

The implications of inequality for corruption: Does the MENA region stand out?

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# Motivation

Economic inequality gives rise to corruption by creating disparities across social groups:

- in their access to political power
- in their potential gain from capturing political decisions

- MENA region potentially stands out because of its modest economic inequality, and at the same time high, ingrained & multifaceted corruption.
- *An Arab variety of capitalism* is characterized by a high degree of cronyism, patronage and interventionism by authorities, high public employment but weak social security, and weak coordination and trust in the private sector and labor market (Hertog 2016)

- So, are causalities same in different country groups?
- Does income level, or variety of capitalism matter?
  
- I aim to examine the inequality–corruption nexus in the Arab region versus that in competing varieties of market systems & countries with different levels of development.

# Existing evidence

Does high & rising inequality undermine political institutions?

- Economic power gets translated into political power undermining democracy
- Post-democracy debate (Crouch 2004, et al.)
- Economic elites dominate decision making (Gilens 2012, Schreyer 2018)

A good starting point may be the various manifestations of corruption: Does concentration of economic wealth lead to *more abuse of political power*?

What are the causal links?

- “Inequality trap” hypothesis (Uslaner et al.): Inequality leads to corruption which perpetuates inequality

# Data

## Inclusive dataset

- Up to 186 countries, not just OECD, including 20 MENA countries
- Unbalanced panel with up to 3,272 observations (corruption for 22yrs, 96-17)
- Various corruption measures (WB WGI, WB Enterprise Surveys, TI-Global Corruption Barometer, Arab barometer, World Values Surveys)
- Various inequality measures (Gini, top 10% share, % informally-employed)

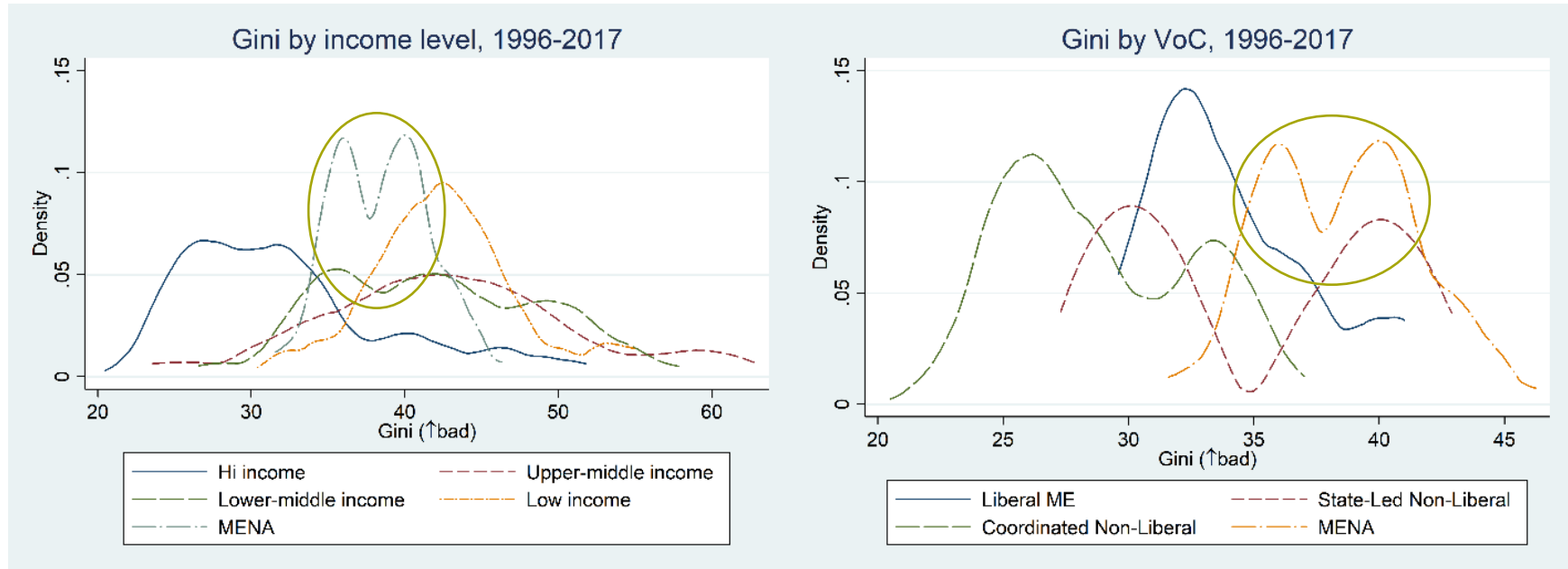
- Variables from reliable sources, but challenging technically
- Difficulties to measure corruption & inequality
  - Highly persistent variables, small changes explainable by contemporaneous or lagged socio-economic factors



# Methods

- I aim to investigate the dynamic of the interdependence
- By considering corruption and inequality in first differences, of various lengths [to deal with persistence]
  - & by controlling for random/fixed effects [to control out remaining between-country heterogeneity in FD]
  - Weak measures of fit expected

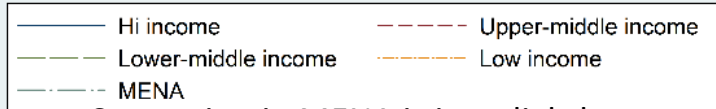
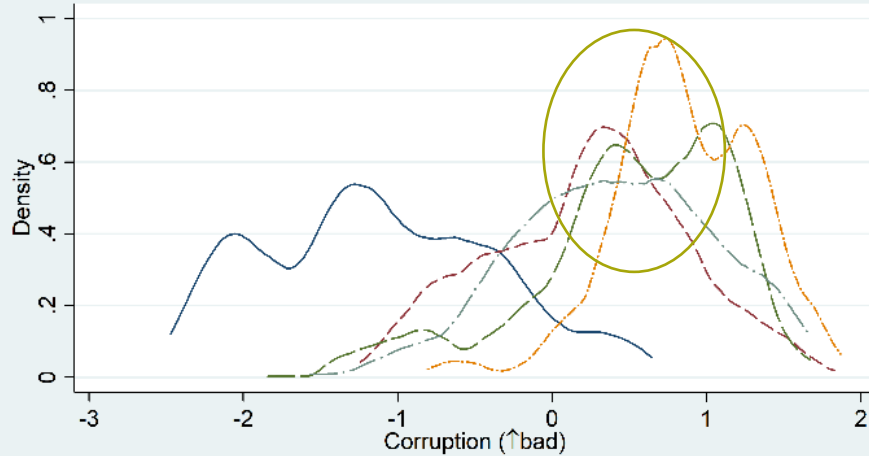
# Evidence: Inequality & development



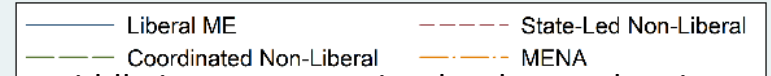
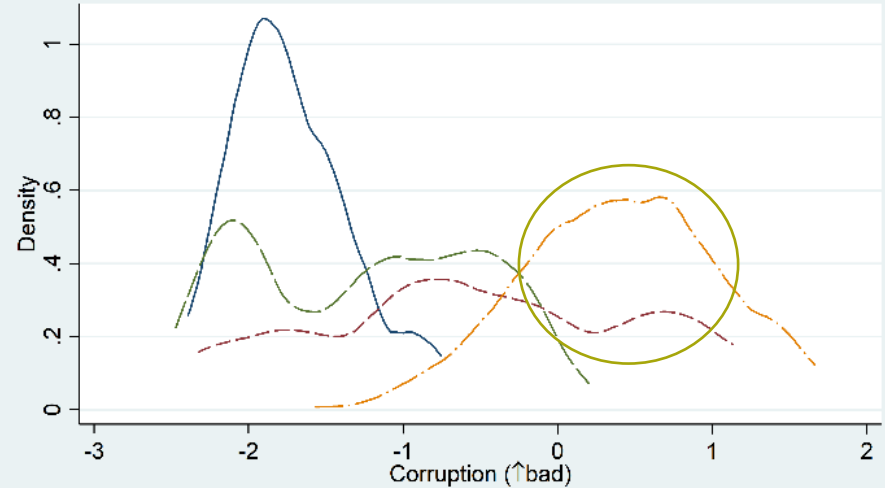
- MENA Gini is between upper-middle and lower-middle income countries.
- MENA Gini is higher than in liberal market and coordinated non-liberal market advanced economies, but not too differently from that in the East Asian state-led non-liberal economies

