

# Online Appendix: English skills and labor market outcomes in Mexico

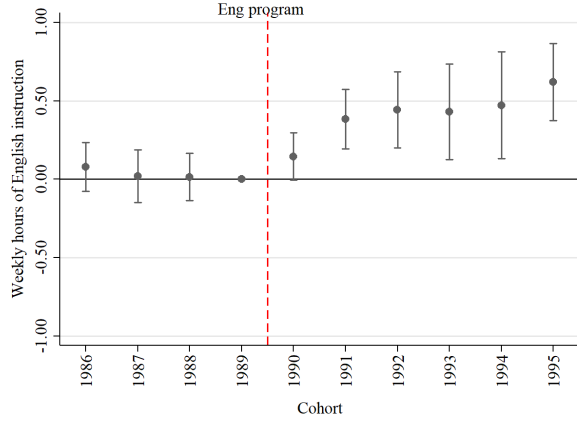
Oscar Galvez-Soriano  
University of Chicago

The first seven figures of this online appendix provide suggestive evidence on the validity of the parallel trend assumption for each Difference-in-Differences (DiD) specification that I propose. Each figure corresponds to each one of the seven (treatment) states that introduced English instruction in public elementary schools. The comparison group for each specification is one neighboring state, as described in Table A.1 of the main document.

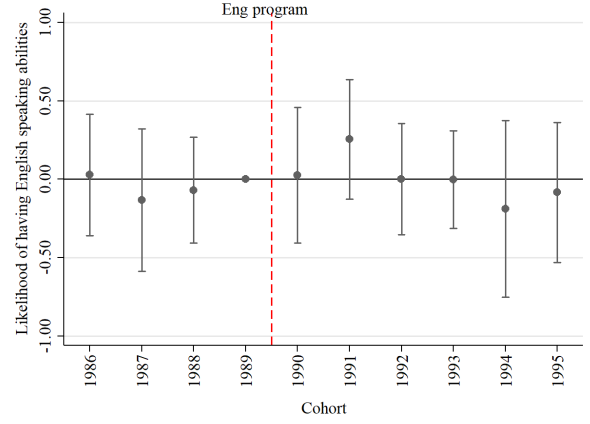
The last seven figures (from Figure 8 to Figure 14) of this online appendix are part of the robustness check where I change the comparison group to all neighboring states instead of only one state. The results provide suggestive evidence on the validity of the parallel trend assumption for all DiD specifications with different comparison groups.

In all figures, there are four outcomes of interest: exposure to English instruction (measured in hours per week); the probability of speaking English (measured as a dummy variable that takes the value of one if the individual  $i$  speaks English and zero otherwise); the probability of working for pay (also measured with a dummy variable); and the log of wages, which approximately measures the effect of English programs on the percentage change of wages.

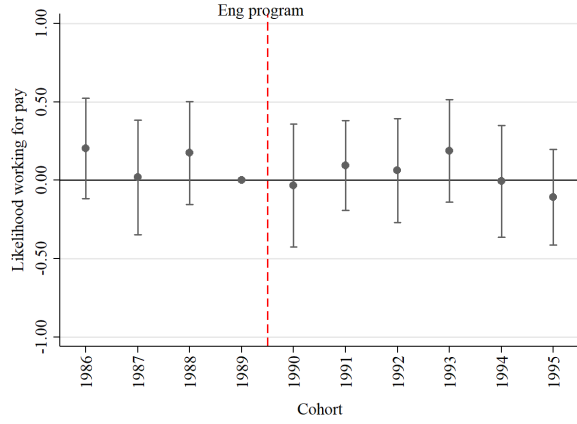
**Figure 1: Pre-trends test for Aguascalientes**



