#### **Return Migration and Social Mobility in MENA: Evidence from Labor Market Panel Surveys**

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## Motivation

- Inequality of outcomes appears to be small in MENA
- However, inequality across demographic groups exists, and grows across the region. It causes intergenerational transmission of inequality, poverty traps for entire social groups, polarization, social tension and political instability
- Inequality (& depravity) of opportunity appears high.
- The role of migration is at the junction of these inequalities.
- Migration across MENA countries and outside is high, so its contribution to different dimensions of inequality should be better understood.

## Our study in a nutshell

- Use large harmonized surveys to study individuals' migration experiences, their backgrounds, and their economic outcomes at multiple points in time
- Identify the role of migration in social mobility, both over one's lifetime and across generations.
- Using a difference-in-difference approach, estimate contribution of migration to outcomes
- At the macro level, identify the impact of migration on various dimensions of inequality.

#### • Labor market panel surveys

Survey			25-55 vear-old	Return migrants, 25-	Mean pop.
wave	Source & documentation	Hhds	men	55yo men (%)	sampling weight
EG98 LMPS	OAMDI 2017; Assaad & Barsoum (2000)	4,816	4,048	379 (9.62)	2,432.09
EG06 LMPS	; Barsoum (2007)	8,351	6,906	426 (7.13)	1,807.98
EG12 LMPS	; Assaad & Krafft (2013)	12,060	9,033	1,221 (13.26)	1,606.38
JO10 LMPS	; Jordan (2010), Assaad (2012)	5,102	4,314	782 (23.86)	236.18
JO16 LMPS	; Krafft (2017)	6,803	4,841	149 (4.07)	254.55
TU14 LMPS	; Assaad et al. (2016)	4,521	2,459	94 (3.36)	601.44

- Previous, pre-previous, and 8-year prior location of residence abroad
- Migration module asking respondents about current migrants among HH members: limited info on background & current status of migrants
- Current wage earnings, HH assets, employment status, residence status
- Employment status in previous/pre-previous/8-yrs prior job, father's employment status
- Across waves, match respondents (& other HH members) to find previous earnings, and more details on migration and job history

#### Methods

- Identify return migrants, current migrants, and non-migrants
- Impute economic outcomes in real terms at various points in time, and between generations
- Estimate transitions in economic status over time, and between generations
- Link transitions to migration history and demographics
- Quantify degree of social & intergenerational mobility
- Estimate earnings/wealth/other-outcome dispersion among return migrants, and non-migrants

### Methods (1): Identify migrants

- Return migrants: Individuals changing their location of residence, from abroad to their (i) current domestic, (ii) previous or (iii) beforeprevious location. Individuals who spent more than 6 months working abroad.
- Current migrants: HH members 1-6 currently abroad
- Limit sample to men 25-55 years of age, to ensure homogeneity, and comparability of economic outcomes across points in time

### Methods (2): Imputing economic outcomes

- Individual wage earnings available only for respondents, for current position
- For past points in time, for fathers', and for current migrants (before leaving country), impute using 2-digit occupation group (01-99) of their main job.
- Current household wealth, and urban status at birth and currently are other usable outcomes.

#### Methods (2a): Wealth index

- One-dimensional index of wealth based on both productive and nonproductive household assets
- First component in the principal component analysis, where asset ownership is standardized by the mean and standard deviation across households, with weights ( $a_p$ ) selected to maximize sample variance of the index subject to  $\Sigma_p a_p^2 = 1$  (Filmer and Pritchett 2001; McKenzie 2005):

$$w = \sum_{p} a_{p} \left( \frac{x_{p} - \overline{x_{p}}}{stdev(x_{p})} \right)$$

 Highest weights assigned to assets that vary most across households, thus informing on maximum discrimination in asset ownership between households

### Methods (3): Economic transitions, mobility index

- Because earnings are estimated only imprecisely, and because wealth is ordinal, focus on transition of relative outcomes: outcome quantiles
- Because of modest sample sizes for migrants, and limitations on the use of occupation-group mean incomes: use quintiles
- Tabulate joint densities of (non)migrants on the distribution of outcome quintiles at two alternative points in time
- Shorrocks mobility measure:  $\overset{\wedge}{M}(P) = \frac{n trace(P)}{n 1}$

#### Methods (4): Dispersion of outcomes, by migrant status

- Compute inequality measures for earnings and wealth, to quantify the migrant vs. non-migrant gaps.
- Compute comparable measures of dispersion of outcomes in each group, accounting for (i) their different sample sizes, (ii) the zero dispersion of earnings in occupation groups, and (iii) ordinality of the wealth index.