# Evidence: Corruption & development

Corruption by income level, 1996-2017

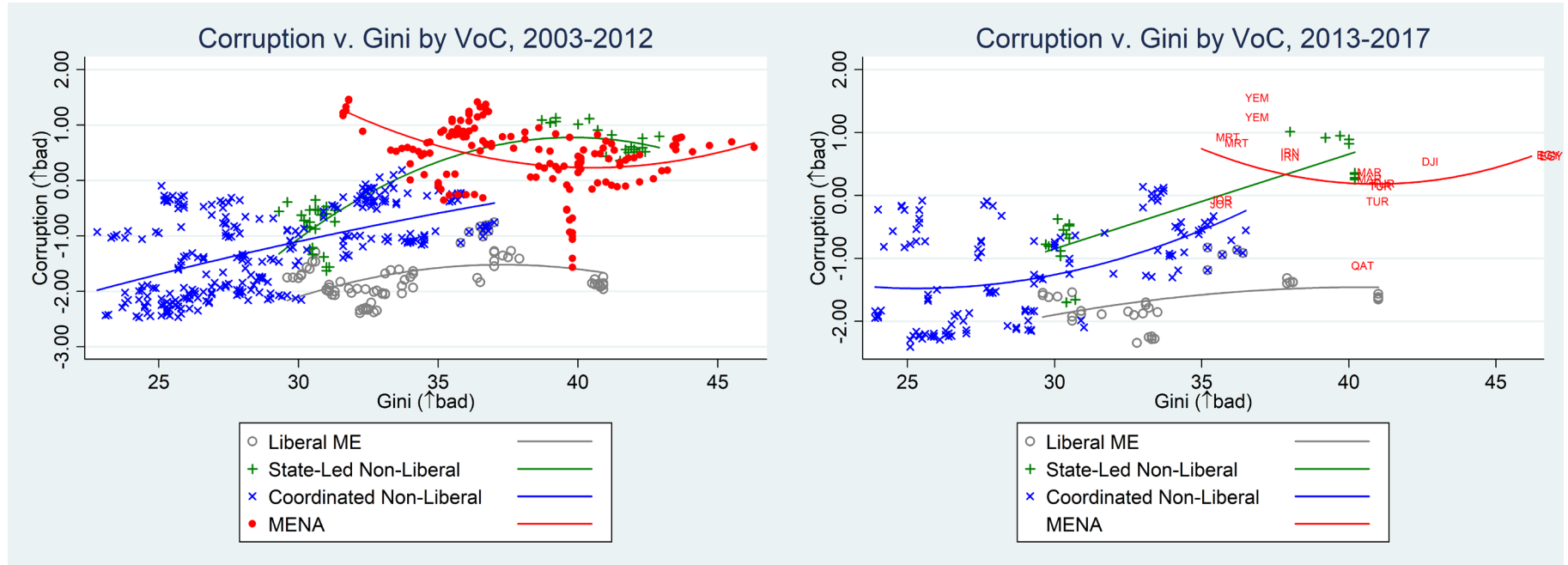


Corruption by VoC, 1996-2017



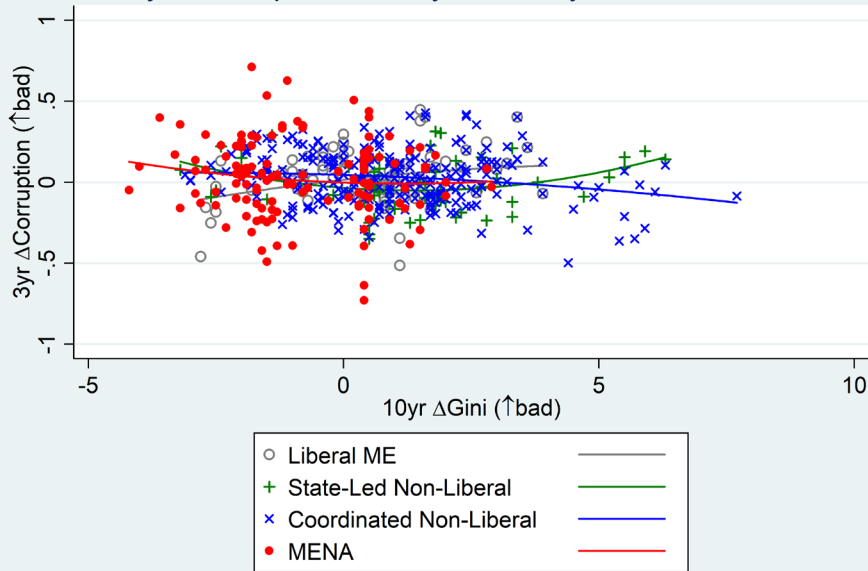
- Corruption in MENA is just slightly worse than in upper-middle income countries, but better than in lower-middle income countries.
- It is higher than in liberal market and coordinated non-liberal market advanced economies.

