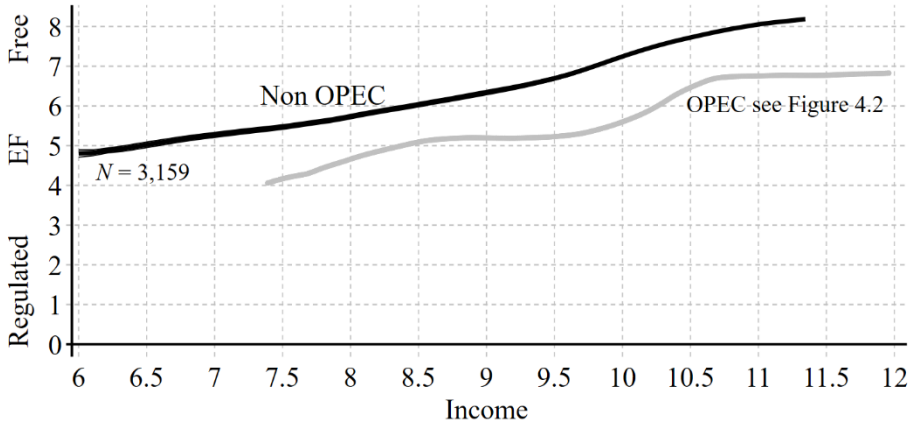


Figure 3.2. OPEC countries

Arab and Others

Figure 3.3. Arab countries

N- and O-group

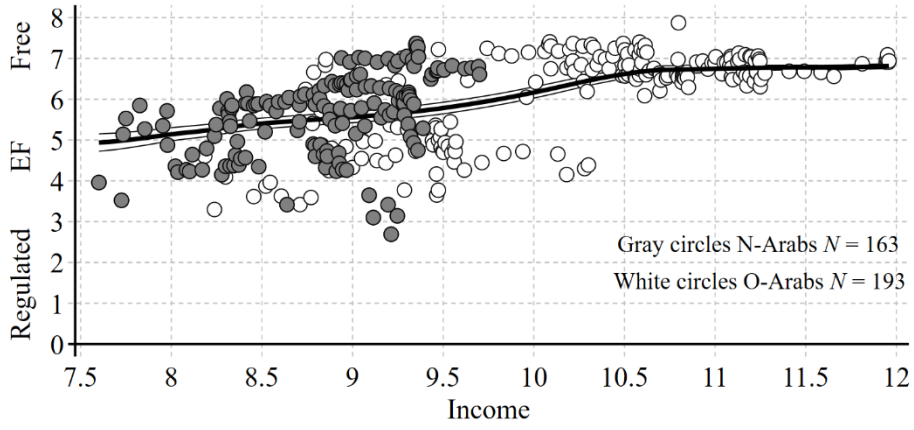


Table to Figure 3. Regressions to reveal shifts

	Analyzing the 387 observations on Figure 3.2 for OPEC countries			
	Constant	Income	Arab dummy	R^2 adj
(1)	-1.58 -3.5)	0.75 (16)		0.39
(2)	-0.81 (.1.5)	0.65 (11)	0.29 (2.4)	0.40
	Analyzing the 356 observations of Figure 3.3 for Arab countries			
	Constant	Income	N-Arab dummy	R^2 adj
(3)	-0.67 (-0.2)	0.62 (13)		0.34
(4)	-2.94 (4.8)	0.89 (14)	0.77 (6.4)	0.41

The two dummies are one for the gray points and zero for the white points on the two figures. The p-values for the two dummies are significantly positive, especially in regression (4).

