Civil War, Forced Migration and Educational Attainment in Destination Areas: Evidence from Colombia

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Civil War, Forced Migration and Educational Attainment in Destination Areas

- This paper studies the effects of displacement on schooling decisions of non-migrant children, rather than the migrants themselves.

- The disproportionally large shares of younger children and young adults among the displaced populations may have a crowding effect on schools at destinations.

- If these migrations depress the wages and employment opportunities of low-skilled workers at destinations, then non-migrant students may decide to stay in school due to their relatively weak prospects in the labor market.

The Effects of Forced Migration on the Marginal Costs and Benefits of Education for Non-Migrant Children at Destinations

- IDPs often experience educational disruption at their place of origin, and upon arrival may lag behind other school aged children.

- Displaced children are given priority access to public schools and the conditional cash transfer program "Familias en Acción" in destination areas.

- At the same time, the influx of migrants can also increase the returns to education. Calderón and Ibáñez (2010) estimate that the arrival of displaced populations to cities is associated with a 2.1 percent decline in wages of low skilled workers.

Literature Review

- A number of papers have found evidence that migration crowds out native students from schools (Betts (1998) and (2000), Betts and Lofstorm (2000) and Hoxby (2000), and Betts and Fairlie (2003)).

- The conflict literature has concentrated on examining schooling choices in areas more severely affected by conflict (Barrera and Ibáñez (2004), Shemyakina (2006), Miguel and Roland (2006), Chen et al. (2007), Dueñas and Sánchez (2007), Akresh and de Walque (2008) and Akbulut-Yuksel (2008)).

Case study: IDPs in Colombia

- Massive migrations to cities prompted by civil war have raised the number of unskilled populations in host cities.

- Beyond the direct effects of gunfire, however, civil conflicts may also affect populations not directly in harm's way.

- As of the end of 2014, a record breaking 38 million people were forcibly displaced within thier own country by violence (UNCHR).

- The countries with the three largest internally displaced populations are Syria and Colombia.

- UNCHR estimates a total of 6 million IDPs in Colombia alone

Case study: IDPs in Colombia

- The case of Colombia offers a different type of instrument with which to study the effects of in-migrations on educational attainment of natives.
- Detailed data on the location and timing of civil violence and violence-related migration let us establish several important facts:
  1. Large migration flows in Colombia are tied directly to massacres of civilians in rural areas.
  2. The timing of violence in rural areas is not related to conditions in nearby urban labor markets.
  3. Workers fleeing rural violence generally relocate nearby, most often to their provincial capital.

Data

- Municipal data on violence and massacres collected by Universidad de los Andes
- Evaluation data from Familias en Acción collected between 2002-2006 for 122 municipalities
- Household survey collected between 2001-2006 for the 13 largest metropolitan areas

Empirical Specification

In order to identify the impact of the inflow of forced migrants on school enrollment of children, I use the following reduced form specification:

$$SE_{ict} = \beta_t + \beta_c + X_{ict}\delta + \gamma lnS_{ct} + \epsilon_{ict} \qquad (1)$$

Where

$$S_{ct} = \frac{\sum_{j=1998}^{t} M_{cj}}{SchoolCohort_{7-17ct}} \qquad (2)$$
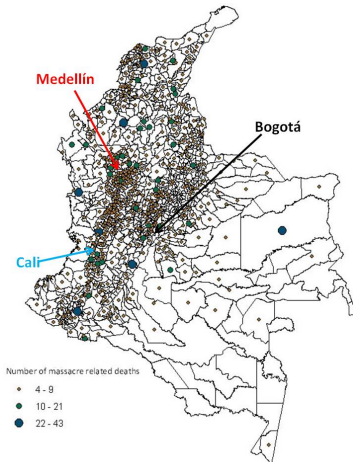
Empirical Specification

To provide a further safeguard against misspecification, I use and instrumental variables approach, where the instrument for S_{ct} is the cumulative number of massacres occurring in the same state. Algebraically, it is given by:

$$I_{ct} = f \left(\sum_{State_s} Massacres \right) \tag{3}$$

Background: Violence in Colombia

Figure 1: Massacres 1988-2008

Results FA Evaluation Data

- My results suggest that the arrival of larger cohorts of displaced children are particularly perverse for other displaced children that arrived earlier to these municipalities, with a significant but rather small crowding effect on non-migrant children.