# Corruption index – Gini relationship by variety of capitalism, '03-'12 & '13-'17

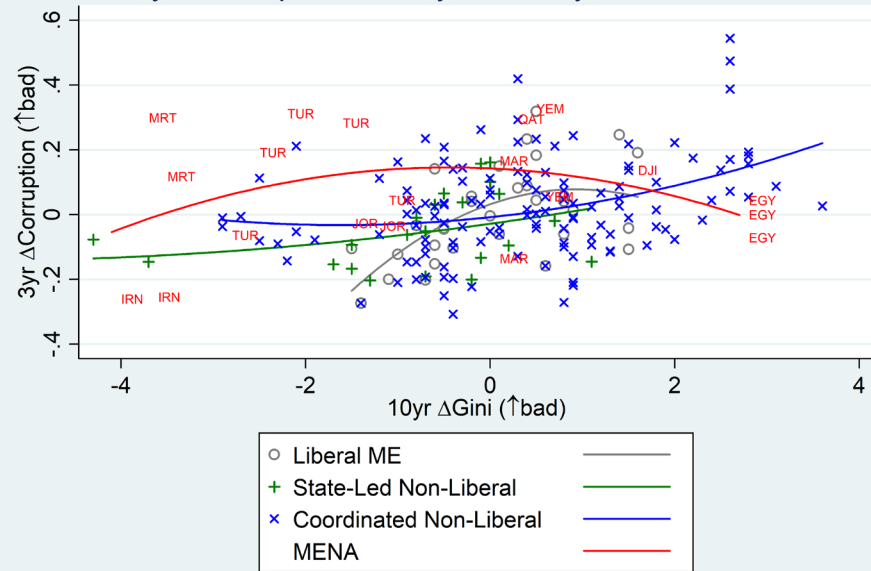


Source: World Bank WGI

3-yr  $\Delta$ corruption v. 10-yr  $\Delta$ Gini by VoC, 2003-2012

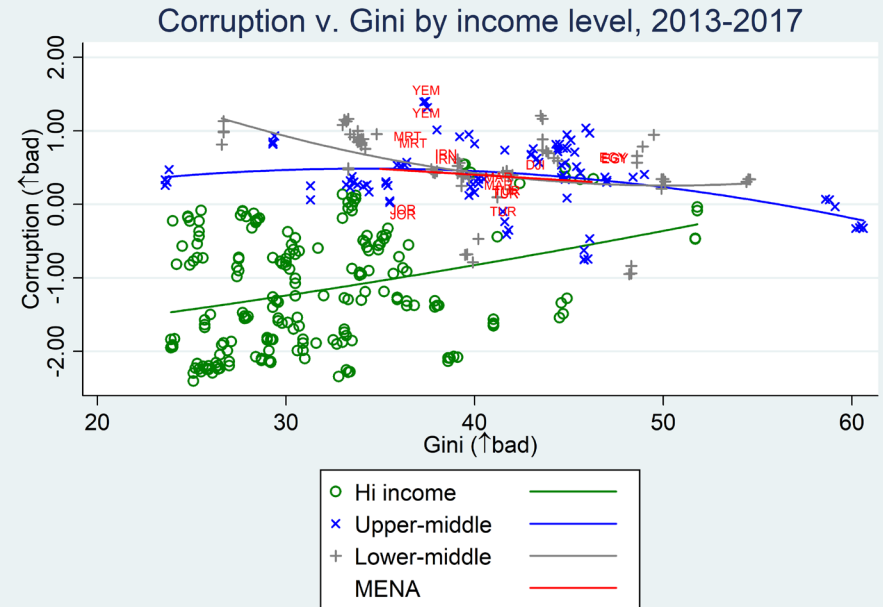
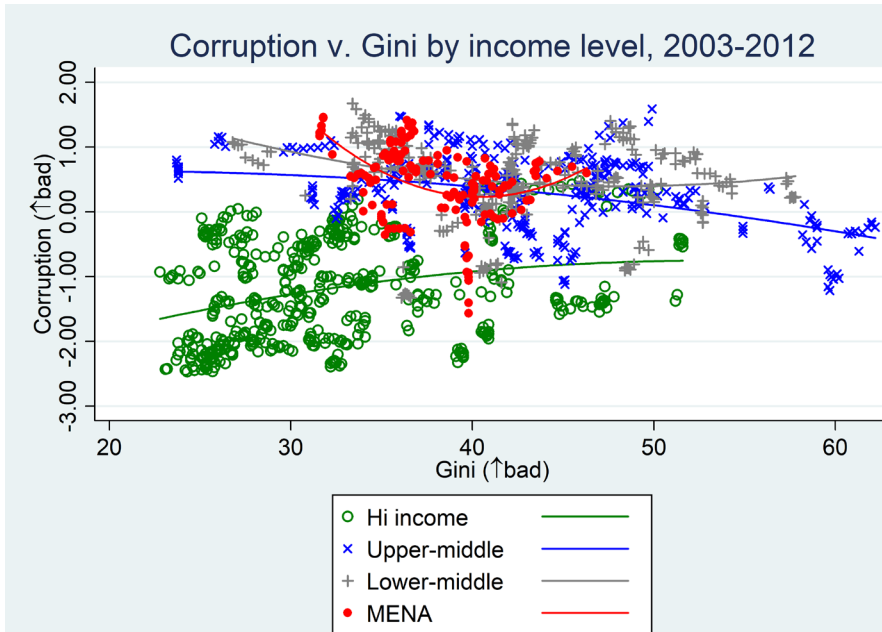


3-yr  $\Delta$ corruption v. 10-yr  $\Delta$ Gini by VoC, 2013-2017

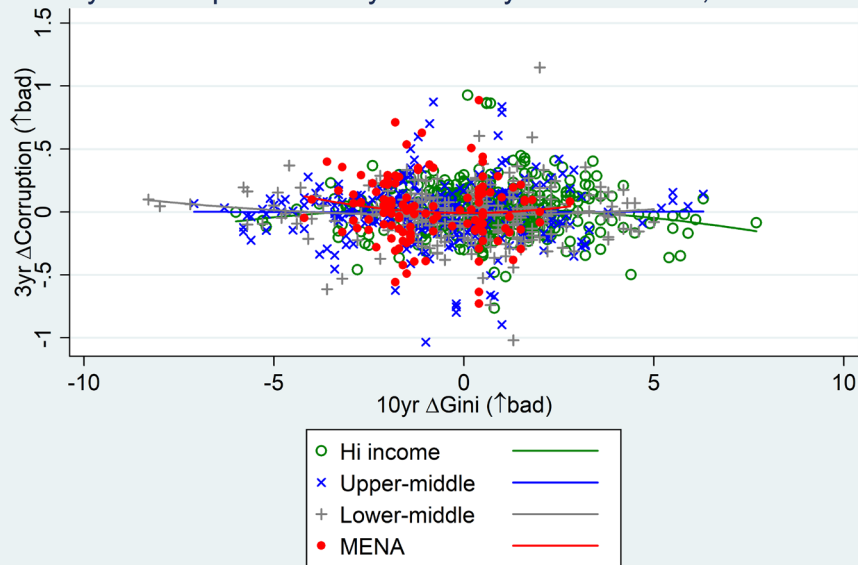


Source: World Bank WGI

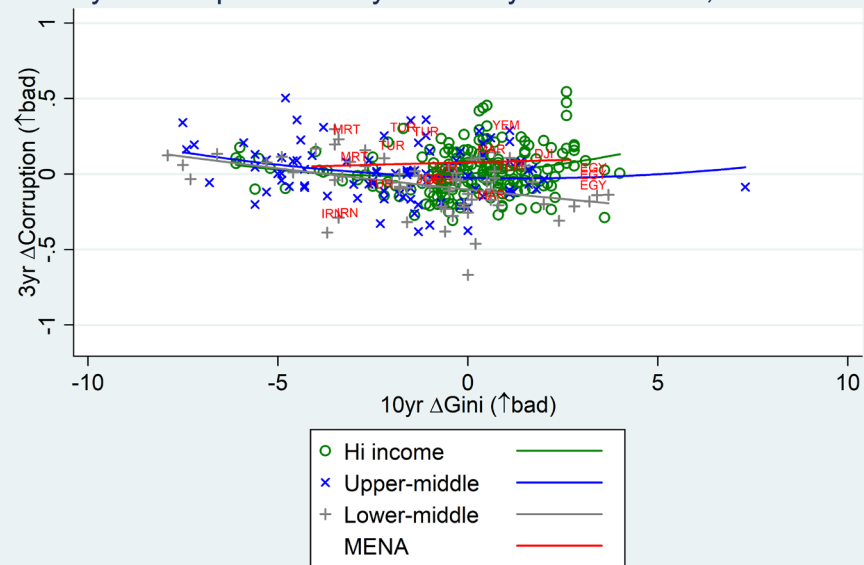
# Corruption index – Gini relationship by country income level, '03-'12 & '13-'17



