Supplementary Appendix:

Online Surveys

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July 13, 2023

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1 Advertisement and Targeting

The survey sample of Egyptian and Tunisian military personnel was generated using targeted advertisements on Facebook.[1] Clicking on the advertisement took users out of Facebook and into Qualtrics, a survey platform, where they filled out a consent form and then took the survey (see section 2).

Between July 7 and August 19, 2018, the following advertisement was shown on Facebook to adult Egyptians and Tunisians:

Figure 1: Facebook advertisment and targeting

The advertisement (Figure 1a) featured a picture of the Egyptian military with the title: "Survey about Security in the Middle East." The text says "Fill out this survey about security in the Middle East and in return you will receive free prepaid credit on your mobile phone, if you are selected." Respondents willing to enter their phone number at the end of the survey (about one-third of the sample) received this credit. For more on the incentives used to recruit respondents, see section 3.

Rather than showing the advertisement to all 7 million Tunisians and 35 million Egyptians on Facebook, it was targeted to only the 440,000 and 5 million, respectively, that Facebook has classified as having an interest in or employed by the military. Facebook allows advertisers to specify not just the user's country (in our case, Egypt/Tunisia), age (over

[1]Survey approved through Princeton University IRB #10748 and paid for through the generous funding of the National Science Foundation and Smith Richardson Foundation. I am indebted to Bob Kubinec for help in fielding the survey. I later used this method to survey the Algerian military (see Grewal (2023)).

18), and language (Arabic for Egypt; Arabic and French for Tunisia), but also a sample list of interests and employers. For the latter, I clicked all options related to the military. Figure 1b, for instance, presents the targeting used for the advertisement in Egypt.

Many Facebook users indeed list the Ministry of Defense as their place of employment (see Figure 2). However, other military personnel likely do not, hence the need to also advertise to individuals Facebook believes are interested in the military. Such classifications are based on algorithms of their activity on Facebook, such as 'liking' Facebook pages about the military.

Figure 2: Sample Facebook profiles (last names and photos censored)

This targeting succeeded in oversampling the number of military personnel who saw the advertisement. Table 1 presents the number of military personnel surveyed compared to the actual percent of military personnel in each country, as well as the percent in the nationally representative Arab Barometer survey.[2] While active-duty personnel make up less than 0.5% of each country's population, with our method, 9% of respondents in Tunisia and 7% in Egypt identified as active-duty personnel, with another 7% and 24%, respectively, identifying as former military personnel. These considerably higher rates of active-duty personnel – 15-

[2]In the Arab Barometer, the percent of respondents who self-report being members of the armed forces or security services in Egypt was 0.3% in 2011, 0% in 2013, and 0.3% in 2016. In Tunisia, these figures are 1.1%, 0%, and 0.7%, respectively. The question was not asked in Egypt and Tunisia in Wave 5.

30 times larger – suggest that the Facebook targeting succeeded in oversampling military personnel. Still, the majority of our survey samples are civilians, who we exclude from the analysis.

Table 1: Oversampling Military Personnel

Country	Demographic	Actual Population	Arab Barometer (Wave 4, 2016)	**Facebook Survey (2018)**
Tunisia	Active-duty	38.5k (0.3%)	8 (0.7%)	150 (9%)
	Retired	-	-	121 (7%)
	Civilian	-	-	1382 (84%)
	Total	11.5m	1200	1653
Egypt	Active-duty	438.5k (0.4%)	4 (0.3%)	496 (7%)
	Retired	-	-	1675 (24%)
	Civilian	-	-	4684 (68%)
	Total	98.4m	1200	6855

Note: Arab Barometer includes both military and security personnel.

Beyond the targeting, the other advantage of using Facebook is its low cost. While face-to-face and telephone surveys in Egypt and Tunisia cost upwards of $20-30 per respondent, our survey costed less than $1 per respondent. This allowed for a much larger overall survey, thereby producing sizable sub-samples of military personnel. Overall, we reached 2442 active or former military personnel.

