

Skilled Migration and the Transfer of institutional norms

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Institutions and growth

- ▶ Very robust positive relationship between market-friendly institutions and growth (Acemoglu et al., 2005; Acemoglu and Robinson, 2006).
- ▶ North (1990) : institutions include formal rules, constraints and enforcement characteristics.
- ▶ Rodrik (2004, 2009): evolution of institutions across countries explain much variability of per capita income; tends to wipe out any effect of trade indicators. Some indicators (e.g. corruption) have positive effects on determinants of growth (e.g. FDI).
- ▶ Institutions : many different sides → different developments in institutional quality can exert different growth effects.

Are institutions fixed?

- ▶ Institutions are persistent → need time to change through institutional reforms (Rodrik, 2009).
- ▶ Nevertheless, emigration is likely to affect evolution of institutions through a set of channels.
- ▶ One direct channel : emigration of skilled workers (brain drain) lower human capital level. Since HK is a major determinant of institutions and institutional change (Glaeser et.al, 2004) → negative impact of skilled migration on evolution of institutions.
- ▶ Nevertheless, many different channels of influence, both for total emigration and skilled emigration.

Channels at stake in migration-institution nexus

- ▶ Exit and voice mechanisms (Hirschman, 1970) : exit : emigration to non corrupted countries; voice : protest again rent-seeking government. Both involve costs. Governments incur costs of repression on protesters but loses taxes on emigrants → incentive to change tax rate.
- ▶ Pressure from outside: diasporas can exert pressure on governments through various mechanisms: double voting rights or double nationality; Diasporas as interest groups can influence foreign policy of host country.
- ▶ Financial remittances: can finance education and investment. Can also finance some political parties.

Channels at stake in migration-institution nexus

- ▶ Diasporas influence the distribution of foreign aid. Evidence from colonial links (France : 78 pct to colonies) or evidence from large diasporas (Turkey-Germany)
- ▶ Transfer of norms by diasporas or migrants. Transfer of democratic norms through foreign education (Spilimbergo, 2009). Evidence of transfer of fertility norms (Beine, Docquier, Schiff, 2008).
- ▶ Expectation channel (McHale and Li, 2009): expectation of emigration might create incentives such as investment in education.

Channels and Skills

- ▶ Key issue: does the type of migration affect the institutional outcomes? Case for Government effectiveness.
- ▶ For some channels, skilled emigration expected to be different from unskilled migration. Examples.
- ▶ Exit and voice mechanisms are stronger for skilled migrants but pertains also to unskilled ones.
- ▶ Remittances ? Unclear since some argue that unskilled migrants remit more.
- ▶ Political pressure? More influence from skilled migrants but effect depends also on total size of diasporas. Negative correlation between total size and skill composition (Beine, Docquier, Ozden, 2011; Grogger and Hanson, 2011).

Channels and skills

Table: Expected channel by skill : case of govt effectiveness

	Skilled	Unskilled	Total
Human capital	-	?	-
Exit and Voice	?	-	?
Remittances	+	++	+
Political Pressure	++	+	+
Double voting	+	+	+
Foreign education	+	?	+
Expectation	+	-	+
Total direct effect	?	?	?
Institutional norms	++	+	+

Heterogeneity across channels

Table: Impact of emigration for various institutional dimensions

	Corruption	Gvt Effect	Pol Stab	Pol Open
Skilled migration	-	-	?	-
Unskilled migration	?	?	?	?
Expectation	?	+	?	+
Return migration	+	+	?	+
Political Pressure	+	?	?	+
Exit and Voice	+	+	?	+
Funding	?	?	-	+
Institutional norms	+	+	+	+
net effect	?	?	?	?

Contribution of this paper

- ▶ Revisit the institutions-migration nexus from an empirical point of view.
- ▶ In contrast to existing literature (Docquier et al. , 2009) we test on various dimensions of institutions (6 different measures).
- ▶ We test explicitly whether there is a difference between skilled and unskilled migration.
- ▶ We allow for 2 basic aggregate channels : channels related to emigration and transfer of institutional norms from abroad.
- ▶ For each channel, we compute the key variables by skill level.
- ▶ We pay attention to various econometric issues (endogeneity of institutions, correlation between measures).