3-yr  $\Delta$ corruption v. 10-yr  $\Delta$ Gini by income level, 2003-2012

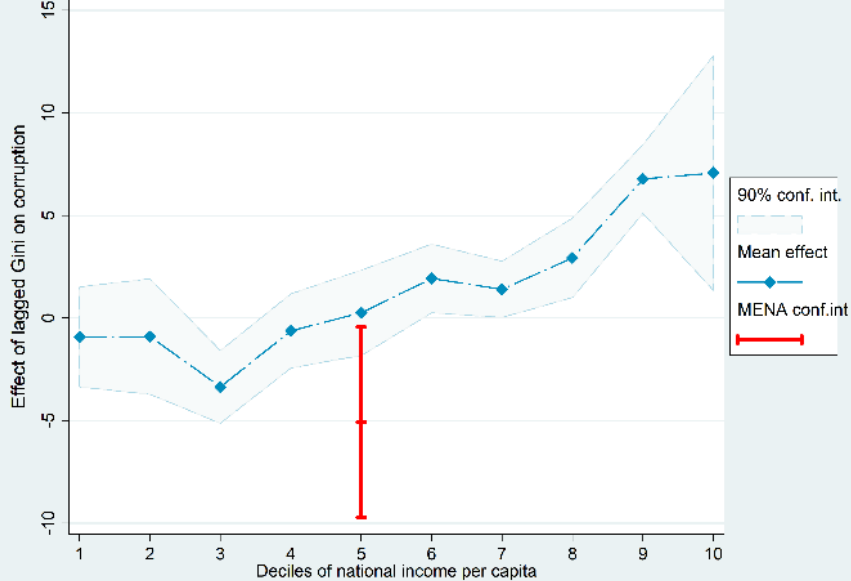


3-yr  $\Delta$ corruption v. 10-yr  $\Delta$ Gini by income level, 2013-2017

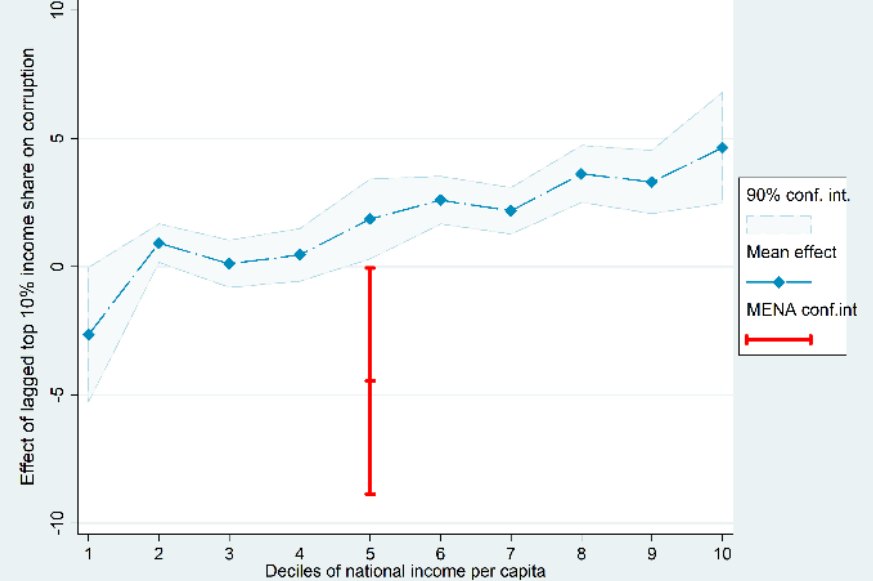


# OLS of corruption on lagged inequality: Coefficient on lagged inequality

Lagged inequality vs. corruption: Mean effect by income/capita decile

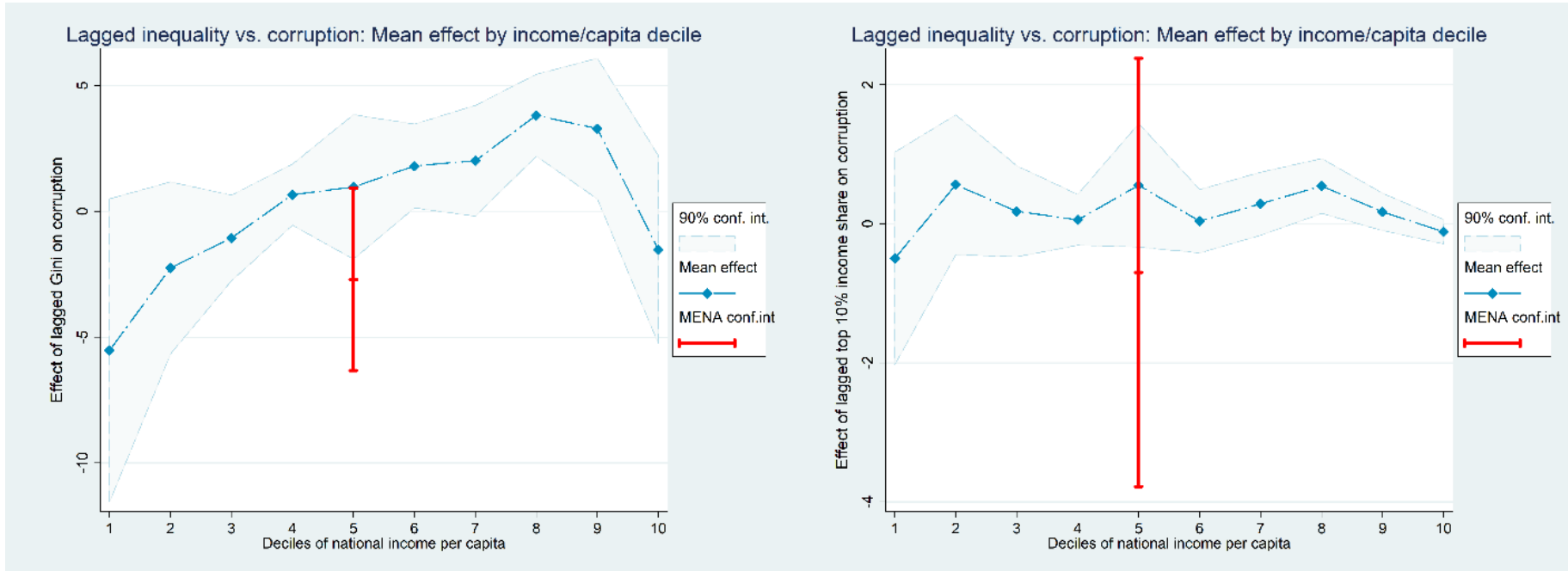


Lagged inequality vs. corruption: Mean effect by income/capita decile



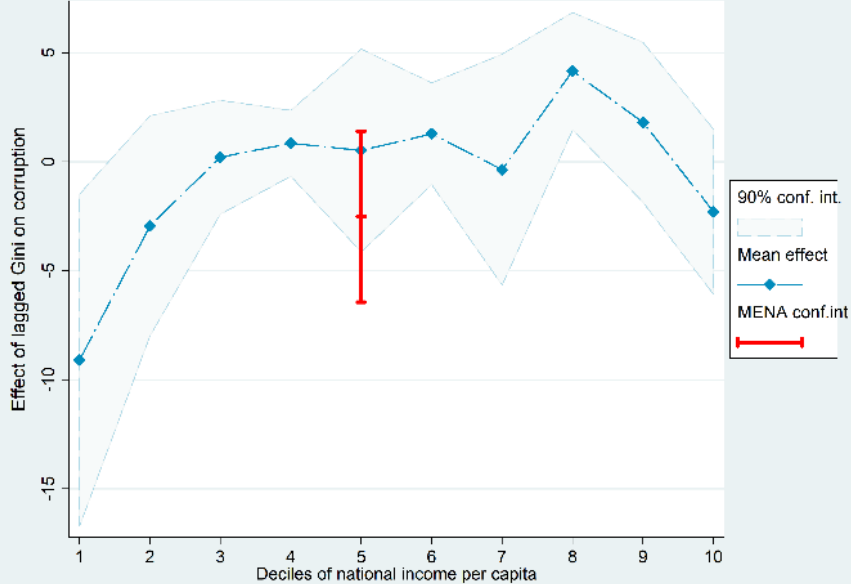


# RE estimation of corruption on lagged inequal.: Coefficient on lagged inequality

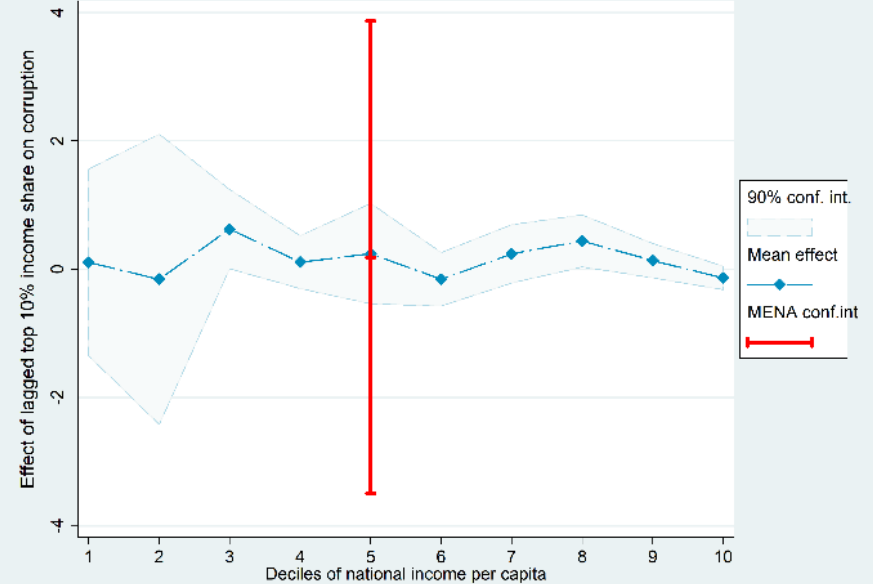


# FE estimation of corruption on lagged inequal.: Coefficient on lagged inequality

Lagged inequality vs. corruption: Mean effect by income/capita decile



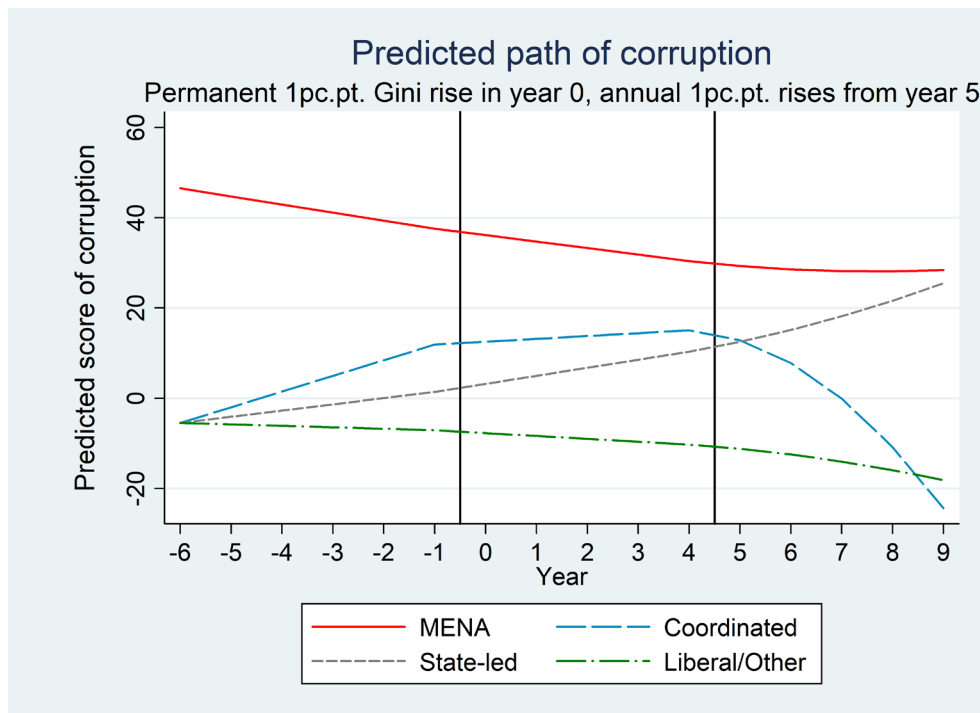
Lagged inequality vs. corruption: Mean effect by income/capita decile



# Regression analysis

Y: 1-yr $\Delta$ corruptn	FD POLS		FD Random Effects GLS				FD Fixed Effects			
10yr $\Delta$ gini	-.169**	-5.340*	-.165**	-5.108*	-20.12***	-18.48**	-.013	.026	-25.56*	-19.222
10yr $\Delta$ gini $\times$ MENA	.271*	.245*	.270*	.249*	.743	.002	.395	.333	-.363	-1.451
10yr $\Delta$ gini $\times$ Coord ME					-2.53***	-2.34***			-3.10***	-3.16***
10yr $\Delta$ gini $\times$ State-led ME					.726***	.504*			-.026	-.658
10yr $\Delta$ gini $\times$ log inc per cap		.945*		.923*	3.498***	3.283**		.116	4.528*	3.603
10yr $\Delta$ gini $\times$ log inc per cap <sup>2</sup>		-.042*		-.042*	-.158***	-.149**		-.012	-.200*	-.164
10yr $\Delta$ gini $\times$ log stockmkt cap					-.107**	-.153**			-.102	-.049
10yr $\Delta$ gini $\times$ informality					.018**	.016*			.003	-.001
Coordinated ME					3.796***	3.404***				
State-led ME					1.696**	2.608***				
MENA					-1.460	-1.141				
Year dummies						$\gamma$ ***				$\gamma$ ***
Constant	.133	.092	.132	.098	-.323	.831	.118***	.161***	-.594***	6.232
Within R-squared	.001	.002	.001	.001	.036	.108	.001	.001	.027	.111
Observations	2,526	2,518	2,526	2,518	467	467	2,526	2,518	467	467
MENA countries	15	15	15	15	8	8	15	15	8	8
Non-MENA	146	144	146	144	60	60	146	144	60	60

Predicted evolution of corruption following a permanent 1%pt jump in Gini at t=0, & Gini rising annually at 1%pt starting at t=5.



Source: Coefficients from the RE full specification without year dummies (column 5)

# Conclusions

- Inequality affects corruption positively in some developed OECD countries, particularly state-led non-liberal market economies.
- The effect is weakest or negative in liberal market economies
- Economic power translates directly into political power in highly networked societies
- The link between the two spheres is indirect in economies where transactions are done at arm's length

- Inequality affects corruption weakly or negatively in developing countries, and in the MENA & resource extracting economies
