Supplementary material for Niels Spierings, Democratic disillusionment? Desire for democracy after the Arab uprisings

Online Appendix A. Type of survey per country and year

Country	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Algeria		WVS4				AB1					AB2		WVS6 AB3	
Bahrein									AB2					WVS6
Egypt	WVS4							WVS5			AB2	WVS6	AB3	
Iraq				WVS4		WVS5					AB2		AB3 WVS6	
Jordan	WVS4					AB1	WVS5			AB2			AB3	WVS6
Lebanon							AB1				AB2		AB3 WVS6	
Morocco	WVS4					AB1	WVS5				WVS6		AB3	
Palestine						AB1				AB2		AB3	WVS6	
Sudan											AB2		AB3	
Tunisia											AB2		AB3 WVS6	
Yemen							AB1				AB3		AB3	WVS6

Notes: AB = Arab Barometer; WVS = World Values Survey
The number indicates the round. The AB projects included three rounds (1,2,3). The WVS project is currently engaged in round 7, but for that no data are available yet, and the first three round did not include MENA countries; 4, 5, and 6 thus refers to the rounds in the overall WVS project, whereby round 4 is the first round used in this study, etcetera.

Online Appendix B: Multilevel regression models of desire for democracy

	Model 1a: Trend without controls	Model 1b: Trend with controls	Model 2a: Trend + break without controls	Model 2b: Trend + break with controls	Model 3a: Trend + break without controls, for Bahrain, Egypt, Lebanon and Morocco	Model 3b: Trend + break with controls, for Bahrain, Egypt, Lebanon and Morocco
Core variable						
Uprisings: after uprising (dummy)			-0.057*** (0.011)	-0.054*** (0.011)	-0.255*** (0.014)	-0.262*** (0.014)
Control variables						
Time: years since 2000	-0.011 (0.009)	-0.009 (0.009)	-0.001 (0.009)	0.001 (0.009)	-0.007 (0.009)	-0.006 (0.009)
Sex (ref = male)		-0.008 (0.006)		-0.008 (0.006)		-0.010 (0.008)
Education (0-3)		0.040*** (0.003)		0.040*** (0.003)		0.045*** (0.004)
Age categories (0-6)		0.018*** (0.002)		0.017*** (0.002)		0.018*** (0.003)
Model statistics						
Intercept	2.538***	2.425***	2.453***	2.435***	2.694***	2.589***
Intercept variance at country level	0.142*	0.153*	0.135*	0.151*	0.011	0.013
Time variance at country level	0.001***	0.001*	0.001*	0.001*	0.000	0.000
BIC	147,073.243	145,583.607	147,055.744	145,569.224	44,418.229	44,050.267
N_{ind}	65,893	65,349	65,893	65,349	21,627	21,451
N_{ctry}	11	11	11	11	4	4

*** $p<0.001$ ** $p<0.01$ * $p<0.05$ # $p<0.10$

Standard error between brackets; Weighted by individual weight provided per survey; Data source: AB and WVS surveys

Online Appendix C: csQCA of conditions causing democratic disillusionment

The csQCA procedure below follows the steps as presented by Rihoux and De Meur (2009).

Step 1: Dichotomizing conditions

See Sections 4 and 5 for the dichotomization criterions. The table below, summarizes the information of Tables 1 and 2 into a dichotomous data table presenting all empirically observed cases.

Dichotomous data table

Case ID	PROT	POLLIB	DEMO	DIS
Algeria	0	0	0	0
Bahrain	1	1	0	1
Egypt	1	1	0	1
Iraq	1	0	0	0
Jordan	0	1	0	0
Morocco	1	1	0	1
Lebanon	1	0	0	1
Palestine	0	0	0	0
Sudan	0	0	0	0
Tunisia	1	1	1	1
Yemen	1	0	0	0

PROT = presence of Major protest (See Table 1)
POLLIB = presence of initial political liberalization (See Table 1)
DEMO = presence of actual democratization (See Table 1)
DIS = presence of substantial decline in desire for democracy (See Table 2)

Step 2: Constructing a Truth table

The table below collapses the Dichotomous data table based on the occurrence of similar configurations of explanatory conditions.

