

Facing Displacement and a Global Pandemic: Evidence from a Fragile State

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This paper

We study the effects of the COVID-19 pandemic on the Libyan population and, in particular, on those internally displaced by the conflict

We combine

- unique data from a phone survey conducted in Libya in 2021
- geo-localized data on conflict and economic activity

Results:

- IDPs do not report higher incidence of COVID-19
- IDPs report larger negative economic and health impacts

Possible channels

- *Economic fragility*: IDPs have a weaker economic status which makes them more vulnerable to any negative economic shock
- *Access to health care*: IDPs are discriminated in access to health care

The Context

- Since the fall of the Gaddafi's regime in 2011, Libya has been experiencing political instability and violence
- Each phase of the conflict resulted in an increasing number of IDPs
 - 2011: the outbreak of conflict displaced half a million Libyan citizens (10% population),
 - 2014: the Second Libyan Civil War led to an even larger and more persistent wave of displacement [▶ graph](#)
- The COVID-19 pandemic exacerbated the socio-economic weaknesses caused by political instability that characterize the country and bringing an already fragile healthcare system to the brink of collapse

- Data on the Libyan population are extremely limited
- Latest household survey is the 2007 Household Budget Survey
- Official data collected only until the 2011 conflict
- After that, statistics on the Libyan economy have been largely unreliable
- Data sources on IDPs: IOM (aggregate data in IDPs movements since 2017) and REACH (survey of IDPs in 2021)

Libya 2021 High-Frequency Phone Survey - Social Protection

- First official household survey since 2011 conflict
- Conducted in Libya April-May 2021 (WFP, World Bank, and LBSC)
- We participated in the design of the survey (questions on migration history, displacement, and exposure to conflict)
- Phone-based data collection
- Phone numbers randomly selected from telecom companies' database
- Calls respondents in all 22 Mantikas in Libya [▶ map](#)
- Sample resembles population distribution by Mantika [▶ figure](#)
- We validate our sample using other surveys

Conflict events

- ACLED dataset. We geo-localised all conflict-related events occurred in Libya during the period 2018-2021

Economic activity

- To proxy for local economic activity, we use geo-localized information on night-lights (Visible Infrared Imaging Radiometer Suite (VIIRS))

Sample and descriptives

- Our sample includes 2,257 respondents.
- 30.6% are women
- 42.7% report having completed secondary education

- 9.5% report that someone in the hh had COVID-19 (last 12 months)

- 54.9% of the hh experienced lack of food (last 12 months)
- 28.5% incurred in new debt in the last three months,
- 4% received transfers from government, NGOs or UN agencies

Sample and descriptives

- IDPs in our sample is 7%
- IDPs do not differ (from non-displaced) for gender, age, and education
- IDPs' socioeconomic status is weak
 - lower income,
 - more lack of food
 - more likely to borrowing money
 - larger probability of having received income support.
- IDPs do not report a significantly higher incidence of COVID-19
- Differences as for economic and health impact of the pandemic
 - negative economic impact: 24.7% (population) vs 40.2% (IDPs)
 - negative health impact: 14.5% (population) vs 23.3% (IDPs)
- Localities hosting IDPs
 - do not have lower economic activity
 - are significantly less exposed to conflict

Empirical Strategy

$$Y_{ibm} = \alpha + \beta \text{DISPLACED}_i + \delta \mathbf{X}_i + \mu \text{Nightlight}_b + \gamma \text{Conflict Events}_b + \theta_m + \varepsilon_i$$

- Y_{ibm} : individual-level outcome (e.g. contracted COVID-19, reported impact of COVID-19 economic and health conditions, etc.)
- DISPLACED_i : dummy variable which takes value 1 if the individual is an internally displaced person and 0 otherwise.
- \mathbf{X}_i of individual characteristics of the respondent
- Nightlight_b proxies for economic activity (night lights over last 12 months in 20 km radius of the centroid of the *Baladiya* of residence)
- Conflict Events_b proxies for conflict intensity (same as for nightlights)
- θ_m : *Mantika* (regional) fixed effects

