

# El fin de Progresa: escolaridad y trabajo tras el fin de un icónico programa anti-pobreza

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# Introducción

Progresar/Oportunidades/Prospera: Programa de transferencias condicionales en efectivo (TCE)

- Inicia en 1997, dura por cuatro administraciones distintas
- Condicionalidad incentivaba la escolaridad y consultas de salud
- Evidencia de que fue altamente exitoso: ↑ matrícula (Schultz, Skoufias/Parker), salud infantil (Gertler, Rivera et al), variables económicas de LP (Parker/Vogl, Macours/Araujo)
- Apoyaba ~ 25% familias mexicanas, beneficios ~ 30% ingreso base

Nueva administración elimina Prospera en 2018

- Programa sustituto para educación, con alcance menos claro
- Sin sustituto para el pilar de salud

¿Cómo afecta el fin de un programa de TCE consolidado a la educación y salud?

- Diseño de diferencia-en-diferencias: cobertura Prospera pre-eliminación × post
- Efectos: matrícula, trabajo

# Prospera en el tiempo

**Octubre 1997:** Progresá (luego Oportunidades, Prospera) inicia

**Julio 2018:** Elecciones

**Octubre 2018:** Se anuncia que no se cancelarán programas sociales

**Diciembre 2018:** Inicia nueva administración

**Junio 2019:** Eliminación de Prospera

**Noviembre 2019:** Becas Benito Juárez inicia

Menor claridad y certidumbre de su operación. (a) ¿elegibilidad? (b) ¿prioridades del programa? (c) ¿retos logísticos?

¿Cuáles son las consecuencias para los hogares más pobres?

Interrupción vs. pérdida beneficios, niños vs jóvenes

# Comparativo entre programas (~2019)

## Prospera

- Dirigido a hogares más **pobres**
- Pagos a **hogares** condicional a escuela, consultas de salud
- Pagos atados a **asistencia/consultas**, ajustados por **# y edad** de menores

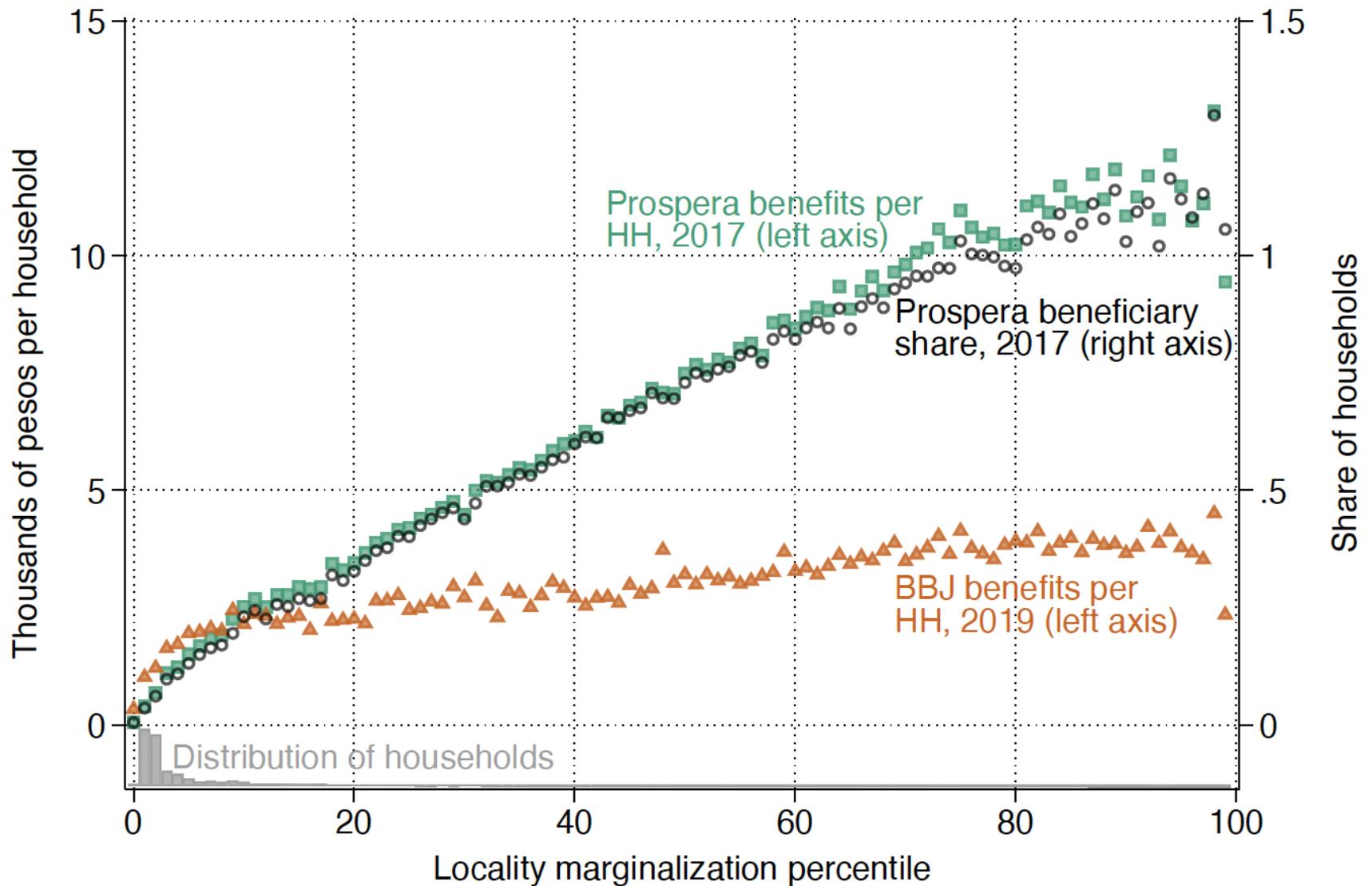
## Becas Benito Juárez: Educación básica

- Dirigido a hogares más **pobres**
- Pagos a **hogares**
- Pago fijo por tener  $\geq 1$  **menor inscrito** en la escuela

## Becas Benito Juárez: Media Superior

- **Todos** los alumnos son elegibles, no condicional a ingreso
- Pagos a **alumnos**
- Pago fijo por **inscripción**

# Benito Juárez vs. Prospera entre localidades



Nota: Cada marcador corresponde a 1 percentil en ranking de la localidad según su marginación.