2 Survey Platform

Clicking on the Facebook advertisement took users out of Facebook and into Qualtrics, a survey platform. There are important ethical questions about the data Facebook collects on its users. Because our survey is conducted on Qualtrics, Facebook does not learn their answers to any of the questions, or even if they took the survey at all.

Upon reaching Qualtrics, respondents could choose to toggle between Arabic, French, or English translations of the survey. They were first presented with an eligibility page (see below), and, if eligible, presented with a consent form. The consent form was transparent that this survey was being conducted by researchers at Princeton University, and a banner

featuring the Princeton University Qualtrics logo headed every Qualtrics page, including the first (eligibility) page.

Figure 3: First page of the Qualtrics survey

The eligibility page asked respondents for their age and nationality. Any Egyptian or Tunisian over 18 was allowed to enter the survey. Location was later verified using IP addresses, removing the few not currently located in Egypt or Tunisia (see section 4).

3 Survey Incentives

In the eligibility page, respondents also chose among a pre-defined list of cell phone service providers. In the subsequent consent page, they saw the amount of phone credit they would receive (or would be entered into a raffle to receive) if they were to complete the survey. The credit was sent through the Swiss company CY.SEND.

Every respondent who completed the survey was eligible to receive phone credit. Respondents with service providers Etisalat, Vodaphone, Ooredoo, and Tunisia Telecom were guaranteed to receive phone credit, while those using Orange were entered in a raffle to receive 63 Egyptian pounds (17% chance of winning) or 9 Tunisian dinars (45% chance). The amounts were the minimum permitted on CY.SEND.

Table 2: Survey Incentives: Cell Phone Credit

Country	Service	Amount	Amount (USD)	Chance
Egypt	Etisalat	10 LE	$0.73	100%
Egypt	Vodaphone	10 LE	$0.73	100%
Egypt	Orange	63 LE	$3.95	17%
Tunisia	Ooredoo	2 DT	$1.19	100%
Tunisia	Telecom	5.4 DT	$2.92	100%
Tunisia	Orange	9 DT	$3.81	45%

Upon completing the survey in Qualtrics, respondents were directed to a Google form where they could enter their phone numbers to claim their credit. Collecting these numbers in a separate form prevented matching up phone numbers to survey answers. About one-third of respondents entered their phone numbers and received phone credit. Phone numbers were subsequently deleted.

Importantly, since every respondent – civilian or military – was eligible to receive phone credit, the incentives do not create any incentive to lie and claim to be in the military. The consent form only says they need to finish the survey; their answers to the questions would not affect their phone credit. Ethically, we felt that we must provide some form of compensation for their time.