- MENA & resource exporting countries underperform relative to their level of development, perhaps an indication of a variety of a resource curse/Dutch disease.

# Policy implications

- The high observed or perceived corruption is an under-appreciated piece of the Arab inequality puzzle
- Political connectedness & ability to get ahead through corruption can be thought of as latent dimensions of multidimensional inequality

- Need to understand and manage economic distribution not just out of concerns for social justice but also for the goal of safeguarding and enhancing democracy and political stability
- Redistributive fiscal policies are not only important for social justice, but are also an investment in political stability & democratic participation



Thank you!

# Appendix: Future research directions

- Decompose state corruption by category or by source, such as that prompted by corruptibility (*supply* of corruption) by state authorities, & that prompted by the need for special treatment or patronage (*demand* for corruption) by private sector
- Distinguish ‘according to rule’ corruption (preferential treatment for legal services) & ‘against the rule’ corruption (unsanctioned services)

- Account for resource-extracting countries' resource utilization & recent growth experiences

# Evidence: Government corruption

Perception of  
corruption by  
MENA  
residents, Arab  
Barometer  
2006–2007 (%  
respondents)

	Algeria	Jordan	Lebanon	Morocco	Palestine	Yemen
How widespread is corruption and bribe taking?						
Hardly anyone is involved	3.6	20.4	1.8	3.1	9.2	4.7
Not a lot of officials	23.3	37.4	18.3	22.0	51.2	23.6
Most officials are corrupted	40.9	25.5	60.3	40.5	29.5	50.8
Almost everyone is corrupted	19.9	5.8	17.5	33.2	5.2	9.8
Can't choose/don't know	6.00	10.94	1.67	1.10	4.66	8.51
Decline to answer	6.31	0.09	0.42	0.16	0.24	2.65
In your opinion, to what extent is the government working to crackdown on corruption & bribe taking?						
To a large extent	8.9	23.5	5.0	9.0	31.5	8.8
To a medium extent	17.9	32.8	12.4	18.8	34.5	14.8
To a small extent	32.6	25.0	19.6	27.6	15.5	25.1
Not at all	28.5	10.8	59.7	40.8	13.6	40.9
Not clear	0.00	0.26	0.00	0.00	0.00	0.00
Can't choose/don't know	7.54	7.52	3.10	3.45	4.89	9.21
Decline to answer	4.62	0.09	0.25	0.31	0.08	1.26

# Officials → voters

How often are voters bribed in your country's elections?  
(World Values Surveys '01-'14)

	Very often	Fairly often	Not often	Not at all often
Algeria 2013	34.66	28.08	20.14	17.12
Egypt 2013	21.19	30.59	33.17	15.05
Iraq 2012	16.39	33.52	36.74	13.35
Jordan 2014	44.8	35.57	12.31	7.33
Kuwait 2014	16.68	29.57	30.62	23.13
Lebanon 2013	34.97	36.33	20.89	7.81
Libya 2014	18.61	23.96	26.79	30.64
Palestine 2013	21.26	45.56	19.39	13.79
Tunisia 2013	23.15	37.24	28.87	10.74
Yemen 2014	26.09	41.24	18.71	13.97

