The (Non-) Effect of Violence on Education: Evidence from the "War on Drugs" in Mexico

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June 6, 2016

UNU-Wider

WIDER Development Conference

Human Capital and Growth

- While homicide rates in most parts of the world fell by as much as 50 percent in the 2000s, LAC constitutes the only region where lethal violence actually increased during this period (UNDP, 2013)

- This situation is puzzling as most LAC countries experienced sustained economic growth driven by a significant education upgrading over the 2000s

Percentage of homicides by firearm in subregions (2010 or latest available year)
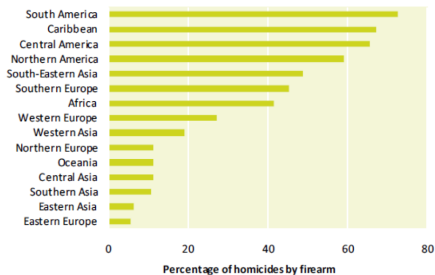
Source: UNODC Homicide Statistics.

We investigate the effects of the sudden increase in the number of **homicides** experienced in Mexico since December 2006 (start of the "War on Drugs") on **education outcomes**

In the case of MX, recent research has shown the negative effects of crime on economic outcomes

- Using similar methodologies, focusing on the same population and using the same homicide data:
    1. Arias and Esquivel (2013) $\Rightarrow$ $\uparrow$ Unemployment, $\downarrow$ formal/salaried jobs
    2. Robles et al (2013) $\Rightarrow$ $\downarrow$ capital investment, $\downarrow$ new businesses
    3. Velásquez (2014) $\Rightarrow$ $\downarrow$ Self-employed women of LF, $\downarrow$ hh consumpiton
    4. Dell (2014) $\Rightarrow$ $\downarrow$ informal sector earnings, $\downarrow$ female L.F.P.
    5. Enamorado, López-Calva, Rodriguez-Castelán (2014) $\downarrow$ local income growth

    find significant negative effects of homicide rates on labor market outcomes and economic activities

While the overall national trend in homicides more than doubled between 2007 and 2010...
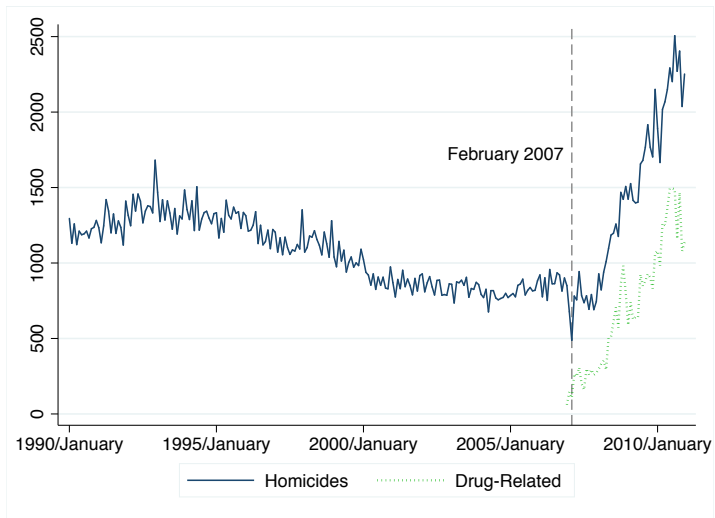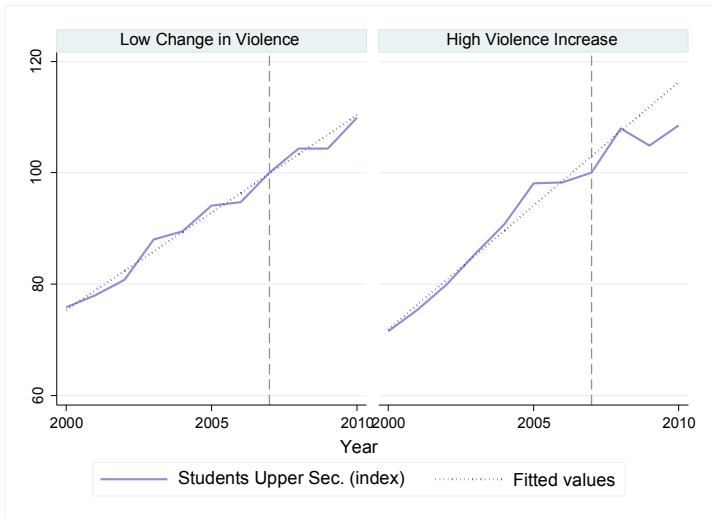
...we do not observe a change in trend in educational attainment.