Figure 4. **SC index**. Kernel regressions for the transition, with bw = 0.5

Figure 4.1. All but OPEC.
For OPEC see 4.2

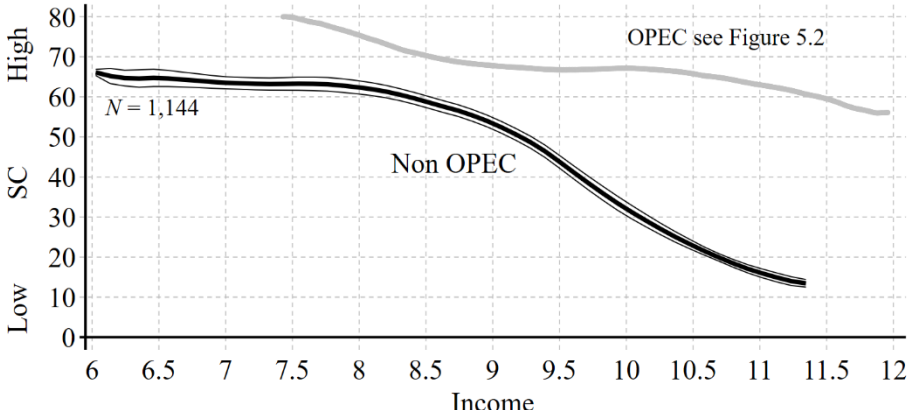


Figure 4.2. OPEC countries
Arab and Others

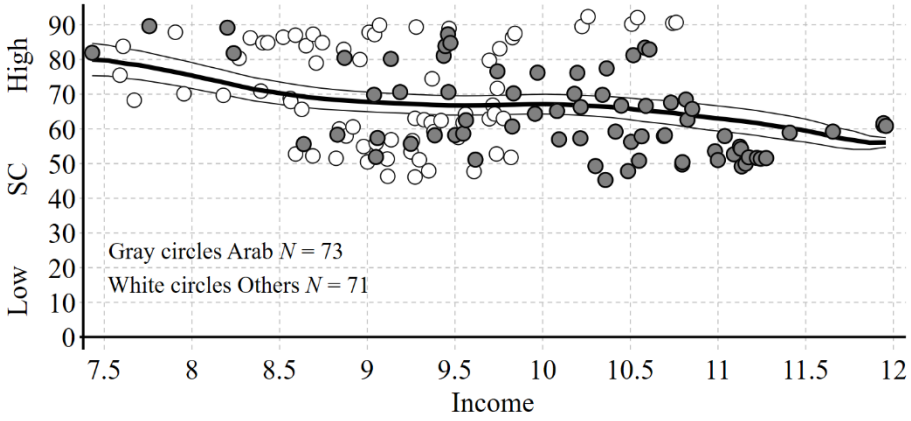


Figure 4.3. Arab countries
N- and O-group

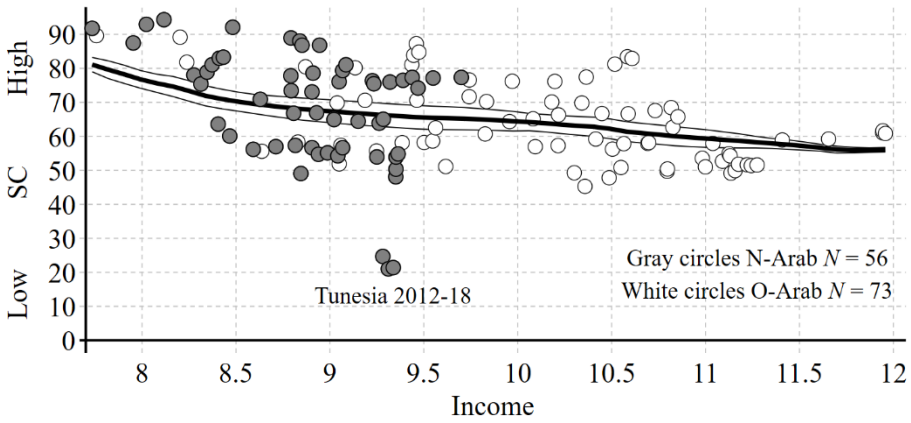


Table to Figure 4. Regressions to reveal shifts

	Analyzing the 144 observations on Figure 4.2 for OPEC countries			
	Constant	Income	Arab dummy	R^2 adj
(1)	111 (10)	-4.55 (4.2)		0.10
(2)	105 (9)	-3.82 (3.0)	-2.71 (1.1)	0.10
	Analyzing the 129 observations of Figure 4.3 for Arab countries			
	Constant	Income	N-Arab dummy	R^2 adj
(3)	125 (11)	-6.17 (5.3)		0.17
(4)	145 (9)	-8.01 (5.2)	-5.55 (1.8)	0.19

The two dummies are one for the gray points and zero for the white points on the two figures. The p-value for the N-Arab dummy in regression (4) is 7%, so it is close to significance.