# Datos ENOE

- Datos de **ENOE 2014-2020q1**
  - Excluimos 3er trimestre (verano)
  - Previo a COVID19
  - Preguntas de asistencia escolar y laborales
- Niños y jóvenes **6-17 años** de edad
  - Primaria 6-11
  - Secundaria 12-14
  - Media-superior 15-17
- Datos administrativos de penetración de **Prospera**, nivel localidad
  - 2017: último año “estable”, pre-eliminación, pre-electoral
  - Dividir entre población 2010 (censo)
  - Enfocarnos en localidades <100,000 (comparabilidad, tendencias paralelas)

# Métodos

Marco de **diferencia en diferencias**, efectos fijos:

$$y_{ilst} = \alpha Prospera_{ls} + \gamma Prospera_{ls} \mathbb{1}_{2018/19} + \beta Prospera_{ls} \mathbb{1}_{2019/20} + \tau_{st} + \epsilon_{ilst}$$

- $l$  localidad,  $s$  estado,  $t$  año académico
- $Prospera_{ls}$  = %hogares beneficiaries prospera por localidad
- $\mathbf{1}_t$  = indicador para el año escolar  $t$
- $\tau_{st}$  efectos fijos estado-año
- $\textcircled{R}$  es el efecto de eliminar Prospera

**Estudio de evento:**

$$y_{ilst} = \alpha Prospera_{ls} + \sum_{q \neq 2018q2} \beta_q Prospera_{ls} \mathbb{1}_{t=q} + \tau_{st} + \epsilon_{ilst}$$

- Estimaciones año-por-año, visualizar tendencias previas

# Análisis y robustez

- Efectos sobre probabilidad de **asistir** a la escuela
- Analizar efectos considerando efectos de BBJ
  - ¿Los efectos de la eliminación de Prospera desaparecen si controlamos por BBJ?
  - No es una evaluación de BBJ => poco tiempo de su implementación
- Análisis **heterogéneo**
  - Nivel educativo de jefe hogar, tamaño localidad, marginación localidad
  - x Sector (variables laborales)
- **Perturbaciones** a estimación base:
  - Tendencias paralelas: efectos fijos por municipio, estado, etc.
  - x Percentil de marginación
  - Tendencias lineales
- Efectos **post-COVID19**<sup>1</sup>
  - Extender periodo de estimación
  - Interpretación menos “limpia” debido a interrupción por políticas de confinamiento

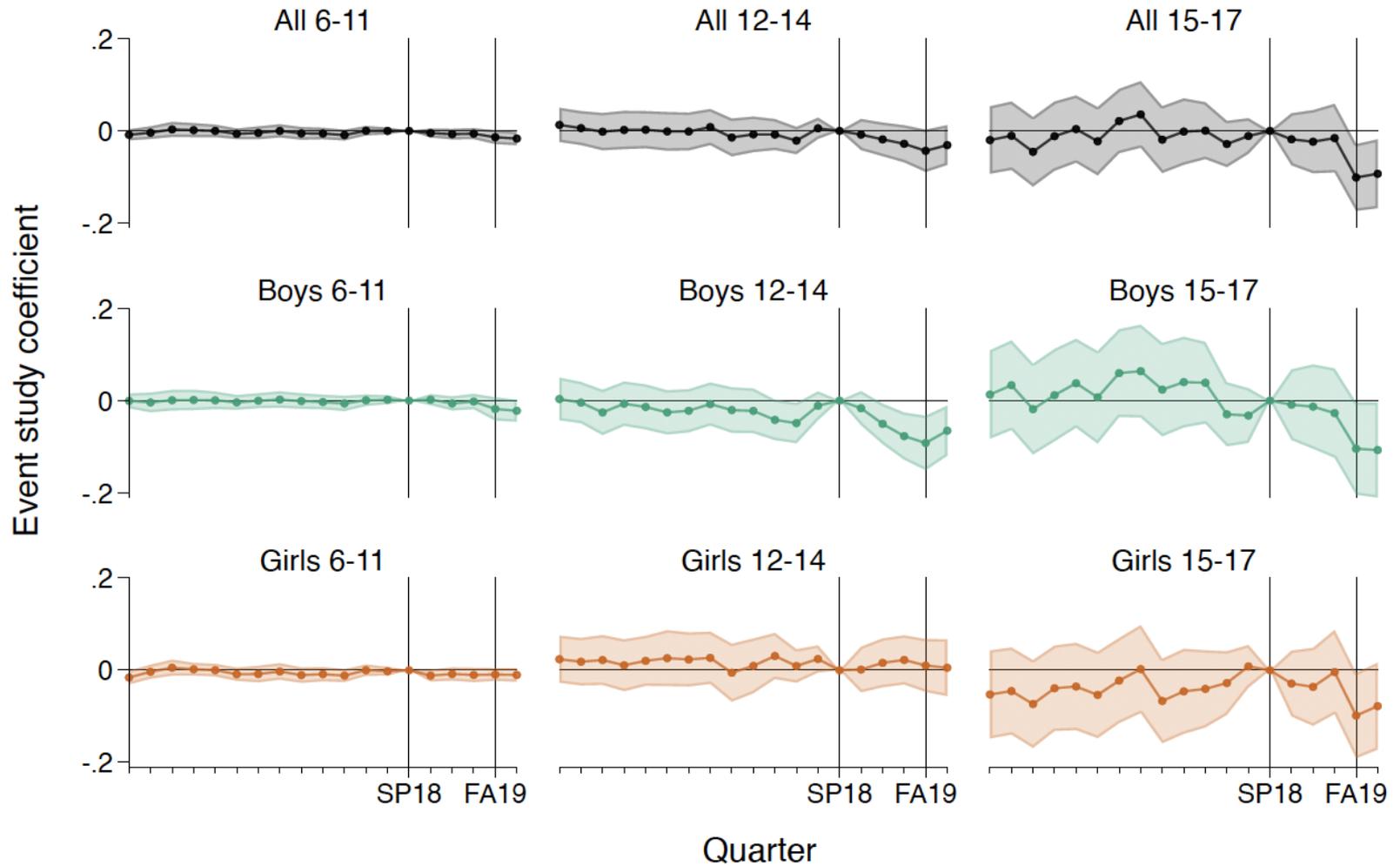
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1. Realizado en el laboratorio de datos del INEGI (SNIEG), ya que las versiones públicas de la ENOE post 2020q1 no incluyen identificador de localidad. Las conclusiones y opiniones expresadas en este Proyecto son responsabilidad exclusiva de los autores y no reflejan las posiciones oficiales del INEGI

Table 1: Effect of rollback on school enrollment, by age group and gender

	Ages 6-11	Ages 12-14	Ages 15-17
	(1)	(2)	(3)
<b>A. All</b>			
Prospera share	-0.005* [0.002]	-0.062*** [0.007]	-0.233*** [0.014]
Prospera share × 2018-19	-0.003 [0.005]	-0.017 [0.014]	-0.011 [0.026]
Prospera share × 2019-20	-0.013** [0.006]	-0.036** [0.018]	-0.089*** [0.028]
Dependent variable mean	0.987	0.936	0.731
N	351,505	177,985	174,998
<b>B. Boys</b>			
Prospera share	-0.004 [0.003]	-0.053*** [0.009]	-0.201*** [0.017]
Prospera share × 2018-19	-0.001 [0.006]	-0.030* [0.018]	-0.033 [0.031]
Prospera share × 2019-20	-0.019* [0.011]	-0.061*** [0.023]	-0.123*** [0.036]
Dependent variable mean	0.986	0.932	0.725
N	179,266	90,341	89,275

Figure 2: Event studies for school enrollment, by age group and gender



Note: Point estimates and 95% confidence intervals, based on standard errors clustered by locality. All regressions include the *Prospera* share and state-by-quarter fixed effects. Sample excludes summers and localities with more than 100,000 residents.