This paper

- Exploits the fact that some municipalities experienced large **increases of violence** while others did not

- Uses **homicides** data from INEGI (and SNSP) matched with data at the municipality-quarter level:
  - Ministry of Education data on enrollments;
  - Labor survey data (ENOE) and Census data on enrollment rates; and,
  - National test scores data (ENLACE)

- Estimates the aggregate effects of such an increase of violence in **educational outcomes** using a fixed effects methodology

Main Results

- Null (or very small in some cases—such as in high school) and precisely estimated results on **total enrollment**

- No effect on **enrollment rates**

- While relatively small, internal **migration** can explain this small impact on total enrollments with a null effect on enrollment rates

- Imprecise impacts on **test scores**

Methodolody

Substantial variation in the evolution of homicide rates across states
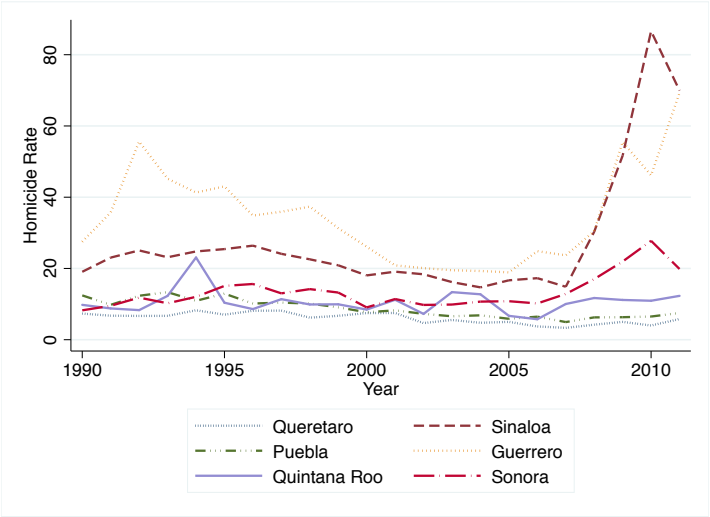
Methodolody

...and even more variation in the evolution of homicide rates across municipalities
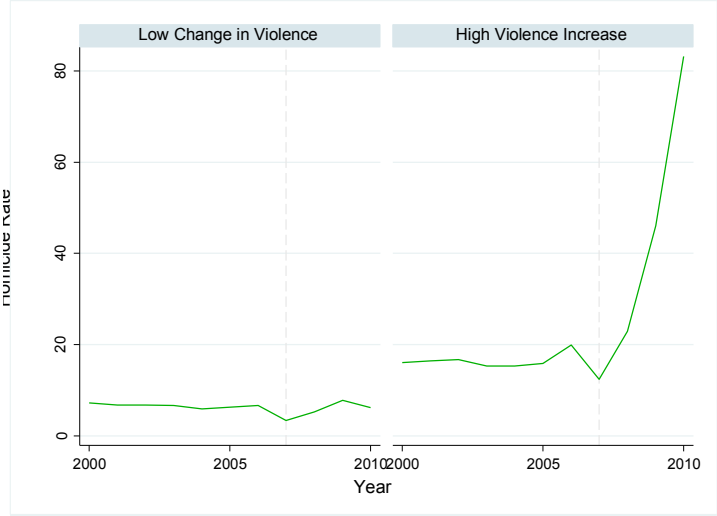
The increase in homicide rates were sudden and likely orthogonal to changes in enrollments