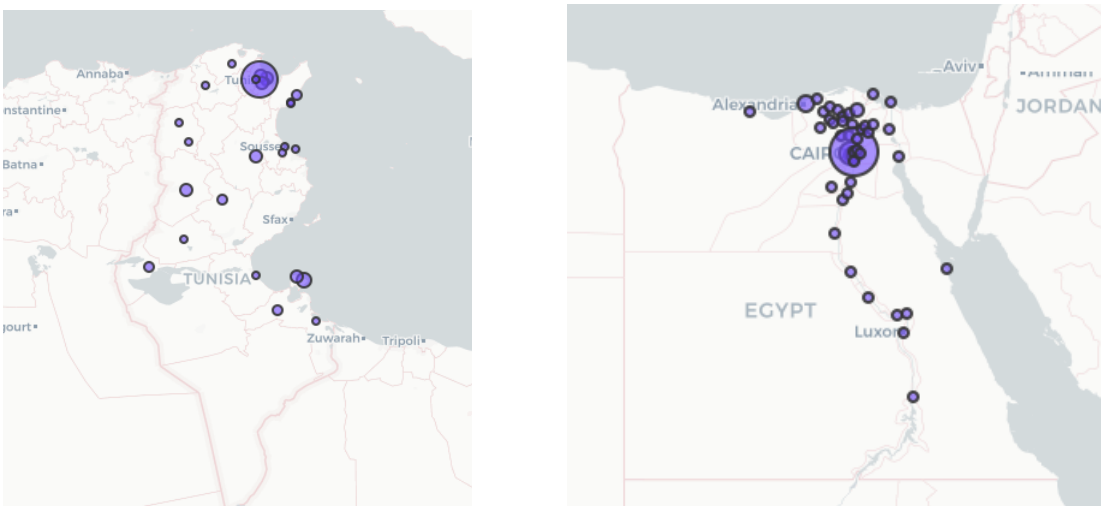
4 Verification Checks

As noted in the text, we have no way of verifying whether respondents who self-described as military personnel were actually military personnel, since we did not ask any names (nor is there a public list of names in the military to cross-check with). However, we performed a number of verification checks to determine that survey respondents were actually Egyptians and Tunisians, were not taking the survey multiple times to receive phone credit, and were taking the survey seriously.

First, the geo-coordinates linked to IP addresses reveal the rough location of survey respondents, including their country and city (though nothing more fine-grained than that).

We filtered out the few respondents who took the survey outside of Egypt and Tunisia, ensuring that everyone in our survey sample was actually located in the countries of interest (see maps in Figure 4).[3] Those filtered out may well have been Egyptians and Tunisians abroad, but we preferred a more conservative test.

Figure 4: Map of Survey Respondents



Second, Qualtrics prevents the same IP address from taking the survey more than once, and we can verify that there are no duplicate IP addresses. In addition, we could verify that there are no duplicate phone numbers. Both tests suggest that survey respondents did not attempt to take the survey multiple times to maximize phone credit.

Third, we can examine respondents' time to completion, to verify that respondents were taking the survey seriously, and were not rushing through the survey to receive phone credit. Our median time to completion was 24 minutes (see Figure 5a), with only 4% completing the survey in less than 10 minutes.

Finally, following Kuriakose and Robbins (2016), we test for duplicate and near-duplicate surveys, which might indicate the same individual attempting to take the survey more than once. However, we had no perfect duplicates, and only 2% of the surveys were even 85% the same (Figure 5b).[4]

[3] Maps created through OpenStreetMap (CC-BY-SA).
[4] R code to detect duplicates obtained here.

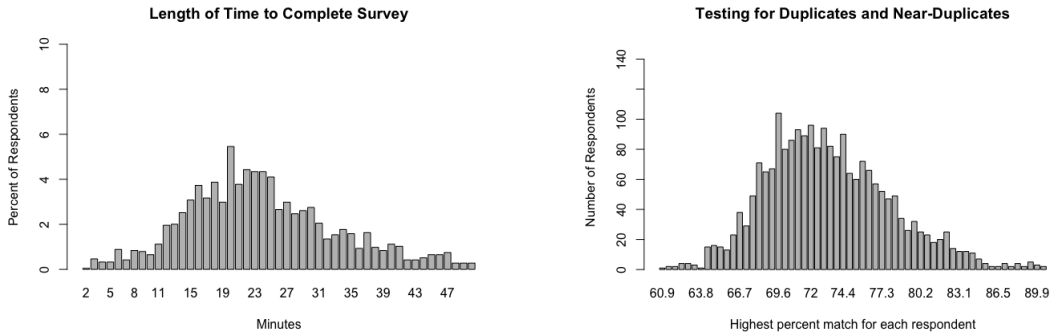


Figure 5: Verification Checks: (a) Time to Completion and (b) Duplicates

5 Representativeness

The survey samples of military personnel are unlikely to be representative, given that all respondents must have access to the internet and be on Facebook. While Facebook usage rates are not available for the military, overall, only about 35% of Egyptians and 55% of Tunisians have Facebook accounts. If military personnel are anything like their civilian counterparts, the survey sample likely skews urban, well-off, and more cosmopolitan – i.e., those who have access to internet.

It is difficult to ascertain *how* unrepresentative the survey is, given that there is little data on the actual militaries. There are two demographics for which data is publicly available: the number in each branch and percent conscript for each branch (IISS, 2017). Tables 3 and 4 compare the survey samples with the actual militaries on these two demographics.

The comparisons reveal that the survey samples are relatively proportional to the actual militaries in terms of branch, with the vast majority in the land army. However, the samples actually under-represent conscripts,[5] perhaps due to the higher socioeconomic status of the survey sample. But there are still a large number of conscripts, which should allow us to sufficiently test the effect of conscription.