Table 4: Effect of rollback on labor supply, ages 15-17, by gender

	Employment	Weekly hours	Monthly earnings
	(1)	(2)	(3)
<b>A. Boys</b>			
Prospera share × 2019-20	0.078** [0.032]	4.68*** [1.30]	455*** [114]
Dependent variable mean	0.353	11.38	629
N	89,272	89,272	89,272
<b>B. Girls</b>			
Prospera share × 2019-20	-0.016 [0.022]	-0.789 [0.874]	-30 [53]
Dependent variable mean	0.134	3.86	194
N	85,721	85,721	85,721

Note: Brackets contain standard errors clustered by locality. All regressions include the *Prospera* share, its interaction with the 2018-19 indicator, and state-by-quarter fixed effects. Sample excludes summers and localities with more than 100,000 residents. Earnings are measured in pesos. \*  $p < 0.1$  \*\*  $p < 0.05$  \*\*\*  $p < 0.01$

Figure 4: Event studies for labor supply, ages 15-17, by gender



Note: Point estimates and 95% confidence intervals, based on standard errors clustered by locality. All regressions include the *Prospera* share and state-by-quarter fixed effects. Sample excludes summers and localities with more than 100,000 residents. Earnings are measured in pesos.

# Otros resultados

- Efectos no sensibles a la inclusión de **BBJ**
- Robustos a distintas especificaciones (no explicados por **tendencias** previas)
- No efectos de **selección endógena** (e.g., atrición, co-residencia)
- Concentrados en **hogares de bajo ESE**
- Efectos similares en localidades +/- **pobres, rurales** vs no
- Efectos persisten **post-COVID19**

# Conclusiones

- La eliminación de Prospera llevó a caídas inmediatas en la **asistencia escolar**
  - Concentrada en jóvenes varones
  - En localidades con penetración total de Prospera, su eliminación a una caída de **asistencia escolar de 9pp** (relative a 73%)
  - Jóvenes mujeres relativamente más protegidas de la eliminación del programa
- Efecto acompañado por **↑laboral**
  - Más de **1 empleo adicional** por cada 2 desertores escolares
  - Análisis descriptivo sugiere que completar educación media-superior tiene retornos relevantes pero que no se materializan hasta décadas después => sugiere mecanismo de sesgo al presente o restricciones de liquidez
- Evidencia de la relevancia de Prospera (TCE) sobre **escolaridad**, décadas después de su implementación y de su rol para **proteger** a poblaciones más vulnerables y **estudiantes marginales**

¡Gracias!

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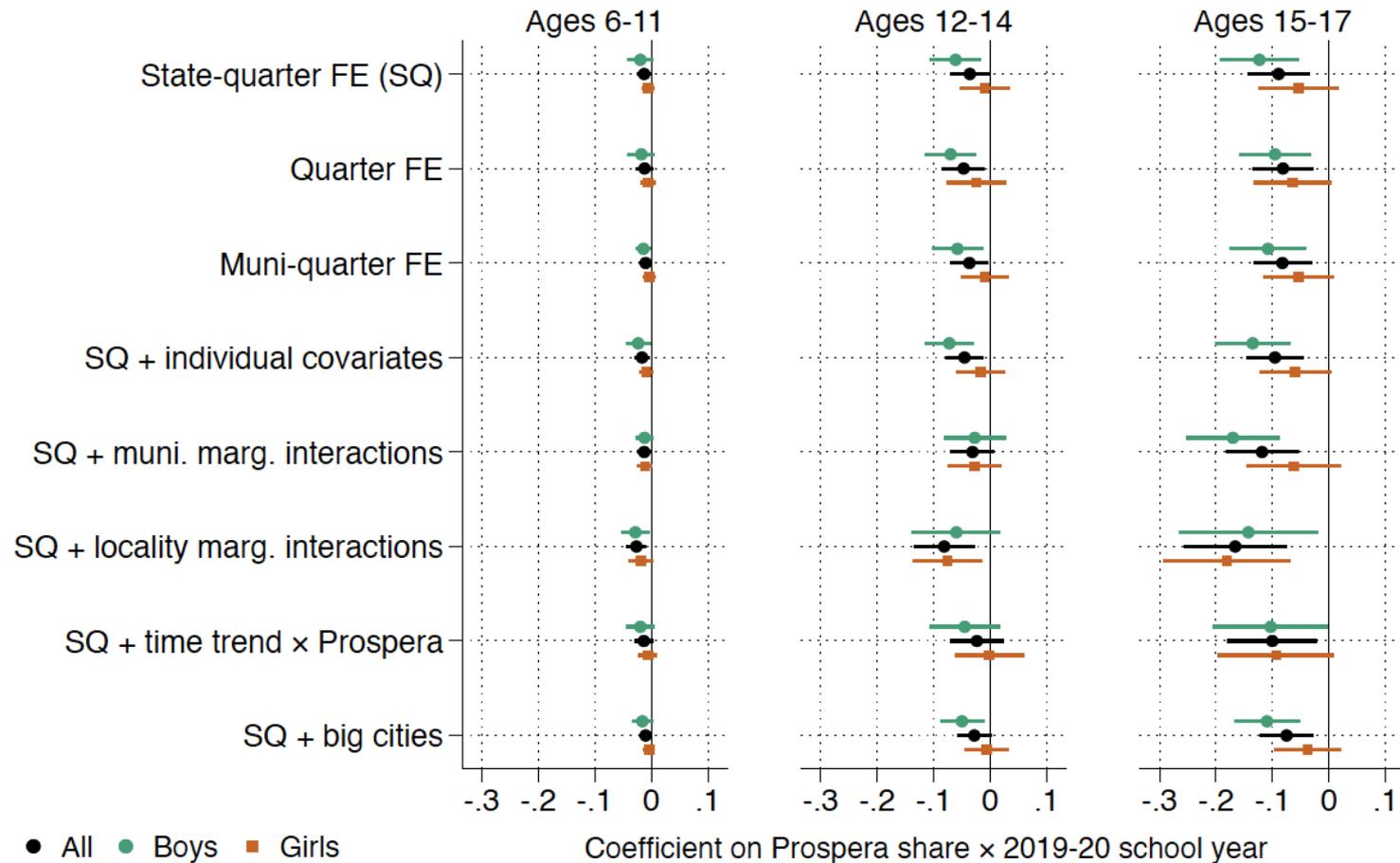
# Apéndice