Figure 5. **TI index**. Kernel regressions (with bw = 0.5) for the transition

Figure 5.1. All but OPEC.
For OPEC see 5.2

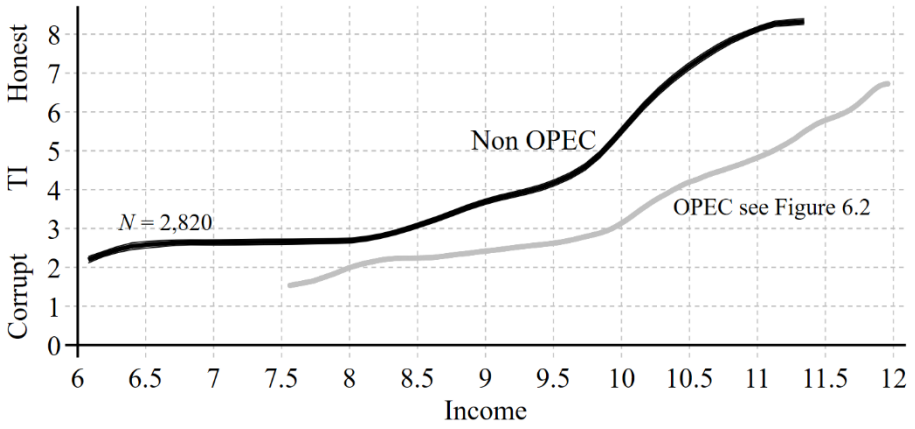


Figure 5.2. OPEC countries
Arab and Others

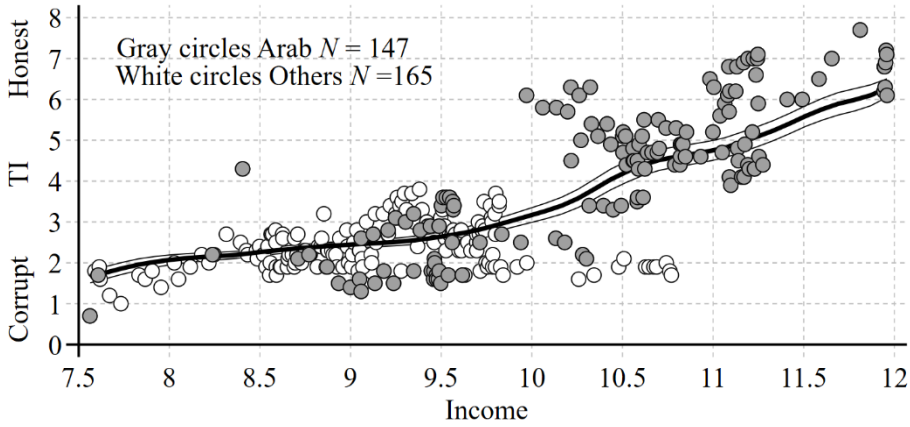


Figure 5.3. Arab countries
N- and O-group

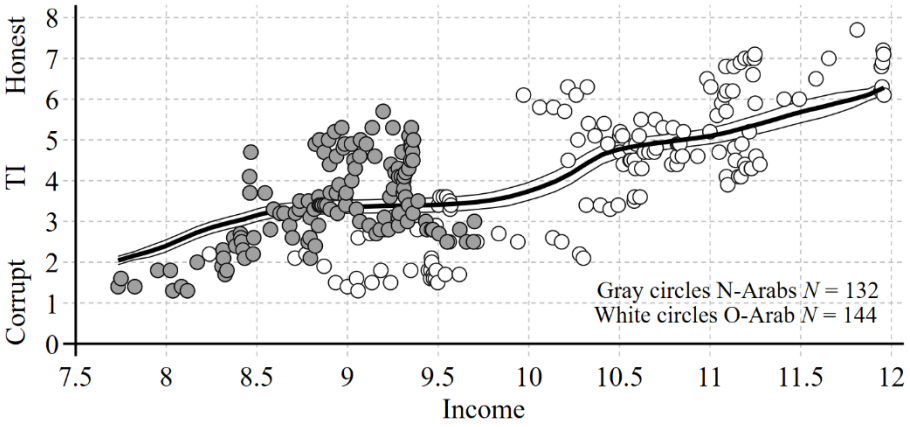


Table to Figure 5. Regressions to reveal shifts

	Analyzing the 312 observations on Figure 5.2 for OPEC countries			
	Constant	Income	Arab dummy	R^2 adj
(1)	-8.53 (16)	1.22 (22)		0.61
(2)	-7.99 (11)	1.03 (15)	0.62 (4.6)	0.63
	Analyzing the 276 observations of Figure 5.3 for Arab countries			
	Constant	Income	N-Arab dummy	R^2 adj
(3)	-6.20 (-10)	1.04 (16)		0.49
(4)	-12.29 (14)	1.59 (19)	1.59 (19)	0.61

The two dummies are one for the gray points and zero for the white points on the two figures. The p-values for the two dummies are significantly positive, especially in regression (4).

Table 6 {t4}. State capture 1996-2022 from Kaufmann 2024

	O-Arab	N-Arab
Average	63.6	68.4
Standard deviation	11.8	17.8
Countries n_c	9	7
Standard error (n_c)	3.9	6.7
Observations n_o	81	63
Standard error (n_o)	1.3	2.2

The index is reported for every third year so there are nine times more observations than countries.

The data for the SC index has a perfect transition curve, which should have made the SC-level 40 points lower see Figure 4.1. However, it is only five points lower. So, the oil wealth has prevented all of the normal fall in the SC-index.

Table 7 {t5}. The level of honesty/corruption, 1995-2023

	O-Arab	N-Arab
Average	5.30	3.39
Standard deviation	1.10	1.67
Countries n_c	9	7
Standard error (n_c)	0.4	0.6
Observations n_o	126	248
Standard error (n_o)	0.09	0.04

The index uses the interval [0, 10] from extreme corruption to extreme honesty.

The fall in the corruption level due to oil is also smaller than it normally should, but it is only half of the normal level.