### Methods (5): Determinants of earnings transitions

- Take the difference-in-difference approach to explaining transitions in outcomes (i.e., earnings, employment status, residence status) as a function of migration experience, starting positions, and individual & HH characteristics.
- To account for endogenous decisions to migrate (& return migrate), estimate a 2-stage model of

(i) probability to (return) migrate as a function of exogenous instruments, and

(ii) transitions in economic outcomes as a function of predicted & (actualpredicted) migration experience.

#### Results: Return migration trends, most recent migration spell

	Egypt 1	L998	Egypt 20	06	Egypt	2012	Jorda	n 2010	Jordan	2016	Tunisia 2014	
1	Iraq?	40.50	Iraq	34.00	Saudi A.	28.72	Egypt	21.23	Syria	21.66	Italy	35.68
2	Saudi A?	28.87	Saudi A.	28.30	Libya	24.94	Kuwait	19.97	Egypt	19.65	Libya	32.80
3	Jordan?	9.71	Jordan	14.92	Iraq	14.55	Saudi A.	15.48	Saudi A.	13.28	France	17.79
4	Libya?	8.29	Libya	12.73	Jordan	13.48	Palestine	10.18	Kuwait	12.14	USA	2.88
5	Kuwait?	6.77	Kuwait	3.65	UAE	6.60	Iraq	8.78	Iraq	4.36	Saudi A.	2.82
6	?	1.88	Lebanon	1.38	Kuwait	4.12	UAE	5.66	USA	3.31	Oman	1.84
7	?	1.72	UAE	1.24	Lebanon	1.31	USA	3.30	Palestine	3.21	Morocco	1.18
8	?	1.44	Yemen	0.90	Qatar	1.26	Syria	2.35	Bahrain	2.66	Belgium	0.77
9	?	0.37	Italy	0.67	Netherl.	1.13	Libya	1.74	Ukraine	2.34	Algeria	0.69
10	?	0.30	Greece	0.51	Italy	0.52	Oman	0.88	UAE	2.11	Other	
	98% of	f 354	98% of	:	97% o	f 1,224	90%	% of	85%	of	96% o	f 94
	migra	nts	352 migra	nts	migr	ants	646 m	igrants	221 mi	grants	migra	nts

## Who are the migrants?

Mean earnings in occupation groups from which first migrating HH members came (current migrants abroad)

	EG98	EG06	EG12	JO10	JO16	TU14
All occupation groups	221.82	303.67	331.34	777.10	809.70	538.96
Occupation groups from which first		125.28	323.27	837.05	1,011.99	531.77
migrants in HH left						

	Return migrant	EG98	EG06	EG12	JO10	JO16	TU14
Urban residence at birth	N	47.2	45.5	44.7		90.1	65.0
_	Y	48.0	32.6	34.0		93.7	62.4
Preparatory-school	Ν	7.9	11.3	18.0	34.1	1.0	14.5
educated	Y	4.7	11.9	15.2	14.7	3.6	16.8
High-school educated	Ν	33.7	41.8	38.8	36.2	27.1	16.4
_	Y	47.3	47.8	45.3	45.1	31.1	13.8
University educated	Ν	18.6	29.6	19.5	17.2	15.5	12.1
	Y	22.9	37.0	14.5	26.4	34.7	9.6
Post-graduate educated	Ν	1.2	0.5	1.3	2.7	2.2	1.3
	Y	1.2	0.0	0.9	8.2	7.7	1.6
Mean age (age age≥25)	Ν	38.2	37.4	36.7	36.3	37.8	39.9
	Y	40.5	43.1	42.3	39.1	44.1	42.1