- IDPs are not more likely to get infected by COVID-19 [▶ table](#)

- IDPs report larger negative impacts from the pandemic [▶ table](#)
 - economic impacts
 - health impacts

Our results (so far):

- IDPs are not more likely to get infected by COVID-19
- IDPs report larger negative economic and health impacts from pandemic

We explore two potential explanations for these findings:

- Economic fragility
- Access to health care

Mechanism (1): Economic Fragility

COVID-19 and the Libyan economy

- Libyan economy negatively affected by the pandemic (price increase, economic slowdown, etc.)
- IDPs have a weaker economic status than non-displaced [▶ table](#)
 - lower monthly income
 - higher probability lack of food

Our results show that

- IDPs are significantly more likely to be forced to borrow money in the *last three months* to cope with the economic difficulties [▶ table](#)

IDPs face harsher consequences from the pandemic because - even if they are not more likely to get COVID-19 - they are more economically fragile.

Mechanism (2): Access to Health Care

Our results (so far):

- IDPs are not more likely to get infected by COVID-19
- IDPs report larger negative health impacts

Suggestive evidence that IDPs less likely to seek care due to [table](#)

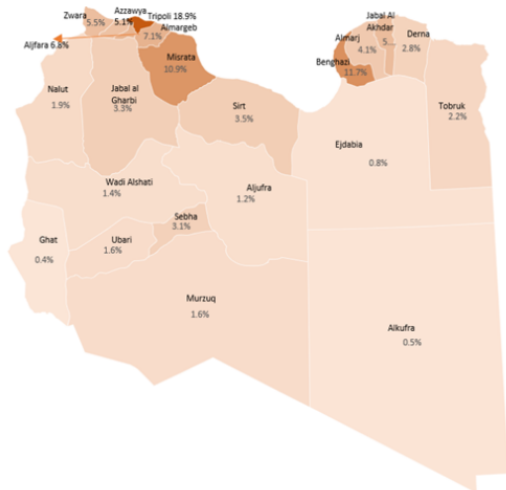
- discrimination against them
- financial constraints

The reduced ability to access health care increases the IDPs' chances of developing lasting health damages, contributing to explain the reported larger negative health effect from the pandemic

Conclusions

- Larger negative effects of the pandemic on IDPs are not related to a higher probability of contagion but to their economic fragility and the fact that they are discriminated in the access to health care
- Policy interventions in similar settings may need to focus more on preventing damage (e.g. through vaccination campaigns and income support schemes) rather than on containing the spread of the disease among marginalized population groups

Distribution of interviewed individuals in Libya



Survey stratification by Mantika [▶ back](#)

	Mantika	Population	Population proportion	Proportion phone numbers (sampling)	Sampled data	Proportion sampled data
1	Tobruk	202,064	3%	3%	50	2%
2	Derna	206,809	3%	3%	63	3%
3	Al Jabal Al Gharbi	367,461	5%	4%	75	3%
4	Al Marj	162,266	2%	4%	92	4%
5	Benghazi	849,66	12%	12%	263	12%
6	Ejdabia	212,363	3%	3%	18	1%
7	Alkufra	56,727	1%	1%	11	0%
8	Sirt	151,33	2%	2%	78	3%
9	Aljufra	59,875	1%	1%	28	1%
10	Misrata	676,706	10%	10%	247	11%
11	Almargeb	536,255	8%	8%	160	7%
12	Tripoli	1,220,712	18%	19%	426	19%
13	Aljfara	551,111	8%	8%	154	7%
14	Azzawya	365,11	5%	5%	114	5%
15	Zwara	360,769	5%	5%	125	6%
16	Al Jabal Al Akhdhar	242,804	4%	5%	132	6%
17	Nalut	109,484	2%	2%	42	2%
18	Sebha	168,249	2%	2%	69	3%
19	Wadi Al Shatii	95,563	1%	1%	31	1%
20	Ubari	92,444	1%	1%	35	2%
21	Maszak	94,609	0%	1%	35	2%
22	Ghat	28,346	0%	0%	9	0%
	Total	6,810,717	100%	100%	2,257	100%