- A 10 percent increase in the share of migrants in a given area reduces school enrollment by 1.5 percent for displaced children and by 0.42 percent for non-migrant children.

- Non-migrants appear to be less sensitive to the arrival of displaced children than displaced children themselves.

- The crowding effect will be larger for the younger non-migrant children relative to older non-migrant children, while it will be smaller for younger IDPs relative to older IDPs.

Results ECH Data for the 13 Largest Metropolitan Areas

- Information on school aged children and IDPS in school age is more reliable for large metropolitan areas, and thus the shares used are calculated using only school aged children.
- The results show that a 10 percent increase in the share of displaced children will reduce non-migrant enrollment by about 0.56 percent and IDPs school enrollment by about 0.82 percent.
- The magnitude of the effects is similar to that found in the FA evaluation survey, and is consistently larger for displaced children.
- However, the main difference is that in the 13 largest cities, the crowding effect will be larger for older children, with a 1.1 decline in enrollment rates for a 10 percent increase in the share of forced migrants.

Conclusion

- The arrival of school aged children into cities and large towns has contributed towards the decline in educational attainment of both IDPs and non-migrant students at these destinations.

- Larger cities are the most likely destination of displaced families and greater attention should be given on how to expand the supply of schools.

- While government programs appear to be targeting at risk populations, the efforts fall short in the light of the dynamics of civil war and the rapid increase of displaced populations arriving in more densely populated areas.

Lessons Learned

- Studying the impact of forced migration on host communities poses several challenges:

1. Those who move typically differ in observable and unobservable ways from those who stay
2. Even if migration is exogenous, destination decisions are endogenous

Lessons Learned

Non-experimental data

1. Some household surveys have comprehensive migration modules, that track IDPs and Refugees at destinations

2. A growing number of countries has geographical data on conflict and political violence, allowing using non experimental methods such as IV, and differences in differences as identification strategies.

Experimental data

1. Policy experiments (e.g. visa lotteries)

2. Research design experiments (the intervention itself is typically designed and implemented by the researcher)

THANK YOU
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Table: FA Regressions for School Enrollment of Children 7-17

	Non-Migrants 7-17		IDPs 7-17	
	OLS	IV	OLS	IV
FA Beneficiary	0.243***	0.250***	0.273***	0.264***
	(0.007)	(0.007)	(0.028)	(0.029)
Female	0.031***	0.030***	0.032	0.030
	(0.006)	(0.006)	(0.025)	(0.027)
Age	-0.028***	-0.028***	-0.037***	-0.038***
	(0.001)	(0.001)	(0.004)	(0.004)
Log Refugee Share	-0.007***	-0.043***	-0.041***	-0.152***
	(0.003)	(0.008)	(0.012)	(0.043)
No. Siblings	0.026***	0.026***	0.041***	0.048***
	(0.002)	(0.002)	(0.007)	(0.008)
No. Household Members	-0.034***	-0.034***	-0.026***	-0.025***
	(0.001)	(0.001)	(0.006)	(0.006)
No. Siblings Under 5	0.017***	0.018***	-0.002	-0.020
	(0.003)	(0.003)	(0.012)	(0.014)
Constant	0.996***	0.835***	0.902***	0.363
	(0.022)	(0.042)	(0.094)	(0.223)
N	13814	13814	879	879
F-Stat	145.137	143.819	13.448	12.362
R^2	0.208	0.197	0.274	0.204

Source: FA Evaluation Survey 2002-2005. Note: Each individual coefficient is statistically significant at the *10%, **5%, or ***1% level.