# Results (1): Economic outcomes, non-migrant vs. return-migrant workers

	Return	EG98	EG06	EG12	JO10	JO16	TU14
	migrant						
Ind. wage earnings	Ν	348.29	353.22	362.22	951.19		599.44
	Y	264.45	444.03	351.16	981.27		753.38
Hhd. wage earnings per	Ν	70.93	104.75	108.60	228.68		193.56
capita	Y	72.76	104.44	100.59	332.51		233.13
Hhd. wage earnings	Ν	360.97	480.93	452.65	1,148.14		748.93
	Y	367.53	507.80	446.50	1,277.39		895.91
Hhd. wealth index per capita	Ν	12.30	9.67	7.57	8.44	13.33	10.54
	Y	13.81	9.54	7.34	12.20	14.24	11.49
Hhd. wealth index	Ν	53.32	41.60	29.77	40.10	57.77	40.05
	Y	56.57	43.75	29.64	43.49	62.62	41.15
Contract job	Ν	46.44%	44.56%	45.59%	70.46%	46.65%	50.22%
	Y	55.08%	52.18%	46.84%	60.34%	56.57%	41.37%
Formal job	N			45.33%	59.20%	60.45%	59.65%
	Y			44.11%	37.64%	68.08%	45.89%

#### Results (1): Mean earnings in all occupation-groups, among nonmigrant and return-migrant workers

	Return						
	migrant	EG98	EG06	EG12	JO10	JO16	TU14
Occupation-group mean	Ν	218.29	303.50	328.39	764.63	812.64	531.68
earnings, current	Y	237.42	312.20	337.85	784.43	894.31	573.42
Occupation-group mean	Ν	210.48	301.48	301.67	788.31	764.07	508.48
earnings, previous	Y	230.84	321.22	354.14	797.48	799.79	545.68
Occupation-group mean	Ν	195.23	292.02		761.47	768.32	
earnings, before previous	Y	224.17	307.08		782.47	731.41	
Occupation-group mean	Ν	211.40	317.53	317.36	779.13	794.18	521.85
earnings, 8 years prior	Y	232.62	336.64	316.89	802.00	851.04	546.74
Occupation-group mean	Ν	176.42	292.60	313.32	770.56		445.02
earnings, father's occupation	Y	180.73	288.83	296.92	780.92		420.28









#### Results: Transition matrices: current vs. 8-year prior earnings

		Non-migra	ants (Shorr	ocks=0.16)	Return migrants (Shorrocks=0.30) $5$ 1234.000.6082.420.0015.891.040.5879.120.008.860.690.470.5014.1669.661.639.730.438.7152.620.584.141					
Egypt	8-yr									
<b>98</b>	prior: 1	2	3	4	5	1	2	3	4	5
Current:	95.94	1.72	1.73	0.00	0.60	82.42	0.00	15.89	1.04	0.64
1	83.48	1.97	1.49	0.00	0.58	79.12	0.00	8.86	0.69	0.31
n	9.67	84.05	4.30	1.47	0.50	14.16	69.66	1.63	9.73	4.83
Z	7.56	86.47	3.33	1.63	0.43	8.71	52.62	0.58	4.14	1.50
2	3.38	2.18	89.97	1.08	3.40	5.97	2.72	82.21	9.10	0.00
3	3.23	2.74	85.21	1.46	3.58	9.91	5.55	79.29	10.45	0.00
4	4.95	5.06	4.51	82.45	3.03	1.57	8.39	11.70	74.11	4.23
4	3.82	5.13	3.44	89.66	2.57	2.25	14.76	9.73	73.44	3.06
5	1.89	2.77	6.54	5.11	83.68	0.00	9.60	1.15	7.11	82.14
5	1.91	3.68	6.52	7.26	92.84	0.00	27.07	1.54	11.29	95.14