# Civil society

How justifiable is someone's accepting a bribe?  
(World Values Surveys 2001-2014)

	Never	2	3	4	5	6	7	8	9	Always
Algeria 2002	88.59	3.30	1.02	1.10	1.49	0.79	0.71	1.34	0.79	0.87
Algeria 2013	63.50	10.30	8.53	3.64	4.62	2.75	1.60	1.07	0.80	3.20
Bahrain 2014	41.58	39.08	6.58	3.17	2.67	3.75	2.33	0.50	0.33	0.00
Egypt 2001	93.96	2.69	1.35	0.62	0.66	0.38	0.10	0.07	0.10	0.07
Egypt 2008	88.49	4.19	1.92	1.44	1.09	0.77	0.61	0.73	0.37	0.39
Egypt 2013	67.09	17.15	9.20	1.17	2.16	1.05	0.49	0.42	0.36	0.92
Iraq 2004	84.65	11.66	1.16	0.30	0.30	0.09	0.04	0.43	0.90	0.47
Iraq 2006	94.37	3.98	0.34	0.15	0.19	0.04	0.08	0.15	0.15	0.56
Iraq 2012	65.52	17.41	7.36	4.94	1.76	1.00	0.92	0.33	0.59	0.17
Jordan 2001	96.41	0.97	0.85	0.47	0.25	0.04	0.20	0.19	0.25	0.37
Jordan 2007	95.34	2.12	0.47	0.64	0.48	0.43	0.00	0.26	0.08	0.19
Jordan 2014	82.00	7.67	4.17	1.92	1.25	1.50	0.75	0.25	0.17	0.33
Kuwait 2014	64.30	7.09	7.68	3.12	4.39	3.71	3.12	1.86	1.77	2.95
Lebanon 2013	50.08	9.00	9.08	8.67	8.17	6.75	3.75	2.33	1.58	0.58
Libya 2014	83.00	4.39	3.64	2.93	2.61	0.67	0.74	0.18	0.25	1.59
Morocco 2001	97.90	0.11	0.28	0.36	0.91	0.00	0.00	0.05	0.00	0.38
Morocco 2007	82.48	5.22	2.61	1.68	3.79	1.01	0.93	1.10	0.59	0.59
Morocco 2011	81.37	6.94	4.29	2.28	3.29	0.91	0.37	0.27	0.00	0.27
Palestine 2013	71.70	9.77	7.45	3.32	3.93	1.41	1.41	0.60	0.10	0.30
Qatar 2010	87.83	5.20	1.08	0.57	1.37	1.43	1.30	0.58	0.36	0.28
Tunisia 2013	88.08	2.62	3.13	1.01	2.62	0.76	0.34	0.17	0.34	0.93
Turkey 2007	83.00	10.90	3.47	1.35	0.66	0.00	0.27	0.08	0.00	0.25
Turkey 2011	86.83	8.20	2.11	1.45	0.43	0.05	0.29	0.19	0.42	0.05
Yemen 2014	81.98	6.46	3.33	1.98	2.29	0.63	0.94	1.35	0.52	0.52

Perception of  
corruption by  
MENA  
residents,  
2013

	Q1: To what extent do you believe corruption is a problem in the public sector in your country?					Q2: Have you ever been asked to pay a bribe?	
	Not at all	A little problem	A problem	A serious problem	Very serious	Yes	No
Algeria	1.32	1.32	7.51	17.66	72.18	50.66	49.34
Egypt	3.66	4.27	12.91	34.86	44.31	48.27	51.73
Iraq	0.75	2.15	23.62	29.32	44.16	45.82	54.18
Jordan	3.85	10.40	24.74	31.19	29.83	20.90	79.10
Lebanon	1.28	1.18	4.60	21.71	71.23	29.47	70.53
Libya	16.76	7.78	22.45	11.61	41.4	75.00	25.00
Morocco	1.43	0.82	4.71	17.40	75.64	55.60	44.40
Sudan	17.73	33.71	31.97	6.15	10.45	33.33	66.67
Tunisia	2.63	3.68	12.00	15.16	66.53	41.20	58.80
Turkey	5.12	6.35	20.98	17.50	50.05	22.39	77.61
Palestine	2.10	10.09	17.78	34.77	35.26	10.92	89.08
Yemen	6.67	26.06	28.81	27.33	11.12	66.56	33.44
Non-MENA	1.11	1.07	5.14	6.77	85.91	40.93	59.07

In your dealings  
with the public  
sector, how  
important are  
personal contacts/  
relationships to get  
things done?

	Not important	Of little importance	Moderately important	Important	Very important
Algeria	10.4	12.74	19.88	27.73	29.26
Egypt	6.60	4.06	11.07	33.20	45.08
Iraq	0.56	7.91	25.12	40.84	25.58
Jordan	3.17	7.06	21.68	38.14	29.96
Lebanon	0.81	2.31	7.29	23.96	65.63
Libya	25.50	12.43	26.25	10.41	25.40
Morocco	2.48	5.07	6.52	38.72	47.20
Sudan	24.84	32.40	26.19	9.52	7.04
Tunisia	14.48	9.94	16.07	32.35	27.17
Turkey	14.45	8.16	16.32	27.53	33.53
Palestine	4.08	10.98	19.67	30.65	34.62
Yemen	5.62	27.37	29.11	24.51	13.38
Non-MENA	5.87	9.31	12.19	37.48	35.15



The court system is fair, impartial and uncorrupted: (World Bank Enterprise Surveys 2002-2014)

	Strongly disagree	Tend to disagree	Tend to agree	Strongly agree
Djibouti 2013	22.54	30.74	38.93	7.79
Egypt 2013	11.81	20.88	39.44	27.87
Iraq 2011	26.14	42.52	23.62	7.72
Jordan 2006	14.39	28.29	45.16	12.16
Jordan 2013	11.62	21.05	41.01	26.32
Lebanon 2013	41.12	32.36	23.15	3.37
Mauritania 2006	21.61	27.97	27.54	22.88
Mauritania 2014	51.97	26.77	12.6	8.66
Morocco 2013	14.79	34.32	41.42	9.47
Palestine 2006	36.06	30.14	29.3	4.51
Palestine 2013	19.65	30.35	42.49	7.51
Sudan 2014	4.26	15.22	54.19	26.33
Tunisia 2013	8.84	25.82	51.13	14.21
Turkey 2008	19.92	18.21	25.07	36.8
Turkey 2013	28.51	24.42	22.49	24.58
Yemen 2010	57.79	20.32	16.25	5.64
Yemen 2013	60.53	20.77	15.13	3.56
Non-MENA '11-'16	20.94	28.01	37.27	13.78

# Protected sectors

To what extent is this country's government run by a few big entities acting in their own best interests?