Source: Libya 2021 High-Frequency Phone Survey – Social Protection (HFS-SP)

Displacement Status, COVID-19 and Other Diseases in the Household

Dependent Variable:	Over the last 12 months, someone in the household experienced					
	COVID-19			Chronic disease	Infectious disease (no COVID-19)	Mental disease
	(1)	(2)	(3)	(4)	(5)	(6)
Displaced	0.0001 (0.0249)	0.0094 (0.0248)	0.0103 (0.0248)	0.0973** (0.0353)	0.0168 (0.0181)	0.0135 (0.0142)
Nightlights per km ²			-0.0132 (0.0295)	0.0449 (0.0283)	0.0069 (0.0103)	-0.0260 (0.0231)
Number of conflict events in Baladiya			-0.0124 (0.0124)	0.0054 (0.0161)	-0.0009 (0.0085)	0.0074 (0.0074)
Individual and HH controls	No	Yes	Yes	Yes	Yes	Yes
Mantika of residence FE	Yes	Yes	Yes	Yes	Yes	Yes
Dependent Variable: Average Value	0.0943	0.0943	0.0943	0.1688	0.0274	0.0168
R ²	0.0194	0.0309	0.0320	0.0872	0.0259	0.0225
Number of observations	2257	2257	2257	2257	2257	2257

Note: Estimated coefficients are reported along with robust standard errors (in parentheses). *, **, *** indicate statistical significance at the 10, 5 and 1 percent level. "Displaced" is a dummy variable. It takes one if the respondent answered yes to the question "Has your household been displaced from your municipality?" and it answered no to the question "Have you returned to your community of origin?". It takes zero otherwise. The variables "Number of conflict events in Baladiya" and "Nightlights per km²" register respectively the average number of conflict events and the value of night lights observed in a distance radius of 20 km from the centroid of the Baladiya of residence of the respondent in the 12 months before the interview took place, and they are expressed in logs. "Individual controls" include: respondent's gender, age, age squared, whether is the household head or not, and whether he/she has a higher education or not. "HH controls" include: number of members in the household of the respondent, share of children under 5 years, share of adults over 60 years, and whether the house is rented or not.

Displacement Status and (Perceived) Impact of of COVID-19

Dependent Variable	Because of COVID-19 pandemic, you had					
	Economic negative impact			Health negative impact		
	(1)	(2)	(3)	(4)	(5)	(6)
Displaced	0.1502*** (0.0412)	0.1336** (0.0408)	0.1528*** (0.0434)	0.0811** (0.0348)	0.0785** (0.0348)	0.0833** (0.0361)
Someone in the hh had COVID-19			-0.0374 (0.0313)			0.1886*** (0.0339)
Displaced*Someone in hh had COVID-19			-0.1840 (0.1219)			-0.0653 (0.1305)
Nightlights per km ²		-0.0769** (0.0380)	-0.0775** (0.0380)		0.0058 (0.0316)	0.0083 (0.0295)
Number of conflict events in Baladiya		0.0284* (0.0167)	0.0281* (0.0167)		-0.0226 (0.0140)	-0.0022 (0.0139)
Individual and HH controls	No	Yes	Yes	No	Yes	Yes
Mantika of residence FE	Yes	Yes	Yes	Yes	Yes	Yes
Dependent Variable: Average Value	0.2472	0.2472	0.2472	0.1457	0.1457	0.1457
R ²	0.0283	0.0429	0.0451	0.0241	0.0351	0.0578
Number of observations	2257	2257	2257	2257	2257	2257

Note: Estimated coefficients are reported along with robust standard errors (in parentheses). *, **, *** indicate statistical significance at the 10, 5 and 1 percent level. "Someone in the hh had COVID 19" is a dummy variable. It takes one if the respondent answered yes to the question "Did you or anyone in your household experienced COVID 19 since March 2020?", and zero otherwise.