- Large increases in homicide rates happened both in municipalities with **low and high** baselines levels of crime:
    - Wealthier and poorer municipalities (Osorio, 2012; non-linear correlation between violence and poverty);
    - More or less urban

- We use the homicide rate as the independent variable.

$$y_{it} = \alpha_i + \beta_t + \gamma homicides_{it} + \varepsilon_{it}$$

where y_{it} is the educational variable of interest, α_i's are municipality fixed effects, β_t's year fixed effects and $homicides_{it}$ the homicide rate per 100,000 inhabitants for municipality i at time t

Theory

- The literature identifies two main potential channels
  1. Crime and violence can negatively affect **enrollment**
  2. A negative effect of violence on **learning** given enrollment. This second channel would occur if stress associated with violence affects learning (Sharkey, 2010; Sharkey, 2012)

- A good number of studies on the potential effects of violence on both enrollment and attainment (Shemyakina, 2006; Chamarbagwala and Morán, 2011; and, Ichino and Winter-Ebmer, 2004)

- All these studies find significant evidence that exposure to armed conflict had a **negative impact** on human capital accumulation and learning outcomes

...and some more theory

- Yet, this literature has an important shortcoming: It is hard—if not impossible—to disentangle the direct effects of violence on individuals' decisions and performance from the indirect effects, as human capital accumulation decisions are often affected by the **destruction of infrastructure** (like schools and roads)

- Most of these studies suggest that physical capital destruction is one of the main **mechanisms**

- While Mexico's "War on Drugs" has taken an important toll in human lives, it has <u>not</u> had the destruction of infrastructure which usually accompanies large scale armed conflicts

- This makes Mexico's setting different from traditional armed-conflict scenarios

Results (and how to interpret the coefficients)

- ▶ We normalize the dependent variable so that we can interpret as *the impact of an increase of an average magnitude*

- ▶ The homicide rate is normalized so that increases of **one unit** represent the baseline homicide rate in 2007 (about 8.3 per 100,000)
  - ▶ (and then $\times 100$ so coefficients represent percentage point increases)

- ▶ The national homicide rate went from 8.3 to 18.1 per 10,000 inhabitants over the period 2007-10

Preview of the results

Even the largest effect we find is small and not robust
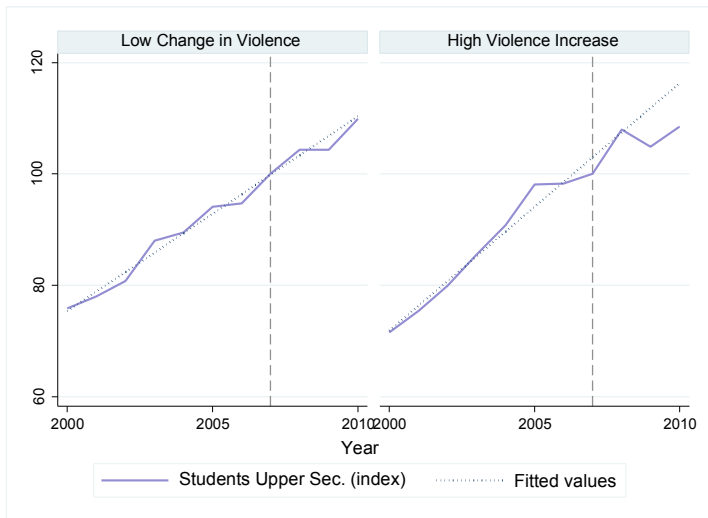
The Impact on Number of Students (1/2)