Table 2: Effects of *Prospera* rollback versus BBJ rollout, ages 15-17, by gender

	(1)	(2)	(3)	(4)
<b>A. Boys</b>				
Prospera share × 2019-20	-0.123*** [0.036]	-0.109*** [0.038]		
Prospera benefits per HH × 2019-20			-0.013*** [0.003]	-0.011*** [0.004]
BBJ benefits per HH × 2019-20		-0.009* [0.005]		-0.008 [0.005]
N	89,275	89,275	89,275	89,275
<b>B. Girls</b>				
Prospera share × 2019-20	-0.054 [0.036]	-0.057 [0.037]		
Prospera benefits per HH × 2019-20			-0.007** [0.003]	-0.007** [0.003]
BBJ benefits per HH × 2019-20		-0.003 [0.005]		-0.003 [0.005]
N	85,723	85,723	85,723	85,723

Note: Brackets contain standard errors clustered by locality. Dependent variable is school enrollment. Benefits per household are measured in thousands of pesos per month. All regressions include state-by-quarter fixed effects. Columns (1)-(2) include the *Prospera* share and its interaction with the 2018-19 indicator. Columns (3)-(4) include *Prospera* benefits per household (in thousands of pesos per month) and its interaction with the 2018-19 indicator. Columns (2) and (4) include BBJ benefits per household (in thousands of pesos per month) and its interaction with the 2018-19 indicator. Sample excludes summers and localities with more than 100,000 residents. \*  $p < 0.1$  \*\*  $p < 0.05$  \*\*\*  $p < 0.01$

Figure 3: Effect of rollback on school enrollment: alternative regression specifications



Note: Point estimates and 95% confidence intervals, based on standard errors clustered by locality. All regressions include the *Prospera* share, its interaction with the 2018-19 indicator, and state-by-quarter fixed effects. Sample excludes summers. Individual covariates include child sex, child age, the household head's education level, an indicator for the mother being present in the household, and the mother's age group, marital status, education level, and literacy if she is present. In the "marginalization interaction" regressions, we interact quarter indicators with indicators for single-percentile bins of the municipality or locality marginalization index. In the "time trend × *Prospera*" regressions, we interact a linear time trend with the *Prospera* share. In the "big cities" regressions, we estimate the baseline model in an expanded sample that includes cities with populations over 100,000.

# Data on Schooling Outcomes

National Survey of Occupation and Employment (ENOE)

- Quarterly labor market survey of 127,000 households
- Use data from fall and winter quarters, 2010q4-2020q1
- Main outcome is [school enrollment](#)
- Question asks: “Is \_\_\_\_\_ currently attending school?”

# Data on Schooling Outcomes

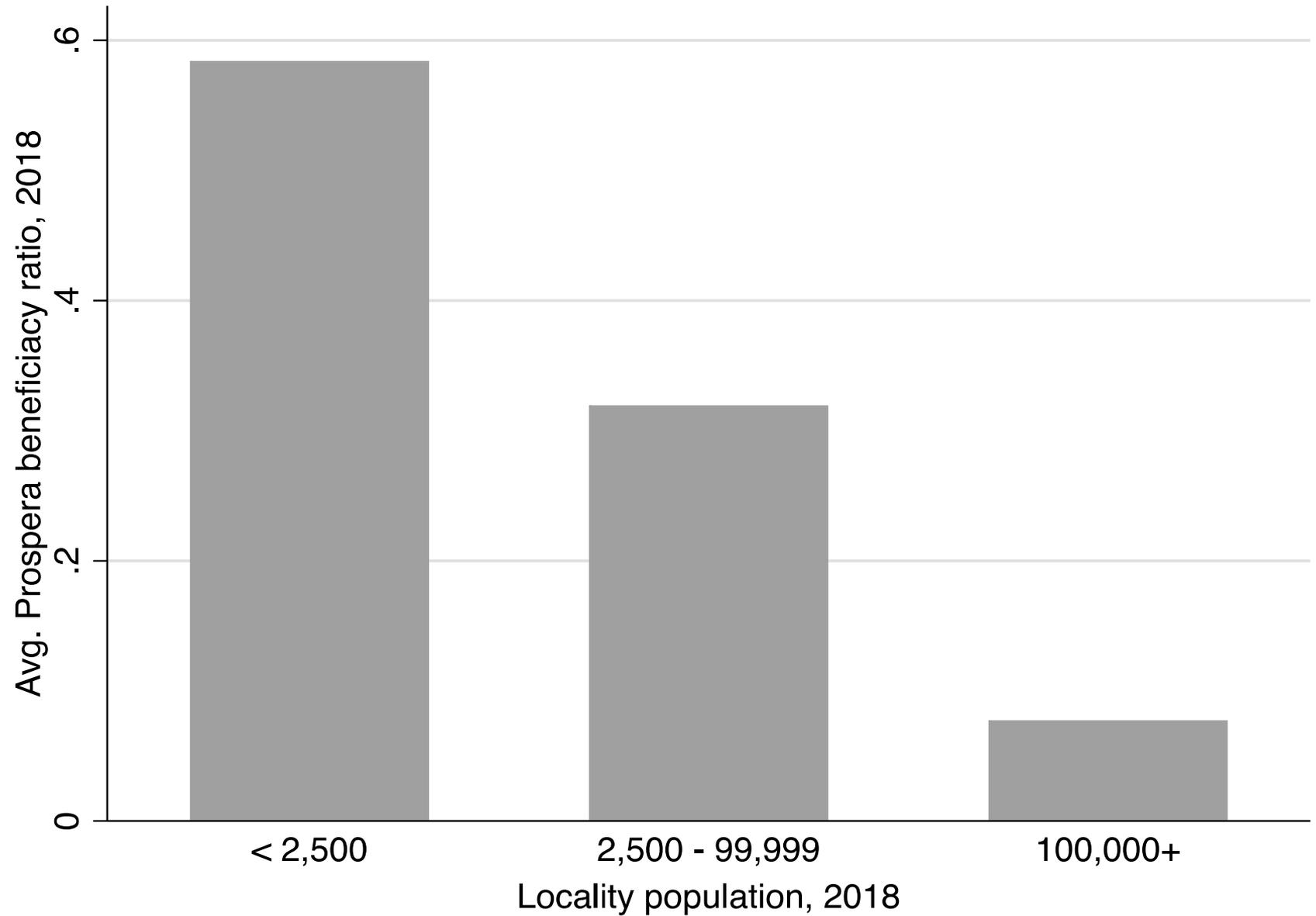
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Sample restrictions