[5]IISS's 81% conscript figure for the Tunisian army is almost certainly on paper only, as it has struggled to obtain even 1% of its eligible conscripts (Meddeb, 2015; El-Shimy, 2018), especially after the police have stopped rounded up Tunisians to serve in the draft after the 2011 revolution. It has instead resorted to hiring soldiers on 2-3 year contracts.

Table 3: Survey Representativeness, Tunisia

Military Survey (N=271)

Demographic	Percent
Branch	
Army	83
Navy	9
Air Force	8
Conscript	
Overall	19
Army	18
Navy	32
Air Force	14

Tunisian Military (N=38,500)

Demographic	Percent
Branch	
Army	76
Navy	13
Air Force	11
Conscript	
Overall	?
Army	81
Navy	?
Air Force	?

Table 4: Survey Representativeness, Egypt

Military Survey (N=2171)

Demographic	Percent
Branch	
Army	80
Navy	7
Air Force	13
Conscript	
Overall	56
Army	57
Navy	45
Air Force	51

Egyptian Military (N=438,500)

Demographic	Percent
Branch	
Army	71
Navy	4
Air Force	25
Conscript	
Overall	66-73
Army	61-71
Navy	54
Air Force	82

While we do not have complementary data on the actual militaries, Tables 5 and 6 provide additional demographic data on the survey samples according to their self-reported rank.[6] For each rank, the tables report the percent in each branch as well as the percent conscripted, active-duty, age (among active-duty), women, hometown (as opposed to where they are currently taking the survey), and level of education. Even without comparable data for the actual military, one demographic is clearly skewed: level of education. The vast majority of the military personnel surveyed in both Egypt (65%) and Tunisia (59%) have at least a college degree, compared to only 34 and 32% of the general population, respectively.

[6]In Tunisia, "Soldier" refers to OR-1 to OR-4 (Private, Private First Class, Corporal, and Master Corporal). "NCO" refers to OR-5 to OR-9 (sergeants). In Egypt, by contrast, the only rank for soldiers is Private, while corporals, sergeants, and warrant officers are all classified as NCOs. In both countries, "Officer" refers to Second Lieutenants and up. "Rank Unknown" are those who refused to reveal their rank.

Table 5: Demographics by Rank, Tunisia

Demographic	**Total** (N=271)	**Soldier** (N=65)	**NCO** (N=67)	**Officer** (N=62)	**Rank Unknown** (N=77)
Branch					
Army	83	86	75	87	84
Navy	9	11	12	8	6
Air Force	8	3	13	5	9
Conscript	19	29	12	0	32
Active-Duty	54	49	61	63	49
Age (among active)					
% 18-24	19	25	17	10	24
% 25-29	24	28	32	18	18
Female	2.6	0	1.5	3.2	5.2
Hometown					
Greater Tunis	25	28	18	24	29
Sahel	18	22	12	21	18
Education					
Less than H.S.	10	22	6	3	9
High School	31	51	36	10	27
B.A. or higher	59	28	58	87	64