Table: Total Enrollment: 2000-2010

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Homicide Rate	-1.00***	-0.95***	-1.04***	-1.55***	0.00	0.02	-0.05	-0.29*
	(0.30)	(0.31)	(0.32)	(0.59)	(0.03)	(0.04)	(0.04)	(0.15)
Mean dept. var.	7.881	7.574	6.478	4.869	7.881	7.574	6.478	4.869
Observations	25,194	25,195	25,208	25,041	25,194	25,195	25,208	25,041
R-squared	0.001	0.001	0.001	0.001	0.985	0.984	0.983	0.936
Fixed Effects	no	no	no	no	yes	yes	yes	yes
Edu. Level	Basic	Prim.	Sec.	Prep.	Basic	Prim.	Sec.	Prep.

Notes: Standard errors clustered at the municipal level in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$

The Impact on Number of Students (1/2)

Table: Total Enrollment: 2007-2010

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Homicide Rate	-0.00	0.02	-0.04	-0.05				
	(0.03)	(0.03)	(0.06)	(0.09)				
Drug Hom. Rate					-0.01	-0.01	-0.02	-0.02
					(0.01)	(0.01)	(0.01)	(0.04)
Mean dept. var.	7.772	7.445	6.423	5.088	7.771	7.444	6.423	5.087
Observations	9,807	9,807	9,807	9,703	9,811	9,811	9,811	9,707
R-squared	0.998	0.997	0.991	0.967	0.996	0.995	0.990	0.966
Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes
Edu. Level	Basic	Prim.	Sec.	Prep.	Basic	Prim.	Sec.	Prep.

Notes: Standard errors clustered at the municipal level in parentheses. $^{*}p < 0.1, ^{**}p < 0.05, ^{***}p < 0.01$

The Impact on Enrollment Rates (Census Data)

Table: Enrollment Rates

Panel A: Men

	2000-2010					2005-2010				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Homicide Rate	-0.023**	0.015	0.040	0.004	-0.005	-0.013	0.057	0.088	-0.008	-0.006
	(0.01)	(0.03)	(0.04)	(0.03)	(0.03)	(0.01)	(0.05)	(0.07)	(0.05)	(0.06)
Mean dept. var.	0.953	0.871	0.541	0.232	0.099	0.959	0.890	0.581	0.259	0.113
Observations	7,341	7,331	7,318	7,307	7,288	4,899	4,889	4,876	4,865	4,847
R-squared	0.595	0.656	0.727	0.725	0.692	0.675	0.726	0.776	0.779	0.754
Age	6-11	12-14	15-17	18-20	21-24	6-11	12-14	15-17	18-20	21-24

Panel B: Women

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Homicide Rate	-0.023*	-0.013	-0.008	-0.016	-0.003	-0.014	0.012	0.026	-0.011	-0.009
	(0.01)	(0.02)	(0.05)	(0.03)	(0.02)	(0.02)	(0.04)	(0.08)	(0.06)	(0.04)
Mean dept. var.	0.955	0.856	0.536	0.223	0.091	0.962	0.888	0.592	0.256	0.104
Observations	7,346	7,325	7,324	7,306	7,313	4,904	4,883	4,882	4,865	4,871
R-squared	0.615	0.698	0.768	0.746	0.677	0.668	0.719	0.792	0.787	0.744
Age	6-11	12-14	15-17	18-20	21-24	6-11	12-14	15-17	18-20	21-24

All regressions include municipality and year fixed effects. Standard errors clustered at municipal level in parentheses. $^{*}p < 0.1,^{**}p < 0.05,^{***}p < 0.01$

Additionally...