- Geography
  - Focus on rural (< 2500) and semi-urban (2500-100k) localities
  - Exclude urban localities (> 100,000 inhabitants), where Prospera was rare

# Prospera across Rural, Semi-Urban, Urban Localities



# Data on Schooling Outcomes

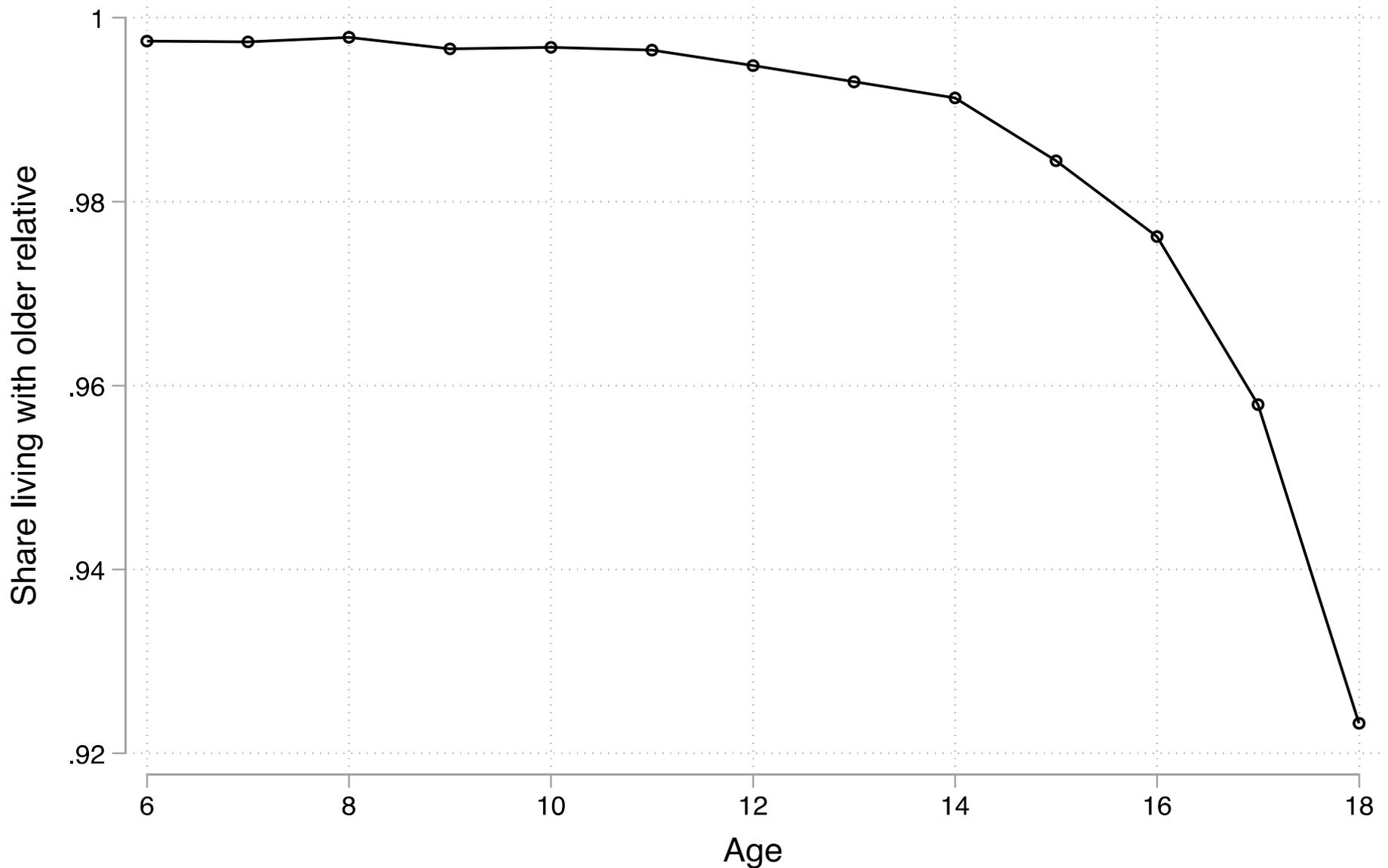
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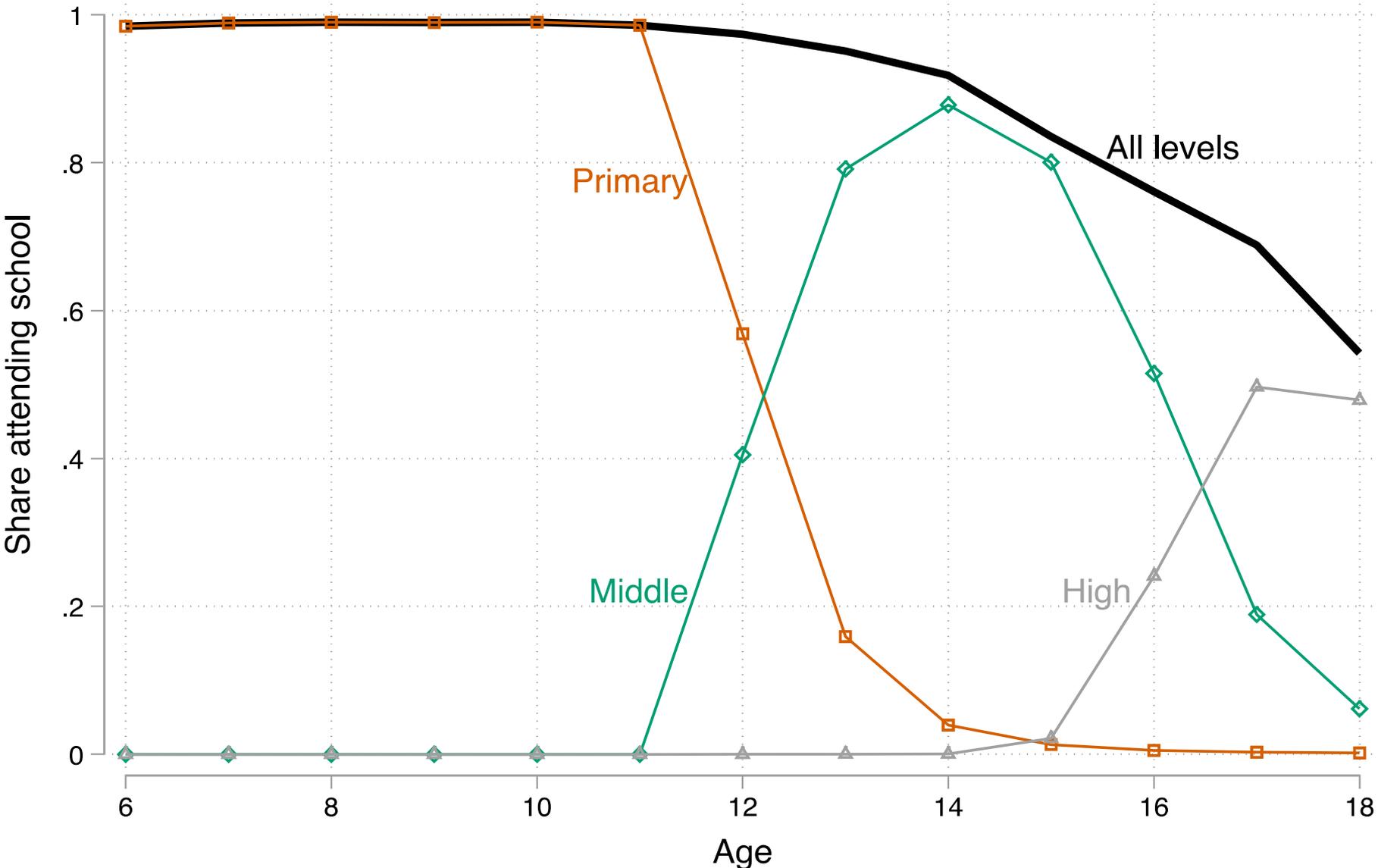
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- Age
  - Focus on primary (6-12) and middle (13-15) school ages
  - Exclude high school ages (16-18), when parental coresidence less common