	Not at all	Limited extent	Somewhat	Large extent	Entirely
Algeria	8.80	18.64	27.64	28.27	16.65
Egypt	7.36	11.66	18.61	34.36	28.02
Iraq	1.17	11.82	36.72	41.02	9.28
Jordan	6.14	24.20	37.19	27.74	4.72
Lebanon	1.00	3.01	6.90	38.64	50.45
Libya	20.73	17.98	24.86	14.55	21.88
Morocco	2.66	6.41	32.04	41.96	16.93
Sudan	21.44	28.45	26.60	10.82	12.68
Tunisia	10.69	12.81	19.38	37.19	19.93
Turkey	7.68	8.40	34.65	25.31	23.96
Palestine	3.07	17.16	31.67	33.47	14.62
Yemen	6.56	25.79	29.64	23.53	14.48
Non-MENA	17.54	30.91	39.29	10.59	1.67

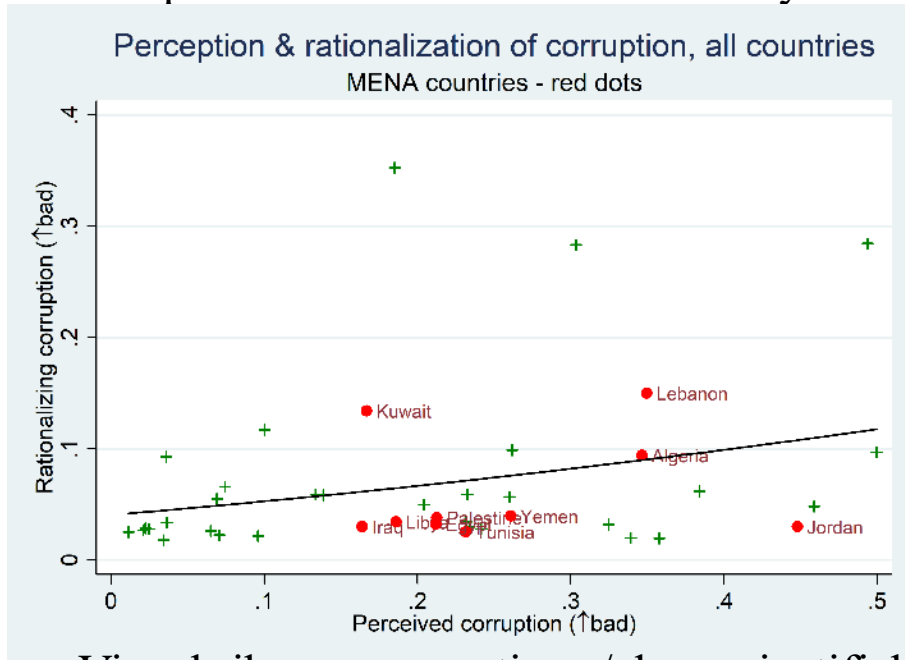
# Business climate

How much of an obstacle  
to current operation is  
corruption?  
(World Bank Enterprise  
Surveys 2002-2014)

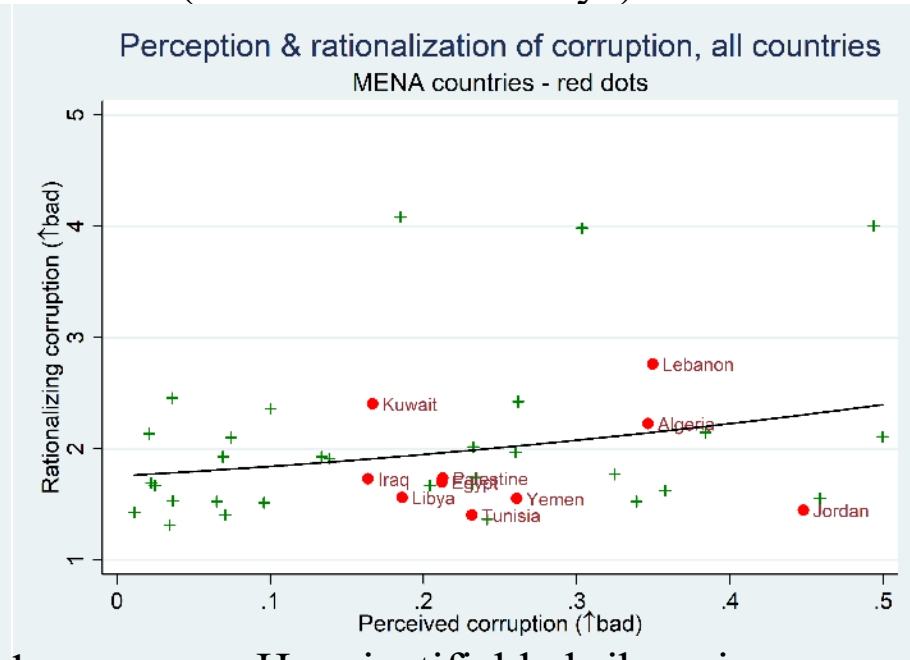
	No obstacle	Minor	Moderate	Major	Very severe
Algeria 2002	24.52	17.05	23.18	15.71	19.54
Djibouti 2013	38.61	10.81	12.74	13.9	23.94
Egypt 2004	31.83	4.14	14.50	15.45	34.08
Egypt 2007	21.99	7.05	11.68	16.38	42.91
Egypt 2013	17.82	9.62	16.22	24.67	31.66
Iraq 2011	11.08	9.58	11.76	24.21	43.37
Jordan 2006	26.31	9.64	21.29	24.1	18.67
Jordan 2013	36.02	22.54	17.51	14.29	9.66
Lebanon 2006	8.43	8.14	16.86	21.8	44.77
Lebanon 2009	8.51	5.85	19.15	18.35	48.14
Lebanon 2013	14.1	5.06	12.48	26.58	41.77
Mauritania 2006	40.68	30.51	10.59	11.44	6.78
Mauritania 2014	16.89	13.51	15.54	30.41	23.65
Morocco 2004	54.50	17.92	10.92	9.53	7.13
Morocco 2007	51.15	11.29	10.23	14.81	12.52
Morocco 2013	27.46	12.85	13.6	23.68	22.42
Oman 2003	68.45	12.50	7.14	3.87	8.04
Palestine 2006	10.66	8.38	14.47	23.1	43.4
Palestine 2013	22.89	9.64	23.13	23.61	20.72
Sudan 2014	1.36	7.85	26.59	53.32	10.88
Syria 2003	22.66	8.27	11.51	18.35	39.21
Syria 2009	7.43	9.24	16.27	14.06	53.01
Tunisia 2013	25.51	17.23	20.44	23.99	12.84
Turkey 2002	39.45	16.77	20.12	23.67	0.00
Turkey 2004	46.52	14.84	21.61	17.03	0.00
Turkey 2005	19.77	9.68	16.80	16.96	36.79
Turkey 2008	29.16	16.98	15.73	14.76	23.38
Turkey 2013	58.95	14.47	12.95	7.31	6.32
Yemen 2010	9.03	4.73	12.26	29.46	44.52
Yemen 2013	0.85	3.41	6.53	18.18	71.02
Non-MENA '11-'16	36.14	17.66	17.33	16.58	12.30

# Perception & rationalization

Perception & rationalization of bribery in 2011-2014 (World Values Surveys)



View bribery as sometimes/always justifiable



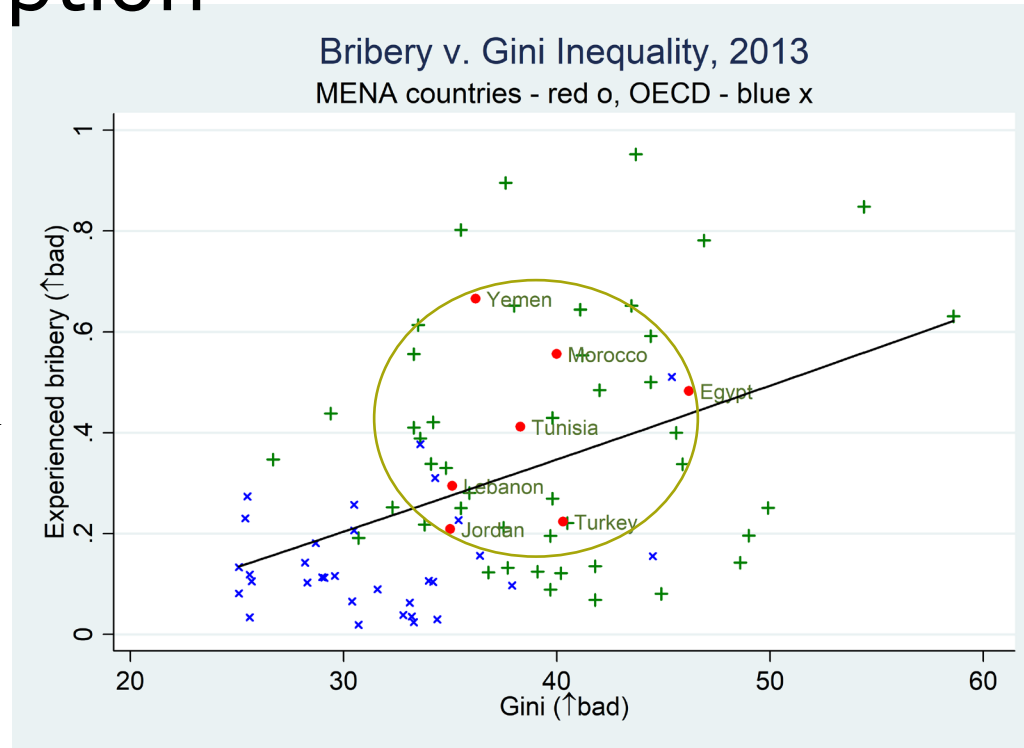
How justifiable bribery is

# Evidence of corruption

- We find a mosaic of evidence of perceptions & rationalizations of corruption by various actors.
- This varies across countries & years