- We find no effects using **drug-related** homicides instead of total homicides

- We also don't find any major effects using **ENOE data**

The Impact on Total Population (1/2)

Table: Number of Residents in Municipalities

	2000-2010		2005-2010			
	Hom. Rate	Hom. Rate	Hom. Rate	Hom. Rate	Drug H.R.	Drug H.R.
Dep. variable: Log Pop.						
Total Pop.	-0.166***	-0.168***	-0.131**	-0.131**	-0.0535***	-0.0536***
	(0.0495)	(0.0499)	(0.0556)	(0.0558)	(0.0171)	(0.0171)
Total Male Pop.	-0.167***	-0.168***	-0.139**	-0.139**	-0.0563***	-0.0564***
	(0.0497)	(0.0500)	(0.0563)	(0.0564)	(0.0164)	(0.0165)
Total Female Pop.	-0.165***	-0.166***	-0.122**	-0.123**	-0.0506***	-0.0507***
	(0.0503)	(0.0508)	(0.0559)	(0.0560)	(0.0180)	(0.0180)
1-5 Year Olds	-0.173***	-0.174***	-0.137**	-0.138**	-0.0581***	-0.0582***
	(0.0502)	(0.0507)	(0.0549)	(0.0551)	(0.0158)	(0.0159)
1-5 Male	-0.173***	-0.174***	-0.146**	-0.147**	-0.0604***	-0.0605***
	(0.0512)	(0.0516)	(0.0569)	(0.0571)	(0.0156)	(0.0157)
1-5 Female	-0.172***	-0.174***	-0.129**	-0.129**	-0.0557***	-0.0558***
	(0.0501)	(0.0506)	(0.0538)	(0.0540)	(0.0162)	(0.0163)
6-14 year olds	-0.107**	-0.109**	-0.0692	-0.0703	-0.0413**	-0.0415**
	(0.0489)	(0.0488)	(0.0569)	(0.0566)	(0.0175)	(0.0174)
6-14 Male	-0.105*	-0.107*	-0.0704	-0.0716	-0.0441***	-0.0442***
	(0.0562)	(0.0561)	(0.0595)	(0.0593)	(0.0164)	(0.0164)
6-14 Female	-0.108**	-0.109**	-0.0662	-0.0673	-0.0375*	-0.0377*
	(0.0438)	(0.0436)	(0.0586)	(0.0582)	(0.0219)	(0.0218)
Controls	No	Yes	No	Yes	No	Yes
N	7,352	7,352	4,910	4,910	4,910	4,910

Notes: Standard errors clustered at the municipal level in parentheses. $* p < 0.1,$ $** p < 0.05,$ $*** p < 0.01$

The Impact on Total Population (2/2)

Table: Number of Residents in Municipalities

	2000-2010		2005-2010			
	Hom. Rate	Hom. Rate	Hom. Rate	Hom. Rate	Drug H.R.	Drug H.R.
Dep. variable: Log Pop.						
15-17 year olds	-0.223***	-0.224***	-0.201***	-0.201***	-0.0817***	-0.0817***
	(0.0586)	(0.0590)	(0.0612)	(0.0615)	(0.0195)	(0.0196)
15-17 Male	-0.263***	-0.264***	-0.240***	-0.240***	-0.0896***	-0.0896***
	(0.0581)	(0.0583)	(0.0589)	(0.0591)	(0.0193)	(0.0193)
15-17 Female	-0.190**	-0.191**	-0.170**	-0.171**	-0.0778***	-0.0779***
	(0.0747)	(0.0752)	(0.0766)	(0.0769)	(0.0256)	(0.0257)
19-24	-0.227***	-0.228***	-0.199**	-0.199**	-0.0718***	-0.0718***
	(0.0699)	(0.0702)	(0.0835)	(0.0835)	(0.0192)	(0.0192)
19-24 Male	-0.264***	-0.264***	-0.265***	-0.265***	-0.0878***	-0.0877***
	(0.0774)	(0.0777)	(0.0989)	(0.0988)	(0.0210)	(0.0210)
19-24 Female	-0.195***	-0.196***	-0.146*	-0.147*	-0.0601***	-0.0601***
	(0.0667)	(0.0669)	(0.0769)	(0.0770)	(0.0198)	(0.0199)
25+	-0.198***	-0.199***	-0.155**	-0.156**	-0.0633***	-0.0634***
	(0.0559)	(0.0565)	(0.0616)	(0.0619)	(0.0169)	(0.0170)
25+ Male	-0.205***	-0.206***	-0.164***	-0.165***	-0.0642***	-0.0643***
	(0.0570)	(0.0576)	(0.0628)	(0.0631)	(0.0173)	(0.0174)
25+ Female	-0.207***	-0.208***	-0.164**	-0.165**	-0.0655***	-0.0656***
	(0.0572)	(0.0578)	(0.0637)	(0.0640)	(0.0174)	(0.0175)
Controls	No	Yes	No	Yes	No	Yes
N	7,352	7,352	4,910	4,910	4,910	4,910