·		Non-migra	ants (Shorr	ocks=0.32)		Return migrants (Shorrocks=0.65)					
Egypt	8-yr										
06	prior: 1	2	3	4	5	1	2	3	4	5	
Current:	67.59	2.19	12.08	9.22	8.93	53.66	0.00	22.85	7.37	16.13	
1	92.36	11.45	17.08	16.13	10.17	76.75	0.00	34.07	11.02	11.11	
n	2.56	64.57	3.00	8.28	21.59	18.58	13.32	9.71	13.52	44.87	
2	0.76	73.83	0.93	3.16	5.37	6.62	27.93	3.61	5.04	7.71	
2	4.06	1.89	71.42	5.96	16.67	5.90	5.53	39.47	17.77	31.33	
3	4.23	7.53	76.90	7.94	14.46	8.45	46.49	58.91	26.60	21.60	
4	2.32	1.55	4.59	77.56	13.98	2.10	5.54	2.70	52.26	37.40	
4	1.61	4.12	3.30	69.05	8.10	1.65	25.58	2.22	42.94	14.15	
5	1.29	0.99	2.14	3.60	91.99	5.65	0.00	0.99	11.89	81.48	
3	1.04	3.07	1.78	3.72	61.89	6.54	0.00	1.19	14.40	45.43	

-		Non-migra	ants (Shorro	ocks=0.23)		Return migrants (Shorrocks=0.35)					
Egypt	8-yr										
12	prior: 1	2	3	4	5	1	2	3	4	5	
Current:	89.07	4.31	3.54	1.63	1.46	75.68	3.49	18.50	1.76	0.58	
1	80.95	6.22	3.28	2.53	2.18	79.62	8.92	14.05	2.45	0.95	
2	5.81	82.88	5.76	2.19	3.36	10.00	69.10	14.78	2.31	3.81	
Z	3.28	74.31	3.32	2.12	3.13	3.26	54.77	3.47	1.00	1.94	
2	7.19	3.36	86.11	2.04	1.31	7.84	2.86	84.97	2.05	2.28	
3	6.81	5.04	83.24	3.30	2.04	7.74	6.87	60.59	2.69	3.53	
4	9.31	5.64	7.25	74.54	3.26	5.89	6.40	15.18	69.88	2.65	
4	6.24	6.00	4.96	85.51	3.59	5.18	13.70	9.65	81.51	3.65	
5	3.82	7.47	7.17	5.38	76.15	4.44	6.85	17.96	9.88	60.86	
5	2.71	8.43	5.20	6.54	89.05	4.19	15.74	12.24	12.36	89.93	

		Non-migra	nts (Shorr	ocks=0.79)			Return mig	rants (Sho	rrocks=0.8	3)
Jordan	8-yr									
10	prior: 1	2	3	4	5	1	2	3	4	5
Current:	45.28	17.51	14.01	4.01	19.19	45.95	6.77	6.39	14.56	26.33
1	33.18	13.73	18.89	8.69	16.27	33.38	13.20	8.07	22.59	24.06
n	21.78	38.71	10.82	6.73	21.96	23.82	17.50	21.76	6.51	30.42
2	25.31	48.13	23.12	23.15	29.53	10.36	20.44	16.46	6.05	16.66
2	22.57	25.87	23.40	5.84	22.31	27.21	14.10	30.74	10.93	17.02
3	19.96	24.48	38.05	15.28	22.83	31.51	43.85	61.87	27.04	24.80
4	21.02	13.59	7.22	37.81	20.37	35.47	7.00	7.19	31.39	18.95
4	8.08	5.59	5.10	42.97	9.06	14.94	7.92	5.27	28.24	10.04
5	26.04	14.60	15.62	6.47	37.27	20.89	11.56	10.21	16.02	41.31
5	13.47	8.08	14.85	9.90	22.31	9.82	14.59	8.34	16.08	24.43

		Non-migra	ants (Shorr	ocks=0.14)			Return mig	rants (Sho	rrocks=0.2	3)
Jordan	8-yr									
16	prior: 1	2	3	4	5	1	2	3	4	5
Current:	89.26	5.73	1.79	0.71	2.52	84.20	0.00	11.99	3.80	0.00
1	89.01	6.34	3.13	1.43	2.40	82.66	0.00	6.72	14.02	0.00
n	2.98	93.12	2.47	0.60	0.83	0.00	100.00	0.00	0.00	0.00
Ζ	2.45	84.82	3.57	1.00	0.65	0.00	100.00	0.00	0.00	0.00
2	3.69	2.84	87.80	2.96	2.71	0.00	0.00	97.62	1.28	1.11
3	2.14	1.82	89.30	3.47	1.50	0.00	0.00	85.98	7.39	0.73
4	1.73	5.31	0.40	90.92	1.65	18.95	0.00	0.00	38.30	42.75
4	0.82	2.79	0.33	87.49	0.75	6.81	0.00	0.00	51.67	6.53
5	4.91	3.36	1.83	2.86	87.03	4.24	0.00	5.16	2.89	87.72
3	5.59	4.24	3.67	6.60	94.70	10.53	0.00	7.31	26.92	92.74