Methodology

- ▶ $\Delta I_{ijt} = \alpha_j + \beta_j I_{ij,t-1} + \theta_j m_{i,t-1} + \gamma_j N_{ij,t-1} + \delta_j H_{ij,t-1} + \epsilon_{ijt}$.
- ▶ Key equation: explaining institutional change of type j through 4 variables : initial level (catching up process), emigration, norms transmitted by diaspora and human capital.
- ▶ We explain institutional change. 2 main reasons.
- ▶ (i) We wipe out time-varying factors explaining institution level (geographic, colonial links, ...).
- ▶ (ii) Endogeneity issues of key covariates such as emigration is highly reduced.

Data issues

Data : institutions

- ▶ Institutions : Kaufmann et al. (1999) : 6 indicators of institutions for 1994-2009 period. We compute change between 1994 and 2004 and relate that to key variables observed in 1990.
- ▶ 6 different measures of institutions : Voice and accountability, Rule of law, Political stability, Government effectiveness, Regulatory quality, Control of corruption.
- ▶ Increase in indicators = better quality.

Data : emigration

- ▶ We focus on importance of skill levels → we need data with education level of migrants → Docquier and Marfouk (2007) database (release 2.1.).
- ▶ 30 destination countries- 195 origin countries- 1990 and 2000.
- ▶ Skilled migrants: migrants with tertiary education level.
- ▶ We capture emigration variables by skill level and norms transmitted by diasporas.
- ▶ The migration variables help to define both the absorbed norm and the transmission channel.

Data : norms

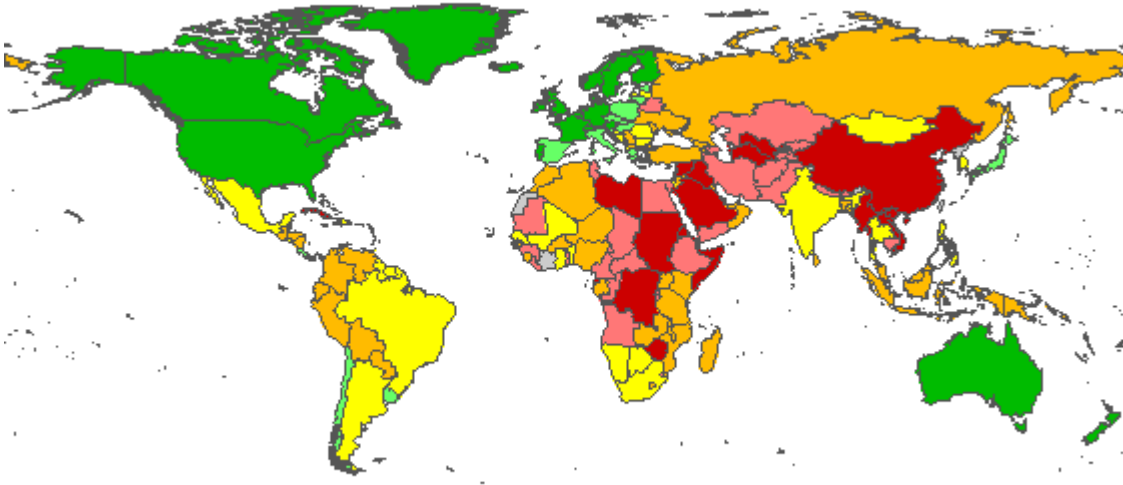
- ▶ Emigration rate by skill level s : $m_{it}^s = \frac{\sum_{k=1}^K M_{ik,t}^s}{LF_{it}^s}$
- ▶ Adopted norm by the migrants: $NA_{it}^s = \frac{\sum_{k=1}^K M_{ik,t}^s l_{k,t}}{M_{it}^s}$
- ▶ Transmitted norm: $N_{it}^s = \underbrace{m_{it}^s}_{\text{transmission}} \underbrace{NA_{it}^s}_{\text{absorbed}}$
- ▶ We report here results assuming that the absorbed norm and the transmission involve similar levels of education.