# Intergenerational Coresidence by Age



Note: Nationwide sample.

# School Enrollment by Age



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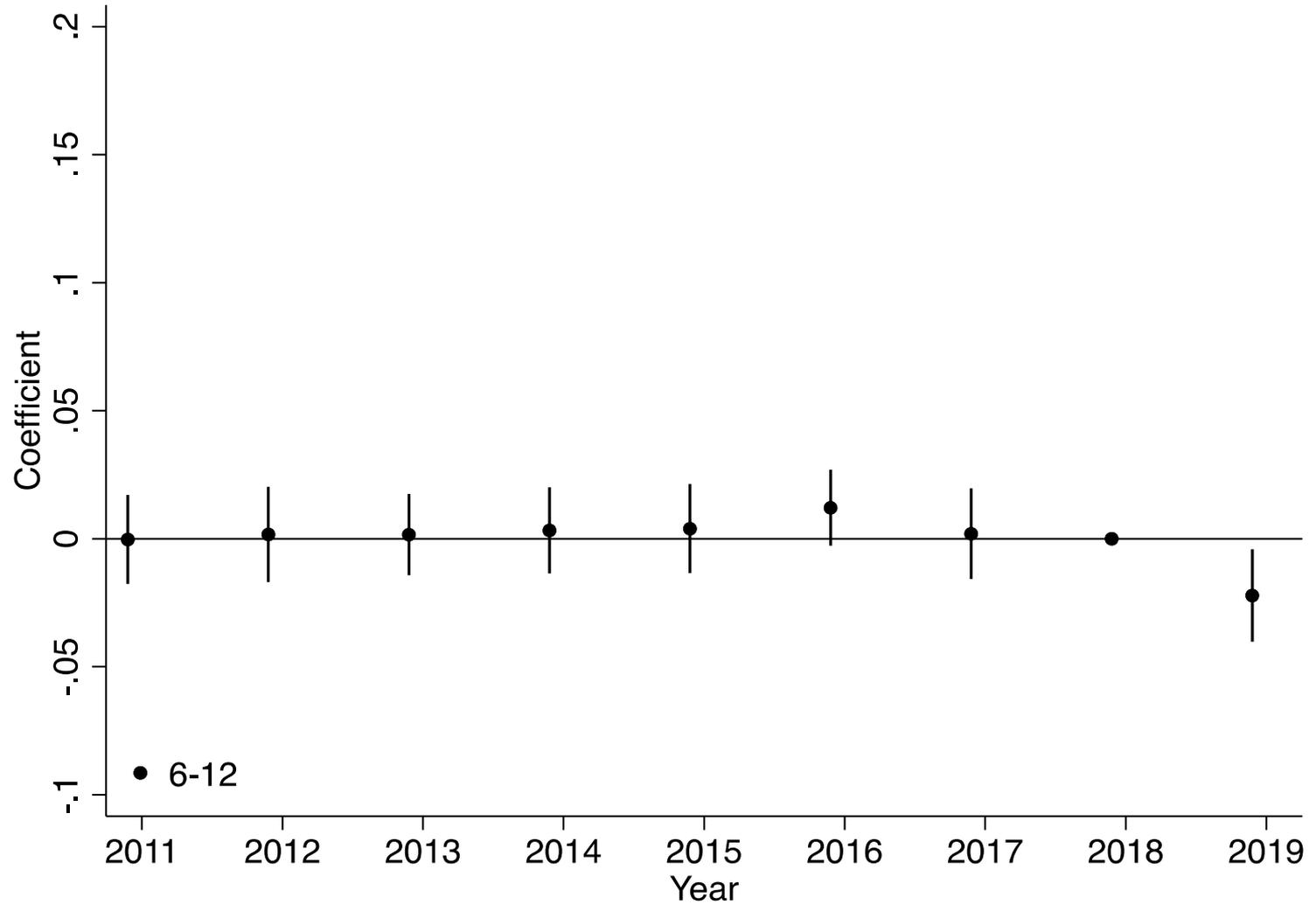
Merge at municipality level to 2018 Prospera benef ratio (mean  $\approx \frac{1}{3}$ , SD  $\approx \frac{1}{4}$ )