Truth table

Configuration	PROT	POLLIB	DEMO	DIS	dis
1	0	0	0		Algeria Palestine Sudan
2	0	1	0		Jordan
3	1	0	0	Lebanon	Iraq Yemen
4	1	1	0	Bahrain Egypt Morocco	
5	1	1	1	Tunisia	

The theoretically possible configurations without observed cases (20) are not included.

Step 3: Resolving contradictory configurations

One configuration (truth table, configuration #3) that has both a positive and a negative outcome. This so-called contradictory configuration is resolved following the fifth and sixth 'Good Practice' as suggested by Rihoux and De Meur (2009:49): I (temporarily) take Lebanon from analysis and study it in detail later (see Section 6.3).

Step 4: Minimization

The Venn diagram visualizes the results after resolving the contradictory configurations. In Boolean formulation this leads to the following first outcomes.

(1) PROT * POLLIB → DIS

(2) prot * demo → dis

(3) pollib * demo → dis

Below, after including the logical remainders and reviewing the cases (See Section 6.3), the Boolean formulation will be explained in words.

Venn diagram of three conditions and democratic disillusionment as outcome with initial observations

Bahrain **Egypt** **Morocco** — *PROT*	*prot*	**Jordan**
POLLIB — **Tunisia**	*DEMO* / *demo*	
pollib		
Iraq **Yemen**		**Algeria** **Palestine** **Sudan**

PROTEST = presence of major protest; *protest* = absence of major protest
POLLIB = presence of initial political liberalization; *pollib* = absence of initial political liberalization
DEMO = presence of actual democratization; *demo* = absence of actual democratization
　　　= presence of democratic disillusionment　　　= absence of democratic disillusionment

Step 5: Bringing in the logical remainders

Below, the non-observed configuration (empty cells in Step 4) are included in the analysis to further minimize the outcomes, leading to more parsimony.

Venn diagram including logical remainders and case-knowledge based corrections

Bahrain **Egypt** **Morocco** **poor Tunisians** — *PROT*	*prot*	**Jordan**
POLLIB — **richer Tunisians**	*DEMO* / *demo*	
pollib		
Iraq **Yemen**		**Algeria** **Palestine** **Sudan**

PROTEST = presence of major protest; *protest* = absence of major protest
POLLIB = presence of initial political liberalization; *pollib* = absence of initial political liberalization
DEMO = presence of actual democratization; *demo* = absence of actual democratization
　　　= presence of democratic disillusionment　　　= absence of democratic disillusionment
　　　= used as logical remainder for absence

All three included logical remainders present counterfactual situations in which either/and no major protest and initial political liberalization took place, but the country nevertheless did democratize. There is no reason to assume that actual democratization would lead to democratic disillusionment in those cases: theoretically this is unlikely and empirically it does not correspond with the results for all adjacent cells in the Venn diagram. For instance, if the absence of major protest in combination with initial reform but no democratization (Jordan) does not lead to democratic disillusionment, it is safe to assume that major protest in combination with initial reform *and actual democratization* (in the eyes of the people) does not lead to democratic disillusionment either. Also, initially the Tunisian case went against theoretical expectations, although providing a very parsimonious outcome (see Step 4), a closer scrutiny of the case (see Section 6.3) provides a more nuanced picture, which is captured in the Venn diagram below by splitting the case in two.

Combinations sufficient for no democratic disillusionment:

(1) pollib   (coverage: Iraq, Yemen, Algeria, Palestine)

(2) prot   (coverage: Jordan, Sudan, Algeria, Palestine)

(3) DEMO   (coverage: richer Tunisians)

The absence of either major protest or initial political liberalization (or the combination of both) is sufficient for the desire for democracy not to drop (see Section 6.1); similarly, actual democratization seems sufficient for preventing the desire for democracy to drop see Section 6.3)

Combinations sufficient for democratic disillusionment:

(1) PROT*POLLIB*demo   (coverage Bahrain, Egypt, Morocco, poor Tunisians)

When major protest and initial political liberalization are not accompanied by perceived lasting democratization, the desire for democracy drops (see Section 6.2 for Bahrain, Egypt & Morocco; Section 6.3 for the poor Tunisians).