3. The five areas of the Fraser index

Figure 6 {f7}. EFA1. Government size

Public expenditure and taxes, including marginal taxes

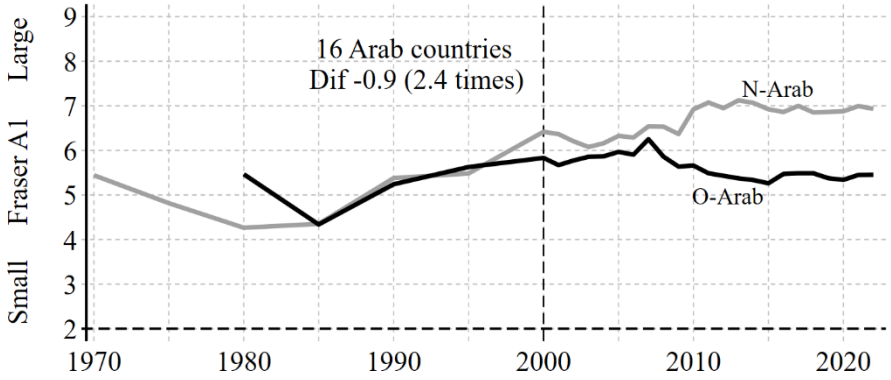


Figure 7 {f8}. EFA2. Legal system

Legal quality and property rights protection

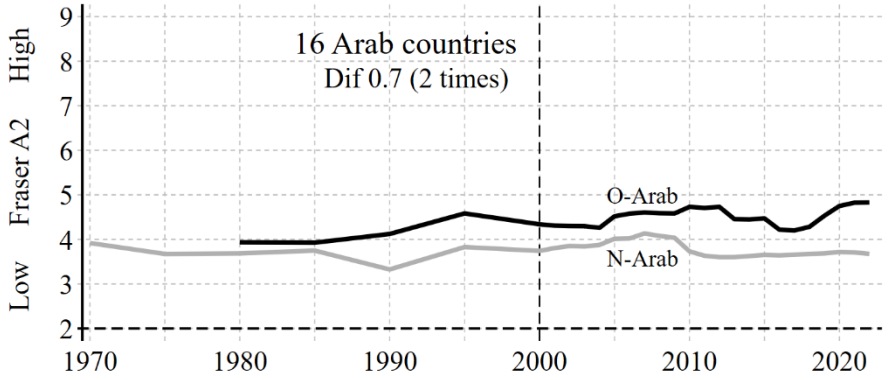
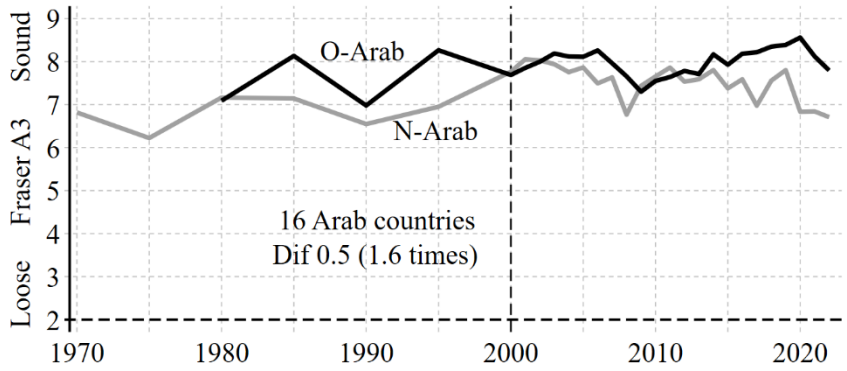


Figure 8 {f9}. EFA3. Sound money

Money growth, inflation, and its standard deviation