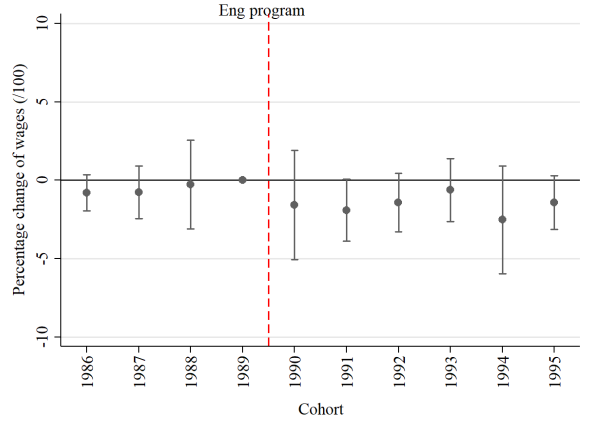
**(a) Hours of English**



**(b) Speak English**



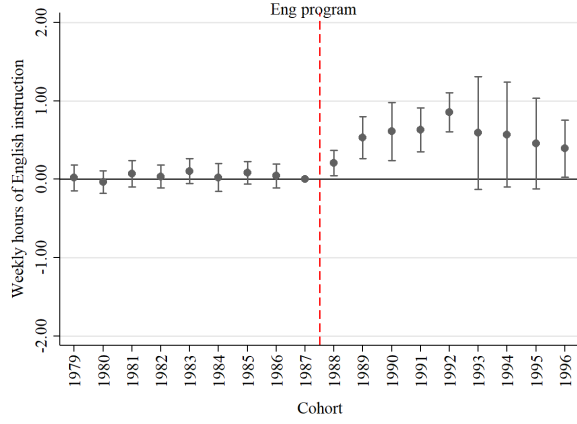
**(c) Paid work**



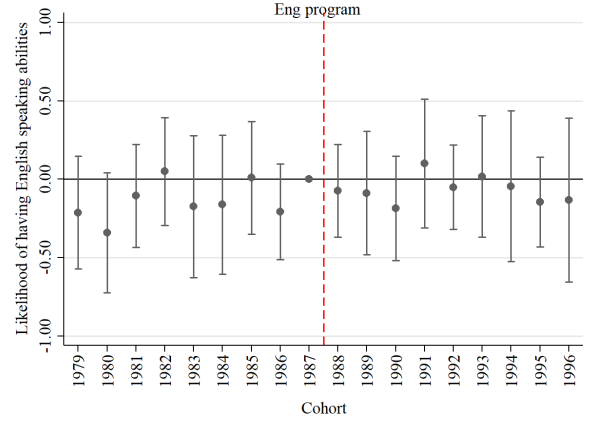
**(d) Ln(wage)**

*Note:* Plotted estimates represent the interaction terms between the treatment variable, and an indicator function for each cohort (1986-1995) in an event study type regression. The omitted cohort is 1989. The vertical dotted line indicates the introduction of the state English program in Aguascalientes. The no statistically significant estimates at the left of the vertical dotted line suggest parallel trends before the policy implementation.

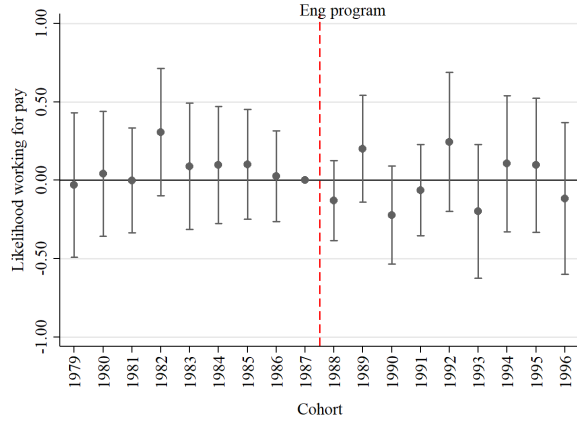
**Figure 2: Pre-trends test for Coahuila**