Norms in MENA countries

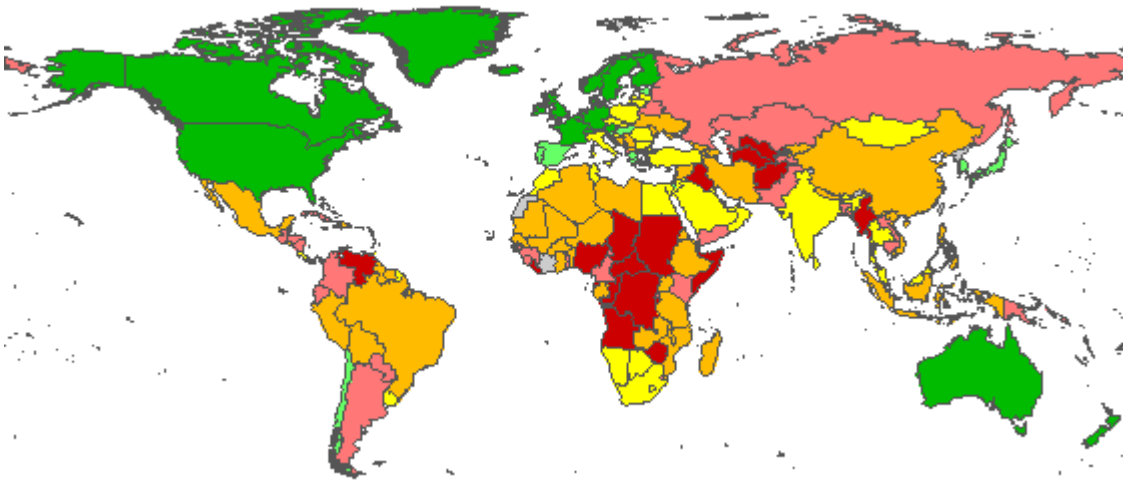
- ▶ Mena countries are heterogenous with respect to norms. Why?
- ▶ Destination of migrants is very different : Algeria, Morocco, Tunisia mainly to Europe (and North America for skilled)
- ▶ Yemen, Egypt, Jordan and Syria significant proportion to Gulf countries where institutional quality is lower than in Europe and North America.
- ▶ How does it affect the impact?

Figure 2

Voice and Accountability (2004)



Rule of Law (2004)



Source: World Bank

Results

Table 2: The impact of migration on the change in institutions (1990-2000)

OLS

	Voice and accountability	Political stability	Government effectiveness	Rule of law	Regulatory quality	Control of corruption
Total migration						
I_{t-1}	-0.121 (3.06) ***	0.498 (0.88)	-0.085 (2.65) ***	-1.600 (4.36) ***	-0.835 (57.80) ***	1.050 (1.11)
m_{t-1}	-1.092 (1.04)	-5.171 (3.17) ***	0.230 (0.27)	-5.563 (2.86) ***	-0.018 (0.46)	-1.358 (0.87)
N_{t-1}	1.003 (1.40)	29.382 (3.90) ***	0.192 (0.31)	35.825 (3.38) ***	0.259 (1.80) *	-0.215 (5.19) ***
H_{t-1}	0.232 (0.56)	5.024 (5.34) ***	0.184 (0.50)	7.454 (8.75) ***	0.094 (6.76) ***	1.840 (2.90) ***
Constant	-0.084 (1.41)	-1.211 (5.86) ***	-0.062 (1.22)	-0.762 (5.02) ***	0.118 (23.17) ***	-0.239 (2.88) ***
Observations	190	178	178	165	180	149
R-squared	0.07	0.24	0.09	0.49	0.99	0.16
Skilled migration						
I_{t-1}	-0.116 (3.25) ***	0.307 (0.52)	-0.094 (2.97) ***	-1.675 (4.63) ***	-0.837 (58.95) ***	-0.210 (5.24) ***
m_{t-1}	-4.188 (3.48) ***	-4.357 (1.77) *	-2.177 (1.60)	-3.145 (0.79)	0.058 (1.20)	-4.306 (2.32) *
N_{t-1}	1.094 (3.68) ***	12.794 (3.16) ***	0.782 (2.62) ***	13.377 (2.21) **	0.137 (2.50) **	0.912 (2.35) **
H_{t-1}	0.216 (0.53)	5.098 (5.32) ***	0.247 (0.67)	7.626 (8.83) ***	0.093 (6.56) ***	1.841 (2.95) ***
Constant	-0.082 (1.53)	-1.096 (5.17) ***	-0.079 (1.63)	-0.695 (4.61) ***	0.119 (24.73) ***	-0.229 (2.94) ***
Observations	190	178	178	165	180	149
R-squared	0.10	0.23	0.10	0.48	0.99	0.17