Table 6: Demographics by Rank, Egypt

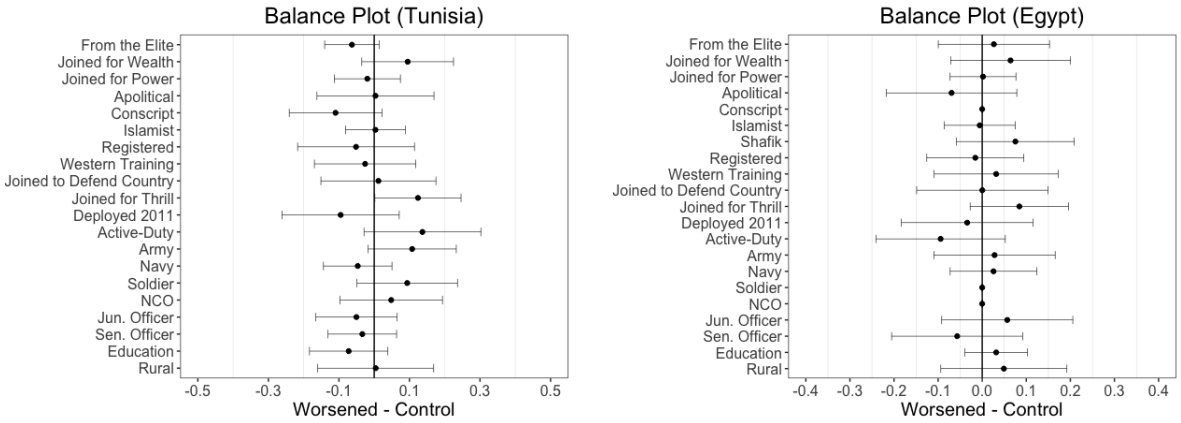
Demographic	**Total** (N=2171)	**Soldier** (N=654)	**NCO** (N=731)	**Officer** (N=283)	**Rank Unknown** (N=503)
Branch					
Army	80	83	83	69	80
Navy	7	5	6	12	7
Air Force	13	12	12	18	13
Conscript	56	70	63	0	56
Active-Duty	23	17	16	42	30
Age (among active)					
% 18-24	53	69	56	33	55
% 25-29	23	21	30	16	23
Female	1.3	1	0.8	2.5	1.8
Hometown					
Cairo	22	20	20	28	24
Alexandria	12	13	11	14	11
Education					
Less than H.S.	9	11	12	1	6
High School	26	22	34	15	27
B.A. or higher	65	67	53	83	68

In short, the survey sample likely under-represents rural and lesser-educated respondents. On the other hand, these demographic tables also help to validate the survey samples. Both the Egyptian and Tunisian militaries are overwhelmingly male, as in our survey.[7] The survey sample is also internally consistent, with soldiers being considerably younger and lesser educated than officers.

6 Balance Plots

Covariates were balanced in both Egypt and Tunisia's priming experiments.

Figure 6: Balance Plots (Priming Experiments)



[7] In Tunisia, women account for less than 7% of ministry of defense employees. See http://kapitalis.com/tunisie/2018/10/04/tunisie-les-femmes-au-ministere-de-la-defense-representent-moins-de-7/.

7 List Experiment

One concern with these results is that directly asking military personnel about their support for a coup is a sensitive, even taboo topic. Particularly in Egypt, military personnel who opposed the 2013 coup may not be at liberty to admit that openly. To mitigate this social desirability bias, our survey also implemented a list experiment in Egypt, which allowed respondents to more anonymously register their attitudes toward the coup.

A list experiment works by presenting respondents with a list of items, one of which is the coup, and asking them how many items they support, without them having to say *which* items they support. They simply have to say they support 2 or 3 of the items, without having to declare which ones. This allows respondents to anonymously declare their support or opposition to the coup.[8]

Our list experiment proceeded as follows. Prior to the direct question, the Egyptian respondents were asked: "Please tell me how many of the following items you support. We are not interested in which ones you support, just how many. No one will know which ones you choose." Respondents were then presented with the following items:

- I support reducing unemployment
- I support Egyptians having the right to burn the Egyptian flag
- I support Egypt's assistance toward the Palestinian cause
- I support Egypt receiving loans from the World Bank
- ***I support the military's removal of President Mohamed Morsi.***

The experimental component is to randomize how many of these items respondents see. Half of the sample, the treatment group, sees all five. The other half, the control group, only

[8]This anonymity is violated for people who say they support all or none of the items: the former reveals they support the coup, the latter that they don't. The trick in designing list experiments is therefore to develop a list of items some of which respondents will support and others not, so they do not reach either extreme. In our survey, roughly 13% said they didn't support any items, and 10% said they support all the items. Thus, the vast majority (77%) of the sample enjoyed anonymity in their opinions about the coup.

sees the first four (the "nonsensitive" items) – not the coup. The control group thus gives us a baseline of how many of the nonsensitive items people support. Comparing control v. treatment, we can therefore back out how many people in the treatment group supported the additional fifth item.