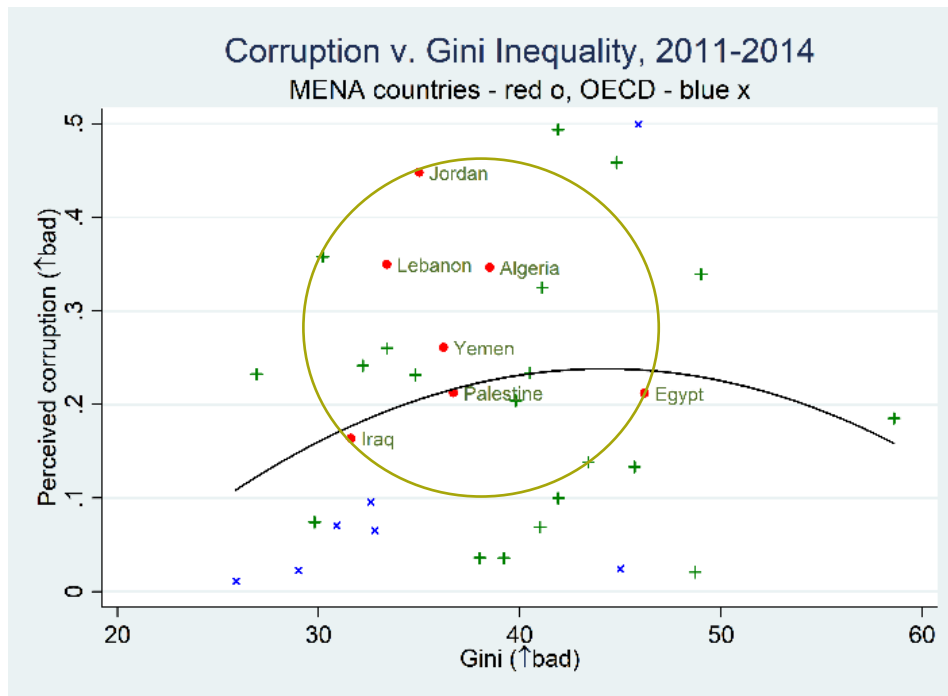
# Gini vs. corruption

Experience of bribery vs. Gini, 2013  
(Transparency International's Global Corruption Barometer)



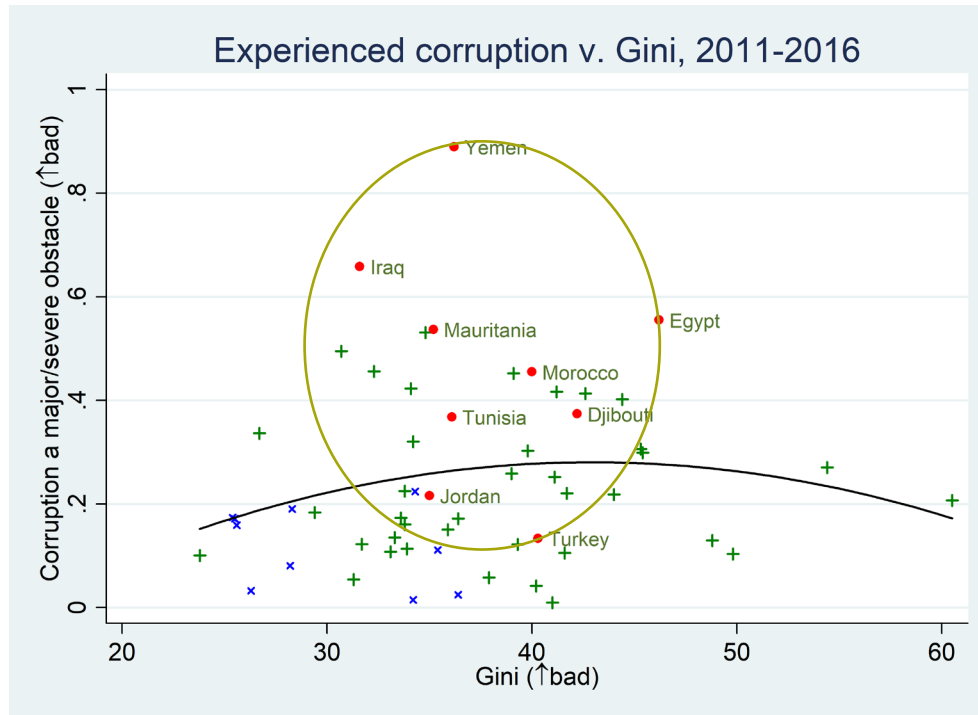
Linear trend line among non-MENA countries

Perception of  
bribery vs.  
inequality in  
2011-2014  
(World Values  
Surveys 2001-  
2014)



Quadratic trend line among non-MENA countries

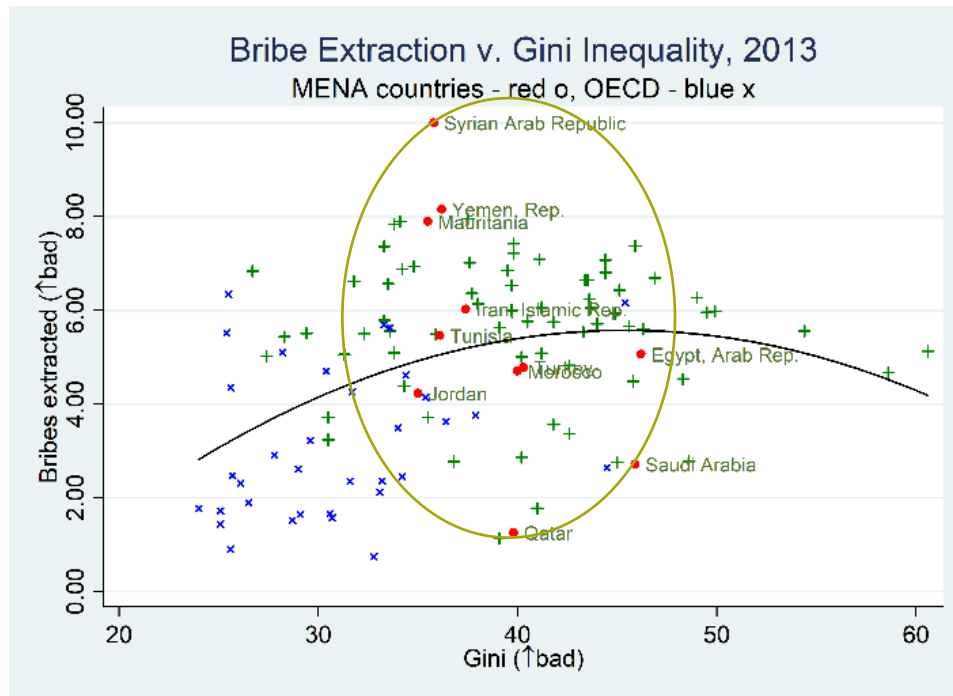
Corruption as an obstacle to current operation vs. inequality in '11-'16 (World Bank Enterprise Surveys 2011-2016)



Quadratic trend line among non-MENA countries



Economic  
Freedom of the  
World Database  
(Fraser Institute  
2018)



Quadratic trend line among non-MENA countries