Table: FA Regressions for School Enrollment of Children Ages 7-12

	Non-Migrants 7-12		IDPs 7-12	
	OLS	IV	OLS	IV
FA Beneficiary	0.147***	0.155***	0.127***	0.120***
	(0.008)	(0.008)	(0.032)	(0.033)
Female	0.016**	0.017**	0.009	0.010
	(0.007)	(0.007)	(0.029)	(0.030)
Age	0.008***	0.009***	-0.002	-0.003
	(0.002)	(0.002)	(0.009)	(0.009)
Log Refugee Share	-0.006**	-0.049***	-0.050***	-0.121**
	(0.003)	(0.010)	(0.014)	(0.049)
No. Siblings	0.031***	0.031***	0.043***	0.049***
	(0.002)	(0.002)	(0.008)	(0.009)
No. Household Members	-0.043***	-0.044***	-0.030***	-0.030***
	(0.001)	(0.001)	(0.006)	(0.007)
No. Siblings Under 5	0.026***	0.028***	-0.004	-0.014
	(0.003)	(0.003)	(0.014)	(0.016)
Constant	0.777***	0.582***	0.648***	0.302
	(0.029)	(0.053)	(0.123)	(0.259)
N	8269	8269	534	534
F-stat	68.451	67.489	4.779	4.300
R^2	0.172	0.150	0.184	0.142

Source: FA Evaluation Survey 2002-2005. Note: Each individual coefficient is statistically significant at the *10%, **5%, or ***1% level.

Table: FA Regressions for School Enrollment of Children 13-17

	Non-Migrants 13-17		IDPs 13-17	
	OLS	IV	OLS	IV
FA Beneficiary	0.343***	0.346***	0.476***	0.466***
	(0.012)	(0.012)	(0.048)	(0.054)
Female	0.053***	0.052***	0.062	0.048
	(0.011)	(0.011)	(0.045)	(0.050)
Age	-0.083***	-0.083***	-0.079***	-0.073***
	(0.004)	(0.004)	(0.015)	(0.017)
Log Refugee Share	-0.008**	-0.022*	-0.022	-0.199***
	(0.004)	(0.013)	(0.021)	(0.077)
No. Siblings	0.014***	0.013***	0.036***	0.046***
	(0.003)	(0.003)	(0.012)	(0.014)
No. Household Members	-0.019***	-0.019***	-0.024**	-0.023*
	(0.002)	(0.002)	(0.011)	(0.012)
No. Siblings Under 5	0.004	0.004	0.009	-0.027
	(0.005)	(0.005)	(0.023)	(0.029)
Constant	1.656***	1.591***	1.485***	0.543
	(0.066)	(0.089)	(0.277)	(0.495)
N	5545	5545	345	345
F-Stat	80.694	80.494	9.300	7.878
R^2	0.268	0.266	0.411	0.283

Source: FA Evaluation Survey 2002-2005. Note: Each individual coefficient is statistically significant at the *10%, **5%, or ***1% level.

Table: FA Evaluation Survey Regressions for Classroom Size

	Non-Migrants 13-17		IDPs 13-17	
	OLS	IV	OLS	IV
All Children				
Log Refugee Share	-0.055	0.674**	-0.512	1.594
	(0.085)	(0.279)	(0.441)	(1.411)
N	9320	9320	582	582
F-Sta	58.469	78.710	5.338	4.495
R^2	0.136	0.077	0.187	.
Older Children				
Log Refugee Share	-0.039	1.468***	-0.431	2.528
	(0.105)	(0.366)	(0.507)	(1.744)
N	6135	6135	390	390
F-Stat	38.814	54.164	5.447	2.974
R^2	0.137	0.073	0.264	.
Younger Children				
Log Refugee Share	-0.091	-0.468	-0.224	0.220
	(0.143)	(0.429)	(0.867)	(2.549)
N	3185	3185	192	192
F-Stat	15.942	32.228	1.464	1.994
R^2	0.112	0.102	0.174	.

Note: Each individual coefficient is statistically significant at the *10%, **5%, or ***1% level.