Of the four nonsensitive items, we expected respondents on average to support two – reducing unemployment and assisting Palestinians – and oppose two – burning the flag and World Bank loans. Indeed, in the control group, the average number of items supported was 1.82. Given that we had a large sample (∼1800 Egyptians) and they were randomized into treatment and control, we can assume that in the treatment group as well, respondents will on average support 1.82 of the first four items.

But the treatment group also sees the additional fifth item: the coup. If everyone in the treatment group supported the coup, then we would expect the average items supported to be 2.8: 1.8 from the nonsensitive items, plus the coup. And if everyone in the treatment group opposed the coup, we would expect the average items supported to remain 1.8 – just the ones from the nonsensitive list.

In our experiment, the average number of items supported in the treatment group was 2.4. Doing the math, that suggests that roughly 58% of the Egyptian military personnel surveyed supported the coup. Subsetting to officers, the list experiment suggests that about 63% supported the coup. These figures are slightly lower than the direct question about the coup, where 64% of respondents and 82% of officers supported the coup. This suggests that there may have been a (small) degree of social desirability bias in the direct question.

Did that bias affect the results, in terms of what factors shaped support for the coup? The data suggest no. Table 7 replicates the two Egypt models from Table 12.3, now using the list experiment measure of coup support rather than the direct question.

As can be seen, the military's corporate interests continue to predict support for the coup in the list experiment. Military personnel who agreed that Morsi encroached on their interests were significantly more supportive of the coup. Likewise, those who believed Morsi

tried to Brotherhoodize the military were also significantly more supportive of the coup. In short, the core results are robust to employing a list experiment: they do not appear to be driven by social desirability bias.

Table 7: Support for 2013 Coup in Egypt (List Experiment)

	Dependent Variable: Support for 2013 Coup	
	(1)	(2)
Morsi encroached	0.80** (0.32)	0.55 (0.44)
Morsi Brotherhoodized		0.82*** (0.30)
Elite Officer	-0.67* (0.39)	-1.09** (0.44)
Joined for Wealth	0.15 (0.18)	0.04 (0.23)
Joined for Power	-0.28 (0.28)	-0.10 (0.33)
Apolitical	-0.19 (0.12)	-0.03 (0.16)
Covariates		
Conscript	-0.31** (0.16)	-0.31 (0.20)
Islamist	-0.32 (0.22)	-0.14 (0.28)
Shafik	0.38** (0.15)	0.11 (0.19)
Registered to Vote	-0.16 (0.18)	0.07 (0.22)
Western Training	-0.03 (0.24)	0.32 (0.29)
Joined to Defend Country	0.12 (0.15)	0.18 (0.19)
Joined for Thrill	0.34 (0.21)	0.13 (0.26)
Deployed 2011	0.40** (0.16)	0.47** (0.20)
Active-Duty	-0.01 (0.16)	0.17 (0.20)
Army	0.01 (0.19)	0.05 (0.25)
Navy	0.25 (0.32)	-0.25 (0.39)
Soldier	0.21 (0.18)	0.25 (0.22)
NCO	-0.04 (0.17)	0.08 (0.22)
Jun. Officer	0.10 (0.42)	0.53 (0.45)
Sen. Officer	0.58 (0.42)	0.56 (0.48)
Education	-0.07 (0.26)	0.09 (0.31)
Rural	-0.22* (0.13)	-0.19 (0.16)
Constant	0.35 (0.41)	-0.56 (0.52)
Observations	1,931	1,197

*Note: *p<0.1; **p<0.05; ***p<0.01*
List experiment analyzed through the ictreg function in R.

8 Questionnaire

Relevant survey questions include:

1. What is your age?
2. What is your nationality?
3. In which governorate did you grow up?
4. What is your level of education?
    - Less than high school, high school graduate, Bachelor's degree, Graduate degree
5. How often do you pray?
    - Once a week, 2-3 times a week, at least once a day, five times a day
6. Do you have military experience? Y/N
7. How would you describe your military experience? Active-duty/Retired
8. Why did you decide to join the military? Please select all that apply.
    - Conscription (no choice)
    - To make a living
    - The military pays more than the private sector
    - The military is a form of upward mobility
    - A sense of duty to defend the country
    - I sought adventure and the thrill of battle
    - To secure a position in government afterwards
    - To secure a position in a military-affiliated company afterwards
    - Military service brings honor and greater social status