Step 6: Interpretation

See Sections 6 (and to a lesser extent Section 7).

Assessing the Robustness

In addition to the steps outline by Rihoux and De Meur (2009), I also followed the advice by Skaaning (2011) on assessing how robust the results are. For statistical analyses this is common practice and there are more or less

standard, for (cs)QCA as a relatively young technique these procedures were less developed and consequently not included in the standard procedures yet. Skaaning provides several options, with particularly stress on Cluster D (see below). Nevertheless, and even while some of these options are more relevant to this study than others, I will list all options offered by Skaaning and briefly discuss how this study reflects those.

A - Methodological triangulation

In this study I combine the csQCA with a more case-study, process tracing approach, which is a form of methodological triangulation. (Skaaning 2011:393-4). Given the low number of macro-level cases, triangulation of the csQCA with explanatory statistical methods is not possible.

B - Change the case selection

Skaaning argues that testing the same expectations on a different set of cases helps to test the robust and list three options in this regard (393), of which the applicable ones are applied in this study, the other are included in the discussion in the closing section of the paper. First, analysis the same issue at the disaggregate level (e.g. wilayat, regional, provincial level) is theoretically less applicable as the main explanatory factors are nation-level characteristics and empirically not feasible given the data available across MENA countries. Second, changing the scope is certainly desirable, for instance the inclusion of Libya and Syria would allow for a stronger test of the role civil war and violence play. Unfortunately, no pre-uprisings data are available for those two countries. In Section 7 this is discussed. Third and last, Skaaning advices to remove outliers if they distort the general picture (394). These cases would make the results less robust and dependent on a exceptional case. This approach is followed in the decision made above to temporarily remove Lebanon (see Step 3 above) and assess it more in-depth in order to see if the causal pattern derived from the other cases is refuted by it or that idiosyncratic circumstances distort the general picture.

C - Change the model specification

The reduction, addition or replacement of explanatory factors can also test the robustness of results. As the can be derived from the results above, the reduction of factors would not lead to more parsimonious results. Given the rather clear outcomes and the discussion of alternative explanations in Section 7 of the study (see particularly the paragraph starting with "Overall, my application of"), it can be concluded that the adding such variables would not change the results. Were data on cases available in which civil war broke out, but which in contrast to the Yemeni case did show protest and initial liberalization, it would be important to include civil war or state

breakdown as additional explanatory factor; however, this configuration does not reflect the Libyan or Syrian situation either. Without these cases included this adds little to the results (this is discussed in Section 7).

D - Change the thresholds/operationalization

Skaaning's core focus in on the question of whether results of a QCA are robust on changes in the numerical threshold applied in a QCA, more particularly the thresholds (i) for calibrating being in or out a factor (operationalization of variables), (ii) for how many cases should be present in a configuration for being included, and (iii) for the proportion of cases in an outcome needing to show the same outcome to be considered consistent.

A csQCA used dichotomous variables, which are sometimes constructed from scale-based variables. That is however not the cases in this study. As discussed in Section 4, the dichotomization of the factors here follows a theoretical-conceptual logic which can be applied to rather natural cut off points for the explanatory factors. Moreover, on both protest and reform the literature almost completely agrees on the division of cases as discussed there. The outcome factor's dichotomization is based on well establish statistical standards ($p<0.05$). Still two cases posed some challenges: Lebanon on protest and Tunisia on disillusionment. In line with this observation these cases have been given more in-depth attention in Section 6.3, which provides a more proper placement in the analyses overall

Reflecting on the frequency threshold, Skaaning notes that this is less relevant for csQCA (as opposed to fsQCA) particularly with a relatively small-N (Skaaning 2011:403), which is the case in this study. Similarly, regarding the consistency threshold is most relevant for QCA with a larger number of cases (ibid), and indeed with the 'only' 11 cases included in this study the number of contradictory configurations is very limited – if not, explanatory factors should be added – and if found they should be resolves on substantive ground (see above on the outliers).

Overall, given the inclusion of all cases on which data are available, the in-depth assessment of the cases (particularly the Lebanese outlier, as turned out idiosyncratic, case), and the theory-based classification of cases based on a by-and-large consensus in the literature, the results of the csQCA can be considered rather robust.