As usual the FA1 area is different, as N-Arab is larger, but all the other four areas have a bit more economic freedom in the O-arb than in the N-Arab group

Figure 9 {f10}. EFA4. Free to trade

Trade taxes, and trade restrictions, black market exchange rates

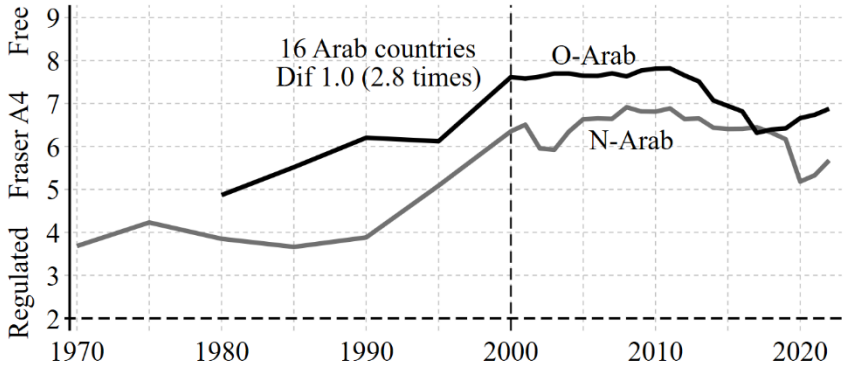
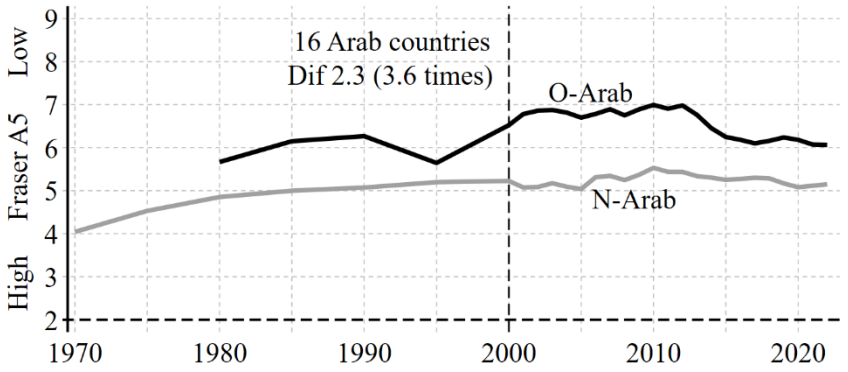


Figure 10 {f11}. EFA5. Regulation of business

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



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