# Summary Statistics

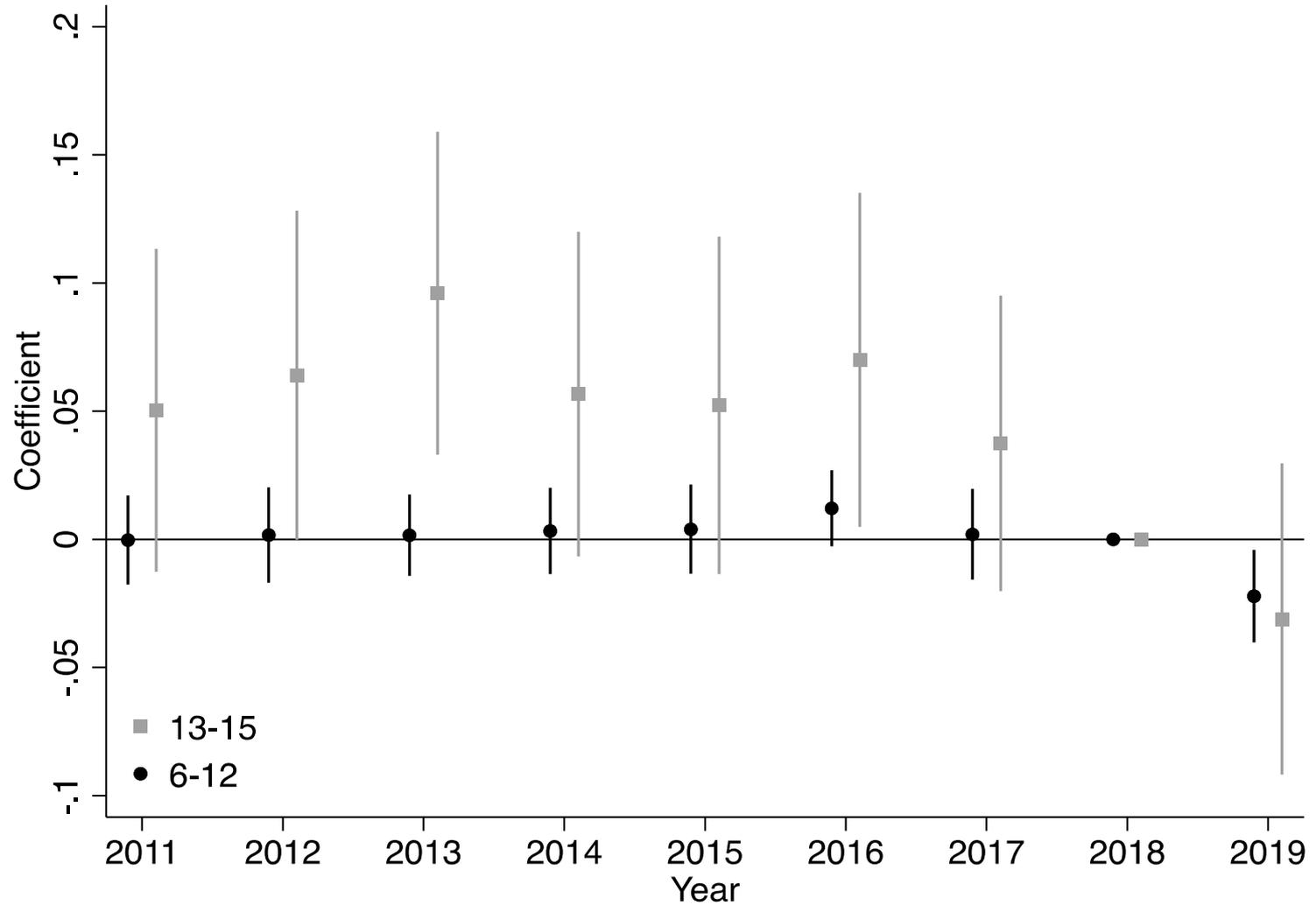
	6-12 year olds			13-15 year olds		
	All	Rural	Semi-urban	All	Rural	Semi-urban
Prospera ratio	0.30 (0.24)	0.38 (0.27)	0.24 (0.19)	0.30 (0.23)	0.38 (0.27)	0.24 (0.19)
Enrollment	0.98 (0.12)	0.98 (0.13)	0.99 (0.11)	0.88 (0.32)	0.85 (0.35)	0.90 (0.29)
Age	9.02 (2.00)	9.02 (2.00)	9.02 (2.00)	14.00 (0.82)	14.0 (0.82)	14.00 (0.82)
Male	0.51 (0.50)	0.51 (0.50)	0.51 (0.50)	0.51 (0.50)	0.51 (0.50)	0.51 (0.50)
Mother's years of ed	8.31 (3.86)	7.20 (3.59)	9.13 (3.85)	7.69 (3.95)	6.45 (3.62)	8.59 (3.94)
Mother's # kids	3.31 (1.80)	3.66 (2.04)	3.04 (1.55)	3.81 (2.07)	4.31 (2.32)	3.45 (1.77)
Num of observations	461,661	193,479	268,182	199,624	83,346	116,278

Note: Means with standard deviations in parentheses. Sample includes children in localities with less than 100,000 population. Mother's characteristics are available for 90% of observations.