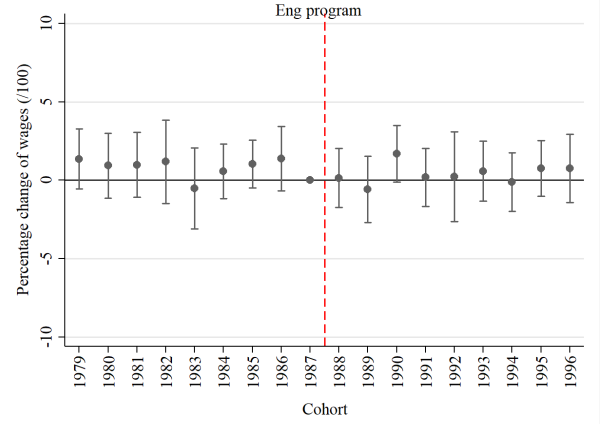
**(a) Hours of English**



**(b) Speak English**



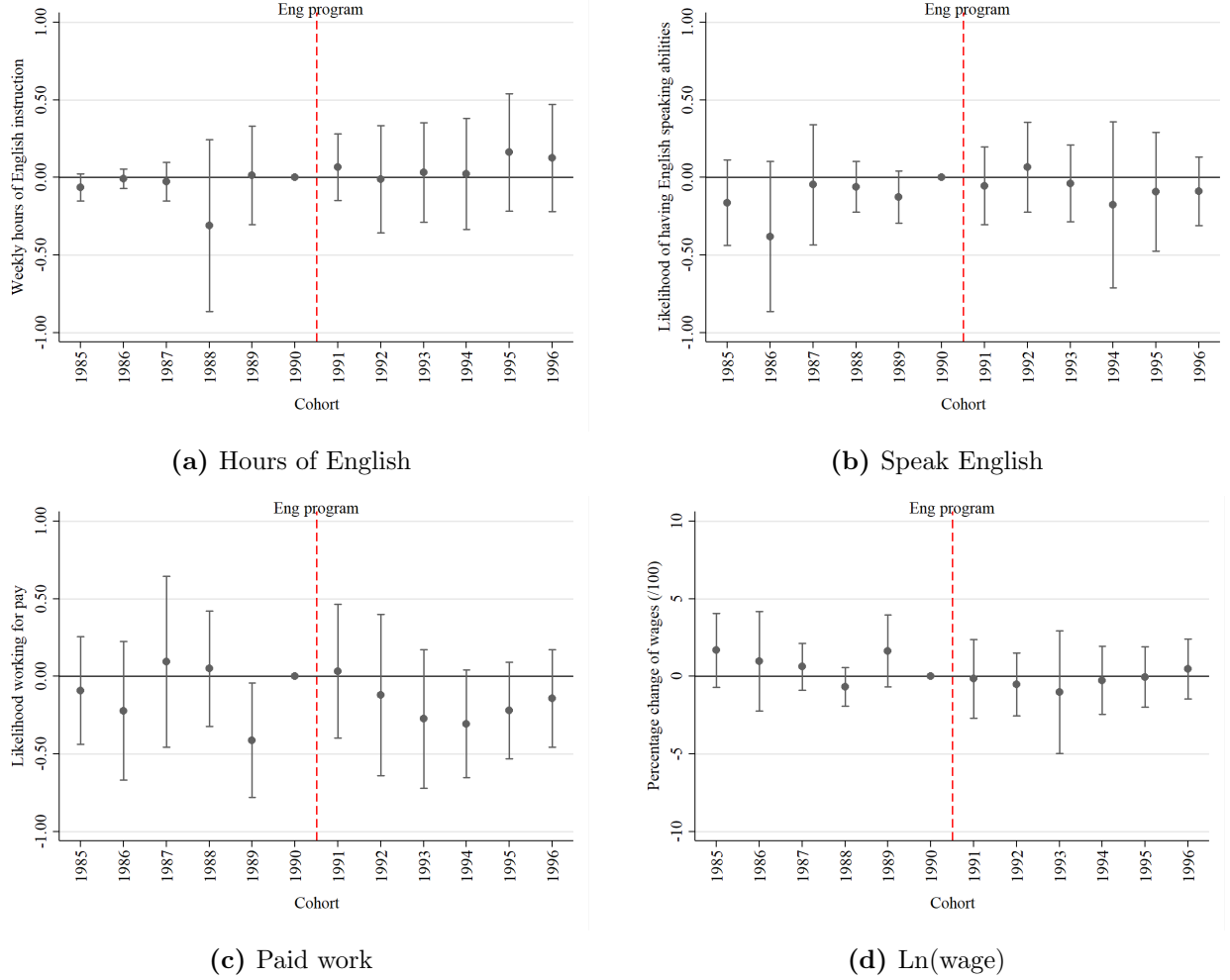
**(c) Paid work**



**(d) Ln(wage)**

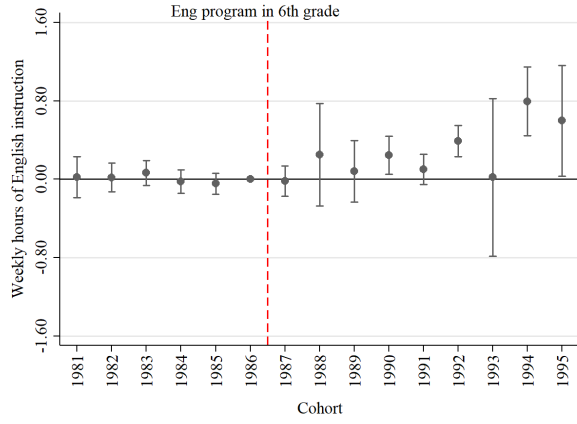
*Note:* Plotted estimates represent the interaction terms between the treatment variable and an indicator function for each cohort (1986-1995) in an event study type regression. The omitted cohort is 1989. The vertical dotted line indicates the introduction of the state English program in Coahuila. The no statistically significant estimates at the left of the vertical dotted line suggest parallel trends before the policy implementation.