Notes: Standard errors clustered at the municipal level in parentheses. $^*p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$

The Impact on Learning

Table: ENLACE Test Scores

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Homicide Rate	10.17	1.56			2.96	-14.54		
	(9.20)	(14.60)			(9.04)	(11.43)		
Drug Hom. Rate			1.75	4.34			2.47	-0.59
			(2.40)	(4.72)			(3.26)	(3.95)
Mean dept. var.	519.263	506.073	519.246	506.066	507.847	509.576	507.838	509.577
Observations	5,641	5,598	5,645	5,602	261,455	88,802	261,571	88,843
R-squared	0.858	0.757	0.858	0.757	0.791	0.751	0.791	0.751
Fixed Effects	Muni	Muni	Muni	Muni	School	School	School	School
Level	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.

Notes: Standard errors clustered at the municipal level in parentheses. $^{*}p < 0.1, ^{**}p < 0.05, ^{***}p < 0.01$

Other results

- No impact on **employment rates**

- No impact on **NiNi's**—NEET (not in employment, education, or training)—rates

- No effect on the supply of **educational inputs**—namely schools and teachers

- Results are robust to...
    - Varying the **timing of the crime rate** (i.e., previous month, previous year, lagged crime rate)
    - Including municipality **time-varying controls** such as local public expenditure or federal transfers
    - Including **state-year** fixed effects

Discussion 1. Enrollment and Migration

- So far, we have assumed migration has resulted in a slightly **upward bias** on the estimate of the impact of violence on enrollment

- The opposite could be true if those who move from high violence growth municipalities to low violence growth municipalities have **low probability** of enrollment

- Even so, the effect on enrollments is, at most, <u>low</u>

- We can **bound** effects on conservative assumption on differences in enrollment probabilities.

(0.26% of enrollment $\times$ Δ in prob. of attainment) $< 0.26\%$!

Discussion 2. Municipality versus minor level of aggregation

- The closer the level of **disaggregation** the higher likelihood of finding an effect
  - Evident when looking at the extreme case of a crime at the household level

- The question we are answering is whether this impact is measurable at the **aggregate** level
  - ⇒ no, or tiny, impact on national (municipal, or state) level

Conclusions

- No or small impact of crime on **enrollment rates**

- Small effect on total enrollment can be explained by **migration**

- Suggestive evidence of no impact on **test scores**, BUT we don't have the precision to determine that

- These results cast an **optimistic** view, in contrast with other studies finding negative effects of violence on short-term economic growth, as these suggest that minimal to null effects on human capital accumulation today should have little to no adverse effects on **long-term growth** outcomes in Mexico.

Conclusions

- No or small impact of crime on **enrollment rates**

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Appendix

Table: Total Enrollment

	2000-2010			
	(1)	(2)	(3)	(4)
Homicide Rate	-0.03	-0.03	-0.02	-0.25
	(0.04)	(0.04)	(0.05)	(0.18)
Mean dept. var.	7.881	7.574	6.478	4.869
Observations	25,194	25,195	25,208	25,041
R-squared	0.987	0.986	0.985	0.943
Fixed Effexts	yes	yes	yes	yes
State-Yr. FE	yes	yes	yes	yes
Edu. Level	Basic	Prim.	Sec.	Prep.