- I have family or friends who have served in the military
- The military provides a sense of community, belonging, and brotherhood

9. What was your specialty in the armed forces? [Check all that apply]

   - Army, Navy, Air Force, Military Security, Joint services

10. What was the highest rank you reached in the armed forces? _____

11. Where did you perform your basic training?

    - My country
    - Other country: _____

12. In which countries did you receive additional training? [Check all that apply]

    - The United States
    - The United Kingdom
    - France
    - Germany
    - Italy
    - Greece
    - Turkey
    - Other: _____
    - No foreign training

13. How would you describe the socioeconomic class of military officers? Lower, Lower-middle, Middle, Upper-middle, Upper

14. Please indicate your level of support for the following individuals on a 1-5 scale, where 1 indicates the lowest level of support and 5 indicates the highest level of support.

(a) Mohamed Morsi [Egypt]

(b) Rached Ghannouchi [Tunisia]

15. (Egypt) Who did you vote for in the first round of the 2012 presidential elections?

16. (Tunisia) If elections were held tomorrow, who would you vote for?

17. (Egypt) The statements below represent opinions we have heard regarding the military's relationship with President Hosni Mubarak. Please tell me the extent to which you agree or disagree with these statements.

    (a) The military was neglected by President Hosni Mubarak, in terms of budget, weapons, and salaries.

    (b) President Hosni Mubarak favored the Central Security Forces and police over the military

    (c) Gamal Mubarak represented a threat to the military's economic interests.

18. (Tunisia) The statements below represent opinions we have heard regarding the military's relationship with President Zine El Abidine Ben Ali. Please tell me the extent to which you agree or disagree with these statements.

    (a) The military was neglected by President Ben Ali in terms of budget, weapons, and salaries.

    (b) President Ben Ali favored the police and national guard over the military.

    (c) President Ben Ali favored officers hailing from the Sahel in promotions, especially to the rank of General.

19. Were you deployed during the 2011 uprising?

    - Yes, to protect vital institutions
    - Yes, to deal with protesters

- No

20. If ordered by your superiors, would you have fired upon protesters to protect President [Mubarak/Ben Ali] during the 2011 uprising? (Yes/No)

21. (Egypt) Please tell me how many of the following items you support. We are not interested in which ones you support, just how many. No one will know which ones you choose.

    - I support reducing unemployment
    - I support Egyptians having the right to burn the Egyptian flag
    - I support the military's removal of President Mohamed Morsi (shown randomly to half)
    - I support Egypt's assistance toward the Palestinian cause
    - I support Egypt receiving loans from the World Bank

22. (Egypt) Did you support the military's intervention to remove President Mohamed Morsi on July 3, 2013?

23. (Egypt) The statements below represent opinions we have heard regarding the military's relationship with President Mohamed Morsi. Please tell me the extent to which you agree or disagree with these statements.

    (a) President Mohamed Morsi limited the military's prerogatives in the constitution.

    (b) The military disagreed with several national security decisions made by President Mohamed Morsi, especially regarding the Sinai, Syria, and Ethiopia.

    (c) President Mohamed Morsi denied the military important economic contracts, such as the Suez Canal Corridor Development Project.

    (d) President Morsi attempted to Brotherhood-ize the military.

24. (Tunisia) The statements below represent opinions we have heard regarding the military's relationship with the troika government. Please tell me the extent to which you agree or disagree with these statements.

    (a) "The troika government increased the military's input into national security decisions."

    (b) "The troika government increased the military's budget, weapons, and salaries."

    (c) "The troika government reduced the favoritism of officers from the coast in promotions."

25. Hypothetically, during the political crisis in 2013, would you have supported General Rachid Ammar in ousting the troika government? (Strongly support to strongly oppose).

26. What does it mean to be 'professional?' Please rank the following options.

    - Having technical expertise
    - Being apolitical
    - Placing the military's interests above one's own
    - Protecting national security
    - Following orders
    - Having meritocratic appointments
    - Other: _____

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