		Non-migra	ants (Shorro	ocks=0.17)		Re	eturn migi	ants (Sho	orrocks=0.	46)
Tunisia	8-yr									
14	prior: 1	2	3	4	5	1	2	3	4	5
Current:	86.34	3.15	9.18	1.33	0.00	54.56	20.48	24.96	0.00	0.00
1	85.35	2.19	4.82	0.94	0.00	66.63	11.78	7.03	0.00	0.00
n	3.44	79.80	11.96	4.40	0.40	7.87	35.76	40.83	0.00	15.55
2	5.11	83.22	9.42	4.70	0.57	17.09	36.60	20.45	0.00	15.86
2	1.04	6.84	89.48	2.13	0.52	0.00	7.89	89.22	0.00	2.88
3	1.81	8.37	82.79	2.67	0.87	0.00	12.18	67.38	0.00	4.44
4	4.51	3.16	3.39	85.06	3.87	8.89	32.06	5.02	54.04	0.00
4	6.55	3.22	2.61	88.68	5.37	16.28	27.66	2.12	100.00	0.00
5	1.11	3.97	0.64	3.89	90.40	0.00	12.02	6.31	0.00	81.67
5	1.20	3.00	0.36	3.01	93.19	0.00	11.77	3.02	0.00	79.70

#### Results: Transition matrices: sons' vs. fathers' earnings

	Non-migrants (Shorrocks=0.81)						Return migrants (Shorrocks=0.82)					
Egypt	Father:											
<b>98</b>	1	2	3	4	5	1	2	3	4	5		
Son:	84.52	3.30	4.54	4.87	2.77	83.91	5.45	3.32	0.00	7.31		
1	39.76	3.89	6.63	5.75	4.07	27.26	5.56	3.36	0.00	6.31		
2	38.10	27.44	12.28	13.90	8.29	40.62	12.37	11.13	7.48	28.41		
	15.45	27.91	15.46	14.17	10.49	8.98	8.59	7.66	3.46	16.68		
2	37.14	17.91	18.78	13.02	13.16	42.38	12.85	21.05	13.08	10.64		
3	20.00	24.18	31.41	17.62	22.11	25.39	24.17	39.26	16.40	16.92		
4	21.73	19.85	13.52	29.80	15.10	16.15	17.82	6.72	48.66	10.65		
	9.61	22.03	18.57	33.14	20.84	8.17	28.32	10.59	51.51	14.31		
5	26.06	15.06	15.44	20.04	23.39	35.82	12.60	14.90	16.22	20.46		
	15.17	21.99	27.92	29.33	42.49	30.20	33.36	39.13	28.63	45.78		

		Non-migra	ants (Shorr	ocks=0.79)	Return migrants (Shorrocks=0.87)					
Egypt	Father:									
06	1	2	3	4	5	1	2	3	4	5
Son:	78.87	1.46	7.17	6.43	6.07	86.66	0.00	4.54	1.79	7.01
1	57.23	13.96	12.02	16.49	7.03	45.86	0.00	9.89	4.39	7.31
2	14.44	8.88	17.17	12.04	47.47	42.49	0.00	0.00	5.53	51.97
	2.66	21.52	7.31	7.85	13.99	5.66	0.00	0.00	3.41	13.64
2	27.80	2.75	32.55	11.62	25.29	43.35	1.04	22.89	12.85	19.86
3	15.87	20.61	42.93	23.46	23.06	23.93	14.26	51.99	32.87	21.62
4	30.94	3.33	18.23	18.46	29.05	40.17	0.60	11.22	13.38	34.62
	12.85	18.16	17.48	27.10	19.27	12.77	4.74	14.67	19.70	21.69
5	21.83	3.76	16.80	13.61	43.99	24.83	6.89	12.02	18.03	38.22
3	11.39	25.75	20.25	25.10	36.65	11.78	80.99	23.45	39.63	35.73