Table: ECH Regressions for School Enrollment of Children Ages 7-17

	Non-Migrants 7-12		IDPs 7-12	
	OLS	IV	OLS	IV
Age	-0.036***	-0.036***	-0.040***	-0.040***
	(0.000)	(0.000)	(0.003)	(0.004)
Female	0.011***	0.011***	0.025	0.026
	(0.002)	(0.002)	(0.022)	(0.022)
Female Head	-0.026***	-0.025***	-0.080***	-0.081***
	(0.002)	(0.002)	(0.025)	(0.026)
Years of Education Head	0.001***	0.001***	0.011***	0.011***
	(0.000)	(0.000)	(0.003)	(0.003)
Siblings	-0.002***	-0.002***	-0.025***	-0.025***
	(0.001)	(0.001)	(0.009)	(0.009)
No. Household Members	-0.009***	-0.009***	-0.011*	-0.011*
	(0.001)	(0.001)	(0.006)	(0.006)
Log Refugee Share	-0.016***	-0.063***	-0.093***	-0.013
	(0.003)	(0.018)	(0.034)	(0.203)
Constant	1.263***	1.071***	0.897***	1.214
	(0.013)	(0.075)	(0.161)	(0.815)
N	87347.000	87347.000	1228.000	1228.000
F-Stat	577.938	575.316	10.684	10.340
R^2	0.142	0.139	0.182	0.178

Note: Each individual coefficient is statistically significant at the *10%, **5%, or ***1% level.

Table: ECH Regression for School Enrollment of Children Ages 7-12

	Non-Migrants 7-12		IDPs 7-12	
	OLS	IV	OLS	IV
Age	-0.002***	-0.002***	0.005	0.003
	(0.004)	(0.004)	(0.039)	(0.039)
Female	0.011***	0.011***	0.006	0.005
	(0.002)	(0.002)	(0.024)	(0.024)
Female Head	-0.018***	-0.018***	-0.058**	-0.057**
	(0.002)	(0.002)	(0.029)	(0.029)
Years of Education Head	0.000***	0.000***	0.007**	0.007*
	(0.000)	(0.000)	(0.003)	(0.004)
No. Siblings	-0.009***	-0.009***	-0.027***	-0.027***
	(0.001)	(0.001)	(0.009)	(0.009)
Household Size	-0.004***	-0.004***	-0.005	-0.005
	(0.000)	(0.000)	(0.006)	(0.006)
Log Refugee Share	-0.009***	-0.003	-0.022	-0.109
	(0.002)	(0.015)	(0.037)	(0.203)
Constant	0.947***	0.972***	0.816***	0.479
	(0.011)	(0.062)	(0.178)	(0.789)
N	48535.000	48535.000	709.000	709.000
F-Stat	43.343	42.727	3.254	3.226
R^2	0.022	0.022	0.106	0.099

Note: Each individual coefficient is statistically significant at the *10%, **5%, or ***1% level.

Table: ECH Regressions for School Enrollment Older Children Ages 13-17

	Non-Migrants 7-12		IDPs 7-12	
	OLS	IV	OLS	IV
Age	-0.104***	-0.104***	-0.103***	-0.103***
	(0.001)	(0.001)	(0.014)	(0.014)
Female	0.014***	0.014***	0.038	0.038
	(0.004)	(0.004)	(0.039)	(0.039)
Female Head	-0.035***	-0.034***	-0.099**	-0.099**
	(0.004)	(0.004)	(0.044)	(0.045)
Years Education Head	0.002***	0.002***	0.019***	0.019***
	(0.000)	(0.000)	(0.006)	(0.006)
Siblings	-0.001	-0.001	-0.031*	-0.031*
	(0.002)	(0.002)	(0.017)	(0.019)
Household Size	-0.014***	-0.013***	-0.010	-0.010
	(0.001)	(0.001)	(0.012)	(0.015)
Log Refugee Share	-0.024***	-0.111***	-0.150**	-0.150
	(0.005)	(0.034)	(0.061)	(0.318)
Constant	2.284***	1.928***	1.508***	1.508
	(0.032)	(0.139)	(0.342)	(1.280)
N	38812.000	38812.000	519.000	519.000
F-Stat	283.607	281.332	5.703	5.473
R^2	0.155	0.149	0.224	0.224

Note: Each individual coefficient is statistically significant at the *10%, **5%, or ***1% level.