Notes: Standard errors clustered at the municipal level in parentheses. $^*p < 0.1, ^{**}p < 0.05, ^{***}p < 0.01$

Table: Total Enrollment: Basic Education

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Homicide Rate	0.00 (0.03)	0.01 (0.04)	0.01 (0.04)	0.01 (0.04)	-0.00 (0.04)	-0.04 (0.03)	0.01 (0.04)	0.01 (0.04)	0.01 (0.04)	-0.01 (0.03)
Public expenditure		0.00*** (0.00)								
Wages			0.01*** (0.00)							
Transfers				0.00*** (0.00)						
Investment					0.00*** (0.00)					
Debt						0.00 (0.00)				
Public Revenue							0.00*** (0.00)			
Taxes								0.01*** (0.00)		
Uncond. Fed. Transf									0.01*** (0.00)	
Cond. Fed. Transf										0.01*** (0.00)
Mean dept. var.	7.881	7.921	7.922	7.920	7.984	8.144	7.921	7.947	7.921	7.984
Observations	25,194	23,494	23,466	23,208	22,293	14,976	23,494	23,023	23,486	20,480
R-squared	0.985	0.984	0.984	0.984	0.984	0.989	0.984	0.984	0.984	0.989

Notes: Standard errors clustered at the municipal level in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table: Total Enrollment: Primary School

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Homicide Rate	0.02	0.02	0.02	0.02	0.01	-0.03	0.02	0.02	0.02	0.01
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Public expenditure		0.00***								
		(0.00)								
Wages			0.01***							
			(0.00)							
Transfers				0.01***						
				(0.00)						
Investment					0.01***					
					(0.00)					
Debt						0.00				
						(0.00)				
Public Revenue							0.00***			
							(0.00)			
Taxes								0.01***		
								(0.00)		
Uncond. Fed. Transf									0.01***	
									(0.00)	
Cond. Fed. Transf										0.01***
										(0.00)
Mean dept. var.	7.574	7.614	7.615	7.612	7.677	7.834	7.614	7.639	7.614	7.672
Observations	25,195	23,495	23,467	23,209	22,294	14,977	23,495	23,024	23,487	20,481
R-squared	0.984	0.983	0.983	0.983	0.983	0.989	0.983	0.983	0.983	0.988

Table: Total Enrollment: Secondary School

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Homicide Rate	-0.05 (0.04)	-0.05 (0.04)	-0.05 (0.04)	-0.05 (0.04)	-0.04 (0.04)	-0.08* (0.04)	-0.05 (0.04)	-0.04 (0.04)	-0.05 (0.04)	-0.06* (0.04)
Public expenditure		0.00*** (0.00)								
Wages			0.00 (0.00)							
Transfers				0.00 (0.00)						
Investment					0.00*** (0.00)					
Debt						0.00 (0.00)				
Public Revenue							0.00*** (0.00)			
Taxes								0.00** (0.00)		
Uncond. Fed. Transf									0.00 (0.00)	
Cond. Fed. Transf										0.00*** (0.00)
Mean dept. var.	6.478	6.525	6.526	6.526	6.593	6.775	6.525	6.555	6.525	6.610
Observations	25,208	23,508	23,480	23,222	22,307	14,990	23,508	23,037	23,500	20,494
R-squared	0.983	0.984	0.984	0.984	0.984	0.987	0.984	0.984	0.984	0.987