		Non-migra	ants (Shorr	ocks=0.83)	Return migrants (Shorrocks=0.89)					
Egypt	Father:									
12	1	2	3	4	5	1	2	3	4	5
Son:	75.10	5.89	9.17	5.95	3.89	78.82	4.62	6.32	4.23	6.01
1	35.11	12.85	16.93	9.92	5.61	32.49	16.38	14.25	9.56	12.62
2	41.06	19.04	12.57	11.95	15.39	60.68	13.04	3.54	9.26	13.48
	12.83	27.76	15.52	13.32	14.83	8.60	15.91	2.74	7.19	9.73
3	51.89	8.26	17.53	11.31	11.02	59.02	6.87	13.54	9.27	11.30
3	26.02	19.31	34.70	20.24	17.05	23.02	23.06	28.89	19.80	22.45
4	38.74	12.83	10.90	22.51	15.02	56.60	7.46	9.80	17.95	8.19
	14.00	21.63	15.54	29.02	16.74	19.48	22.10	18.44	33.83	14.36
5	28.05	9.21	10.22	17.95	34.56	42.08	6.73	16.75	13.88	20.57
	12.04	18.45	17.31	27.50	45.77	16.40	22.55	35.68	29.62	40.83

		Non-migra	ants (Shorr	ocks=0.14)	Return migrants (Shorrocks=0.09)						
Jordan	Father:										
10	1	2	3	4	5	1	2	3	4	5	
Son:	85.41	4.83	4.05	2.98	2.74	94.43	1.91	1.37	1.07	1.22	
1	88.34	3.13	3.32	5.36	3.41	91.82	3.01	0.81	1.66	1.53	
~	2.52	91.56	2.67	1.18	2.07	3.26	93.77	1.76	0.00	1.21	
2	4.06	92.32	3.40	3.32	4.01	1.90	88.88	0.63	0.00	0.91	
2	2.12	2.37	92.38	1.11	2.02	1.71	0.00	97.13	0.63	0.54	
3	2.60	1.82	89.74	2.36	2.98	2.73	0.00	94.77	1.59	1.11	
4	2.59	3.46	1.85	88.13	3.96	2.53	1.92	2.38	91.61	1.56	
	1.46	1.22	0.83	86.33	2.69	1.64	2.01	0.94	94.22	1.30	
5	4.26	2.90	4.13	1.83	86.88	2.23	4.37	5.45	1.86	86.10	
	3.54	1.51	2.72	2.64	86.90	1.91	6.09	2.86	2.54	95.16	

					1						
		Non-migra	ants (Shorr	ocks=0.79)	Return migrants (Shorrocks=0.83)						
Tunisia	Father:										
14	1	2	3	4	5	1	2	3	4	5	
Son:	72.78	7.48	7.85	5.70	6.19	56.94	36.93	0.00	6.14	0.00	
1	26.95	4.86	4.85	5.92	9.06	18.67	15.33	0.00	9.65	0.00	
•	30.00	29.00	20.73	13.29	6.97	15.40	46.40	32.17	6.03	0.00	
Z	19.22	32.57	22.15	23.90	17.64	8.44	32.18	33.06	15.83	0.00	
2	34.58	17.26	34.95	10.27	2.95	37.91	42.01	20.07	0.00	0.00	
3	24.29	21.26	40.94	20.23	8.17	31.58	44.28	31.35	0.00	0.00	
4	34.77	18.87	20.82	20.49	5.04	41.45	0.00	30.24	28.32	0.00	
	19.83	18.87	19.81	32.80	11.37	17.92	0.00	24.52	58.69	0.00	
5	19.59	25.81	14.82	12.33	27.45	50.82	14.10	12.82	7.17	15.10	
5	9.71	22.43	12.26	17.15	53.76	23.39	8.21	11.07	15.83	100.00	