Displacement Status, Income, and Food Insecurity

Dependent Variable	(Log) monthly income			Lack of food		
	(1)	(2)	(3)	(4)	(5)	(6)
Displaced	-0.2160** (0.0930)	-0.1914** (0.0946)	-0.1920** (0.0946)	0.1508*** (0.0389)	0.1311** (0.0390)	0.1311** (0.0390)
Works in the public sector			0.1878** (0.0597)			0.0132 (0.0495)
Nightlights per km ²		-0.0212 (0.0658)	-0.0258 (0.0651)		-0.0499 (0.0387)	-0.0497 (0.0387)
Number of conflict events in Baladiya		0.0443 (0.0415)	0.0447 (0.0416)		0.0219 (0.0193)	0.0219 (0.0193)
Individual and HH controls	No	Yes	Yes	No	Yes	Yes
Mantika of residence FE	Yes	Yes	Yes	Yes	Yes	Yes
Dependent Variable: Average Value	6.7263	6.7263	6.7263	0.5494	0.5494	0.5494
R ²	0.0122	0.0501	0.0511	0.0211	0.0469	0.0470
Number of observations	2257	2257	2257	2257	2257	2257

Note: Estimated coefficients are reported along with robust standard errors (in parentheses). *, **, *** indicate statistical significance at the 10, 5 and 1 percent level. The variable "Income" registers the respondent's monthly income from any source. Lack of food is a dummy variable. It takes one if the respondent declared that "someone in the household is currently engaging in any following behaviors due to a lack of food or have engaged in any of these behaviors within the last 12 months before the interview, but he/she cannot continue to do it: Spent savings; Reduced non-food expenditures; Borrowed money; Sold productive assets; Took an additional job; Reduced Health Expenditure; Begged; Engaged in illegal work; Sold house or land". It takes zero otherwise. "Works in the public sector" is a dummy variable. It takes one if the respondent indicated the option "Public Administration and Defence; Compulsory Social Security" when answering to the question "What is the sector you currently work in?". It takes zero otherwise. All other variables are defined as in Table 1.

Displacement Status and New Debt Accumulation

Dependent Variable	Incurred in a new debt in the last three months		
	(1)	(2)	(3)
Displaced	0.1136** (0.0400)	0.1037** (0.0399)	0.1035** (0.0399)
(Log) monthly income		-0.0519*** (0.0085)	-0.0520*** (0.0086)
Someone in the household experienced COVID 19			0.0107 (0.0324)
Nightlights per km ²	-0.0814** (0.0373)	-0.0825** (0.0369)	-0.0824** (0.0370)
Number of conflict events in Baladiya	0.0134 (0.0168)	0.0158 (0.0167)	0.0158 (0.0167)
Individual and HH controls	Yes	Yes	Yes
Mantika of residence FE	Yes	Yes	Yes
Dependent Variable: Average Value	0.2849	0.2849	0.2849
R ²	0.0640	0.0816	0.0817
Number of observations	2257	2257	2257

Note: Estimated coefficients are reported along with robust standard errors (in parentheses). *, **, *** indicate statistical significance at the 10, 5 and 1 percent level.

Displacement Status, Health Care, and Discrimination

	Seek care		
	(1)	(2)	(3)
Displaced	-0.0144 (0.0579)	-0.0221 (0.0567)	0.0835 (0.0524)
Displaced * % IDPs in the Mantika denied care for status			-0.2119*** (0.0396)
Nightlights per km ²		-0.1183** (0.0437)	-0.1257** (0.0442)
Number of conflict events in Baladiya		0.0234 (0.0278)	0.0226 (0.0283)
Individual and HH controls	No	Yes	Yes
Disease Type	No	Yes	Yes
Mantika of residence FE	Yes	Yes	Yes
Dependent Variable: Average Value	0.7211	0.7211	0.7211
R ²	0.0236	0.0830	0.1121
Number of observations	796	796	776

Note: Estimated coefficients are reported along with robust standard errors (in parentheses). *, **, *** indicate statistical significance at the 10, 5 and 1 percent level. “% IDPs denied care for status” is equal to the number of interviewed IDPs (other than the respondent) who did not received assistance in the Mantika because of their legal status, over the number of interviewed IDPs in the same Mantika.