Robust t-statistics in parentheses

** significant at 5% level; *** significant at 1% level

Benchmark results

- ▶ OLS results by skill levels and for 6 institutional measures.
- ▶ Catching-up results : β coefficient in general negative and significant.
- ▶ Results confirm the importance of human capital in explaining evolution of institutions: significant for 4 out 6 institutional measures (Political stability, Rule of Law, Regulatory quality and control of corruption).
- ▶ What about impact of emigration?

Impact of emigration

- ▶ In general, much more explanatory power for skilled rather than unskilled or total migration.
- ▶ In general, direct impact of emigration is found to be detrimental: coefficient is negative on institutions.
- ▶ For skilled migration, direct effect is negative for 3 dimensions: Voice and accountability, political stability (same for unskilled migration), control of corruption.
- ▶ Possible channels at stake: direct effect on human capital (VandA) or voice and exit (exit of skilled people lowers possibility of voicing).
- ▶ Nevertheless, positive impact of institutional norms, especially for skilled diaspora abroad for *all* dimensions of institutions
- ▶ Possible interpretation: brain drain is detrimental in the short run , but positive in the long run.

Robustness check.

SURE

- ▶ Institutional dimensions are obviously correlated.
- ▶ Major political reforms, revolutions, government turnover or coup d'état affect all institutional dimensions at the same time.
- ▶ To account for that : SURE estimates (Zellner, 1971).
- ▶ Drawback : reduced sample as observations must be the same across all dependent variables.
- ▶ In general main OLS results are confirmed: more explanatory power for skilled migration; negative direct impact of emigration; positive impact through transfer of norms, especially from skilled diaspora.

Table 3: The impact of migration on the change in institutions (1990-2000)

	SURE					
	Voice and accountability	Political stability	Government effectiveness	Rule of law	Regulatory quality	Control of corruption
	Total migration					
I_{t-1}	-0.132 (2.45) **	-0.591 (0.75)	-0.213 (5.35) ***	-1.860 (3.34) ***	-0.849 (41.10) ***	-0.409 (7.28) ***
m_{t-1}	0.273 (0.10)	-6.444 (1.85) *	-1.032 (0.64)	-6.675 (1.69) *	0.015 (0.18)	-2.472 (0.82)
N_{t-1}	0.358 (0.22)	33.538 (2.49) **	1.283 (1.38)	41.432 (2.35) **	0.115 (0.48)	1.874 (1.21)
H_{t-1}	0.110 (0.19)	4.903 (5.02) ***	1.098 (2.41) **	7.523 (8.03) ***	0.095 (6.59) ***	3.444 (4.62) ***
Constant	-0.062 (0.74)	-0.965 (4.10) ***	-0.163 (2.50) *	-0.742 (4.11) ***	0.123 (0.48)	-0.409 (4.66) ***
Observations	149	149	149	149	149	149
R-squared	0.06	0.2	0.05	0.46	0.97	0.03
	Skilled migration					
I_{t-1}	-0.128 (2.35) **	-0.787 (1.04)	-0.208 (5.39) ***	-2.033 (3.61) ***	-0.848 (41.34) ***	-0.395 (7.31) ***
m_{t-1}	-7.330 (3.69) ***	-7.163 (1.75) *	-4.885 (2.27) **	-5.666 (1.14)	0.035 (0.42)	-4.725 (1.73) *
N_{t-1}	1.674 (3.99) ***	15.617 (3.24) ***	1.425 (3.88) ***	16.522 (2.51) **	0.135 (1.99) **	1.157 (2.39) **
H_{t-1}	0.064 (0.11)	5.076 (5.17) ***	1.083 (2.44) **	7.687 (8.35) ***	0.095 (6.43) ***	3.407 (4.58) ***
Constant	-0.068 (0.80)	-0.862 (4.03) ***	-0.155 (2.67) ***	-0.641 (3.64) ***	0.122 (18.45) ***	-0.384 (4.35) ***
Observations	149	149	149	149	149	149
R-squared	0.10	0.22	0.08	0.45	0.98	0.04