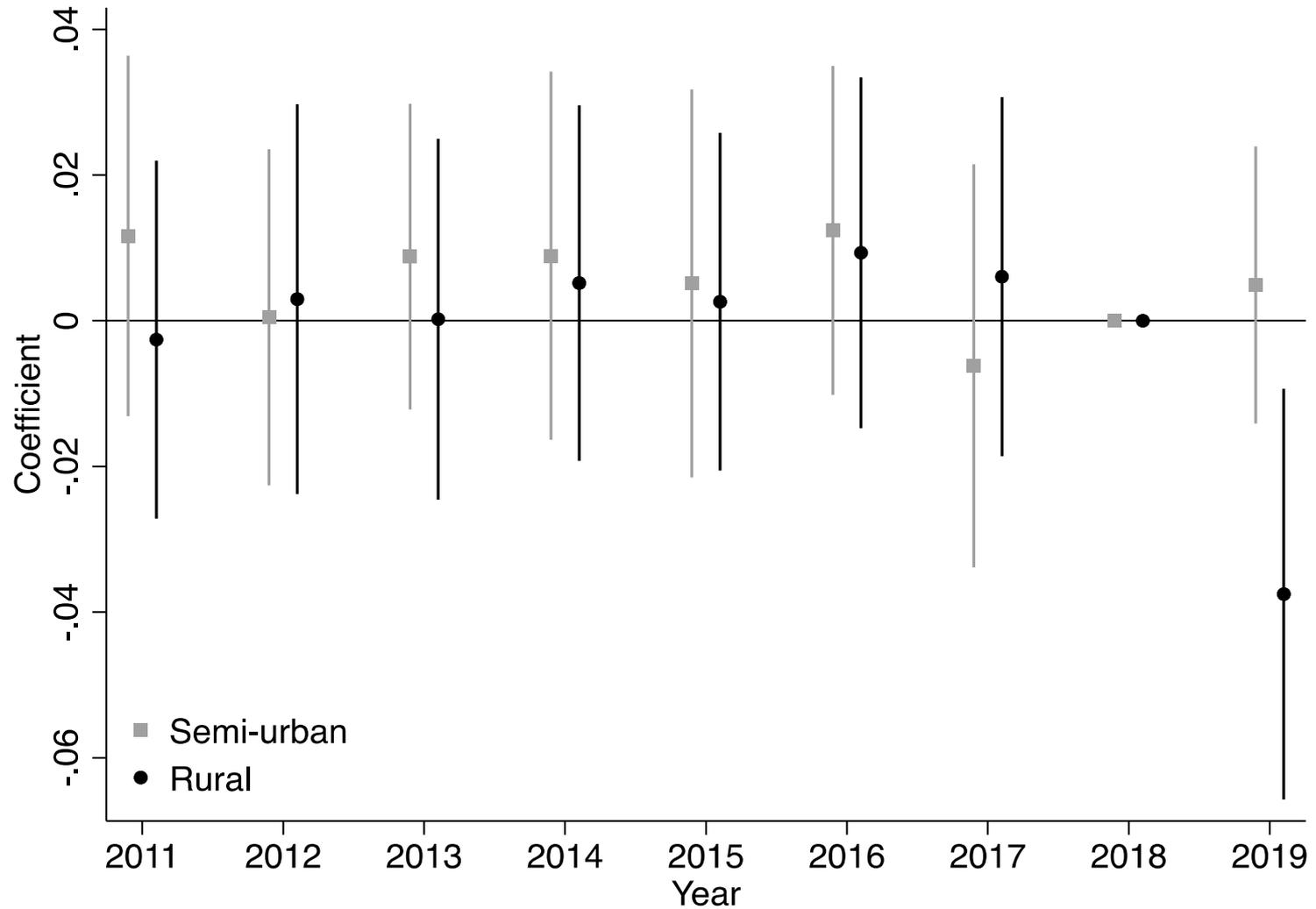
# Event Study by Age Group



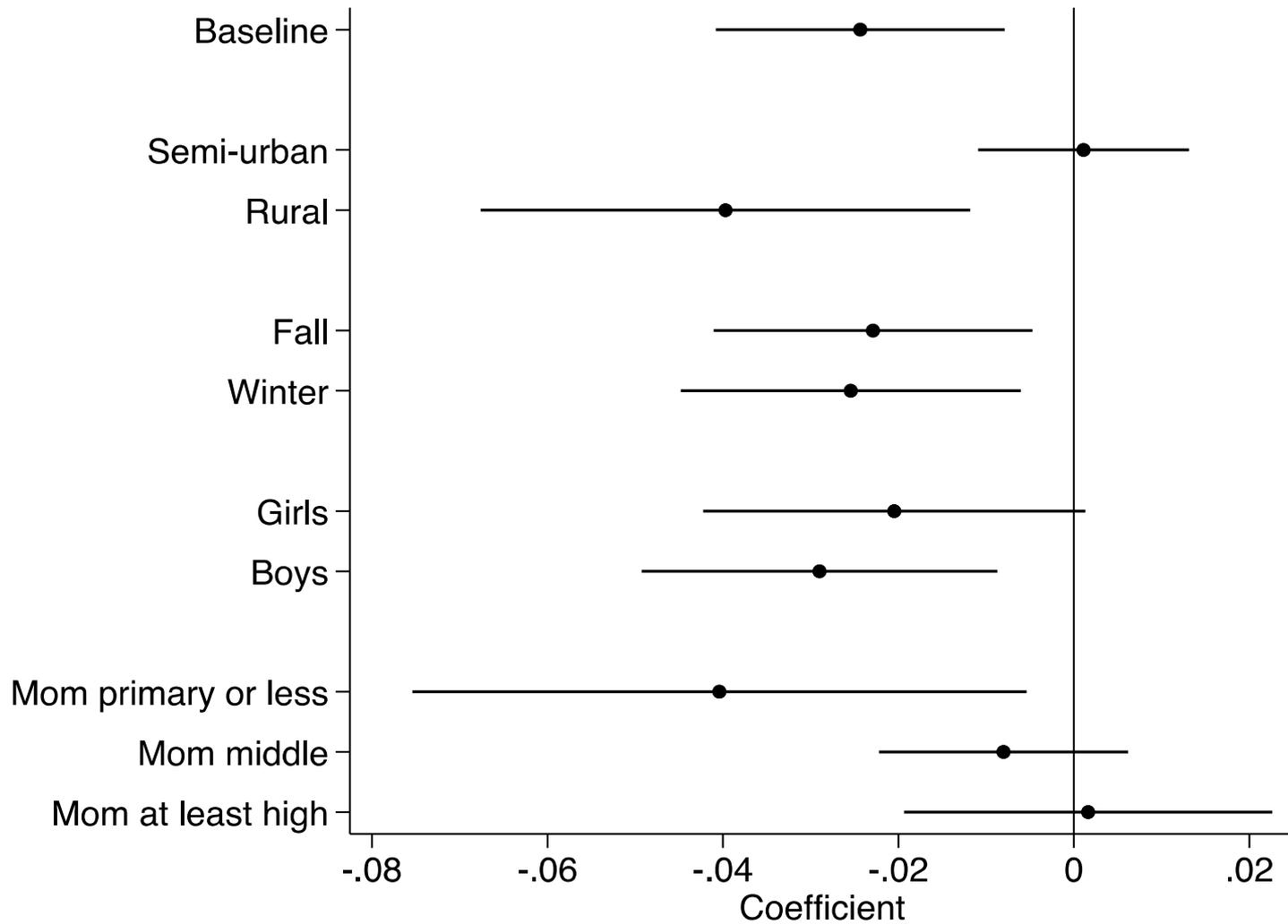
# Event Study by Age Group



# Event Study by Locality Size, 6-12 Year Olds



# Heterogeneous Effects, 6-12 Year Olds



# Summary

Interpretation: 95<sup>th</sup> vs. 5<sup>th</sup> percentile of Prospera ratio...

- Pooled: 2.6 %-point relative decline in enrollment
- Rural only: 4.8 %-point relative decline in enrollment

Age-specific estimates suggest effects open up at age 12

- Primary-to-secondary transition → same as Progresa effects in 1997-98

Health outcomes

- No time to report today, but interesting findings so far
- ↑ infant mortality in municipalities w/ ↑ Prospera share

Next steps

- Think hard about improving design, especially pre-trends in older kids
- Try to incorporate Becas Benito Juárez, but COVID closures get in the way
- More requests to Transparencia → hope to measure  $\Delta$  program support in \$