Table: Total Enrollment: High School

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Homicide Rate	-0.29* (0.15)	-0.32** (0.16)	-0.32** (0.16)	-0.32** (0.16)	-0.33** (0.16)	-0.32 (0.20)	-0.32** (0.16)	-0.31* (0.17)	-0.32** (0.16)	-0.32* (0.17)
Public expenditure		-0.01*** (0.00)								
Wages			-0.02*** (0.00)							
Transfers				-0.02*** (0.01)						
Investment					-0.02*** (0.00)					
Debt						-0.01*** (0.00)				
Public Revenue							-0.01*** (0.00)			
Taxes								-0.03*** (0.01)		
Uncond. Fed. Transf									-0.03*** (0.01)	
Cond. Fed. Transf										-0.03*** (0.00)
Mean dept. var.	4.869	4.945	4.948	4.948	5.035	5.295	4.945	4.999	4.945	5.082
Observations	25,041	23,348	23,320	23,065	22,147	14,889	23,348	22,881	23,340	20,340
R-squared	0.936	0.934	0.934	0.933	0.933	0.933	0.934	0.933	0.934	0.934

Table: Total Enrollment: Lagged Homicide Rate

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Hom. Rate (L1)	-0.02	-0.06	-0.47***				-0.04	-0.08	-0.48***
	(0.04)	(0.06)	(0.17)				(0.03)	(0.06)	(0.17)
Hom. Rate (L2)				-0.08	-0.20**	-0.39*	-0.09	-0.23**	-0.44*
				(0.06)	(0.10)	(0.21)	(0.06)	(0.10)	(0.23)
Homicide Rate							0.00	-0.06	-0.27*
							(0.03)	(0.04)	(0.14)
Mean dept. var.	7.575	6.479	4.870	7.576	6.481	4.871	7.575	6.480	4.871
Observations	25,159	25,172	25,005	25,121	25,134	24,967	25,039	25,052	24,885
R-squared	0.989	0.986	0.936	0.995	0.988	0.937	0.995	0.988	0.937
Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes	yes
Hom. Rate L3 & L4	no	no	no	no	no	no	yes	yes	yes
Edu. Level	Prim.	Sec.	Prep.	Prim.	Sec.	Prep.	Prim	Sec.	Prep.

Notes: Standard errors clustered at the municipal level in parentheses. $^{*}p < 0.1,^{**}p < 0.05,^{***}p < 0.01$

Table: Total Enrollment: State-Year Fixed Effects

	2000-2010			
	(1)	(2)	(3)	(4)
Homicide Rate	-0.03	-0.03	-0.02	-0.25
	(0.04)	(0.04)	(0.05)	(0.18)
Mean dept. var.	7.881	7.574	6.478	4.869
Observations	25,194	25,195	25,208	25,041
R-squared	0.987	0.986	0.985	0.943
Fixed Effexts	yes	yes	yes	yes
State-Yr. FE	yes	yes	yes	yes
Edu. Level	Basic	Prim.	Sec.	Prep.

Notes: Standard errors clustered at the municipal level in parentheses. 2000-2010 period.
$^{*} p < 0.1, ^{**} p < 0.05, ^{***} p < 0.01$

Table: Supply of Schools and Teachers

	Total Teachers				Total Schools			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Homicide Rate	-0.64**	-0.04	-0.00		0.33	-0.06**	-0.02	
	(0.30)	(0.03)	(0.03)		(0.36)	(0.02)	(0.02)	
Drug Hom. Rate				-0.01				-0.01
				(0.01)				(0.01)
Mean dept. var.	5.196	5.196	5.160	5.159	3.797	3.797	3.753	3.753
Observations	24,962	24,962	9,807	9,811	24,957	24,957	9,807	9,811
R-squared	0.000	0.992	0.999	0.998	0.000	0.993	0.999	0.998
Fixed Effects	no	yes	yes	yes	no	yes	yes	yes
Years	2000-2010	2000-2010	2007-2010	2007-2010	2000-2010	2000-2010	2007-2010	2007-2010

Notes: Standard errors clustered at the municipal level in parentheses. $^{*}p < 0.1,^{**}p < 0.05,^{***}p < 0.01$