Bootstrap t-statistics in absolute terms in parentheses

* significant at 5% level; *** significant at 1% level

IV estimation

- ▶ One possible concern: reverse causality. Emigration might depend on change in institutions.
- ▶ 2 conditions: (1) institutions act as a push factor and (2) agents form correct expectations on the change in institutions.
- ▶ Endogeneity problem might be mitigated since change in institutions occur between 4 and 14 years after emigration.
- ▶ Endogeneity is dubious since institutional change driven by many factors → the case for correct or perfect expectations is low
- ▶ Nevertheless we test for that.

Exogeneity

- ▶ Test of exogeneity on the 6 institutional dimensions.
- ▶ We find statistical evidence of endogeneity for 4 measures : Political stability, Rule of Law, Regulatory Quality, Control of corruption.
- ▶ 4 (external) instruments (correlated with emigration, not with change in institutions) : country size, low income, tropical countries, legal system.
- ▶ Strong instruments but exclusion restriction is not fulfilled for skilled migration
- ▶ For total migration , results support negative direct impact and positive impact through the norms.

Table 6: The impact of migration on the change in institutions (1990-2000)
2SLS: Second Step

	Political stability	Rule of law	Regulatory quality	Control of corruption
Total migration				
I_{t-1}	1.357 (1.39) ***	-0.469 (0.83)	-0.819 (50.83) ***	-0.496 (2.87) ***
m_{t-1}	-39.005 (3.36) ***	-57.473 (2.22) **	-0.291 (2.06) **	-40.398 (1.15)
N_{t-1}	26.672 (3.71) ***	284.196 (2.56) **	1.224 (2.51) **	23.600 (1.27)
H_{t-1}	4.865 (4.22) ***	6.364 (5.35) ***	0.099 (6.55) ***	3.242 (2.94) ***
Constant	-1.929 (5.13) ***	-1.575 (5.67) ***	0.108 (16.39) ***	-0.756 (2.60) ***
Observations	166	154	167	140
Sargan-test	0.82	0.54	0.01	0.56
R-squared	0.77	0.43	0.98	0.18
Skilled migration				
	PS	RL	RQ	CO
I_{t-1}	0.312 (0.50)	-1.659 (3.99) ***	-0.839 (57.91) ***	-0.198 (4.68) ***
m_{t-1}	-9.546 (0.93)	10.366 (0.82)	0.324 (2.05) **	-2.126 (0.22)
N_{t-1}	2.981 (1.42)	-3.295 (0.20)	-0.132 (0.80)	0.539 (0.36)
H_{t-1}	5.309 (5.75) ***	7.702 (7.98) ***	0.094 (6.20) ***	1.893 (2.97) ***
Constant	-1.122 (5.17) ***	-0.693 (4.09) ***	0.121 (24.44) ***	-0.226 (2.76) ***
Observations	166	154	167	140
Sargan-test	0.01	0.00	0.01	0.003
R-squared	0.23	0.44	0.38	0.15

Robust t-statistics in parentheses, * significant at 10% level; ** significant at 5% level; *** significant at 1% level, F-test for testing for weak instruments (>10 means strong instruments); Sargan-test : p-value reported, null hypothesis = validity of exclusion restriction.

Developing countries

- ▶ Developing countries only.
- ▶ Robust for some dimensions : Voice and accountability and government effectiveness.
- ▶ We find some evidence of direct positive impact of emigration for political stability and rule of law.
- ▶ Some results might be affected by collinearity in norms: south-north migration dominates and OECD countries have broadly similar values for institutional quality.

Conclusions

- ▶ Theoretical literature on the impact of migration considers many different channels.
- ▶ Here we test for 2 main channels of migration (direct and transfer of norms), on 6 different measures of institutions.
- ▶ We look at the role of education.
- ▶ Results support in general important impact of skilled migration, negative direct impact and positive impact through institutional norms.
- ▶ Policy implication: where your brains go definitely matters !