**Figure 3: Pre-trends test for Durango**

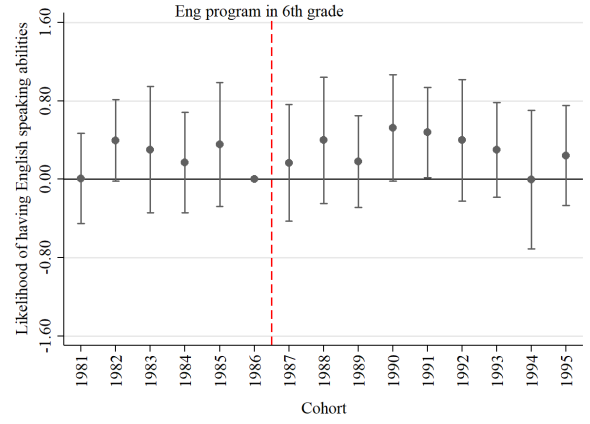


*Note:* Plotted estimates represent the interaction terms between the treatment variable and an indicator function for each cohort (1985-1996) in an event study type regression. The omitted cohort is 1990. The vertical dotted line indicates the introduction of the state English program in Durango. The no statistically significant estimates at the left of the vertical dotted line suggest parallel trends before the policy implementation.

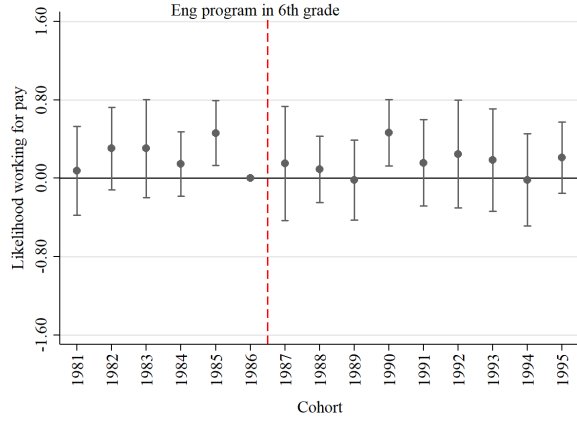
**Figure 4: Pre-trends test for Nuevo Leon**



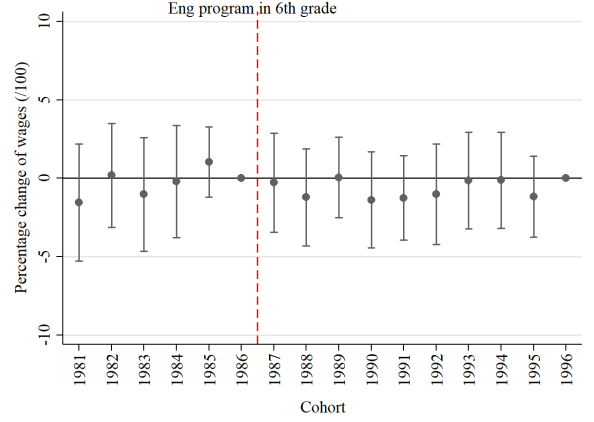
**(a) Hours of English**



**(b) Speak English**



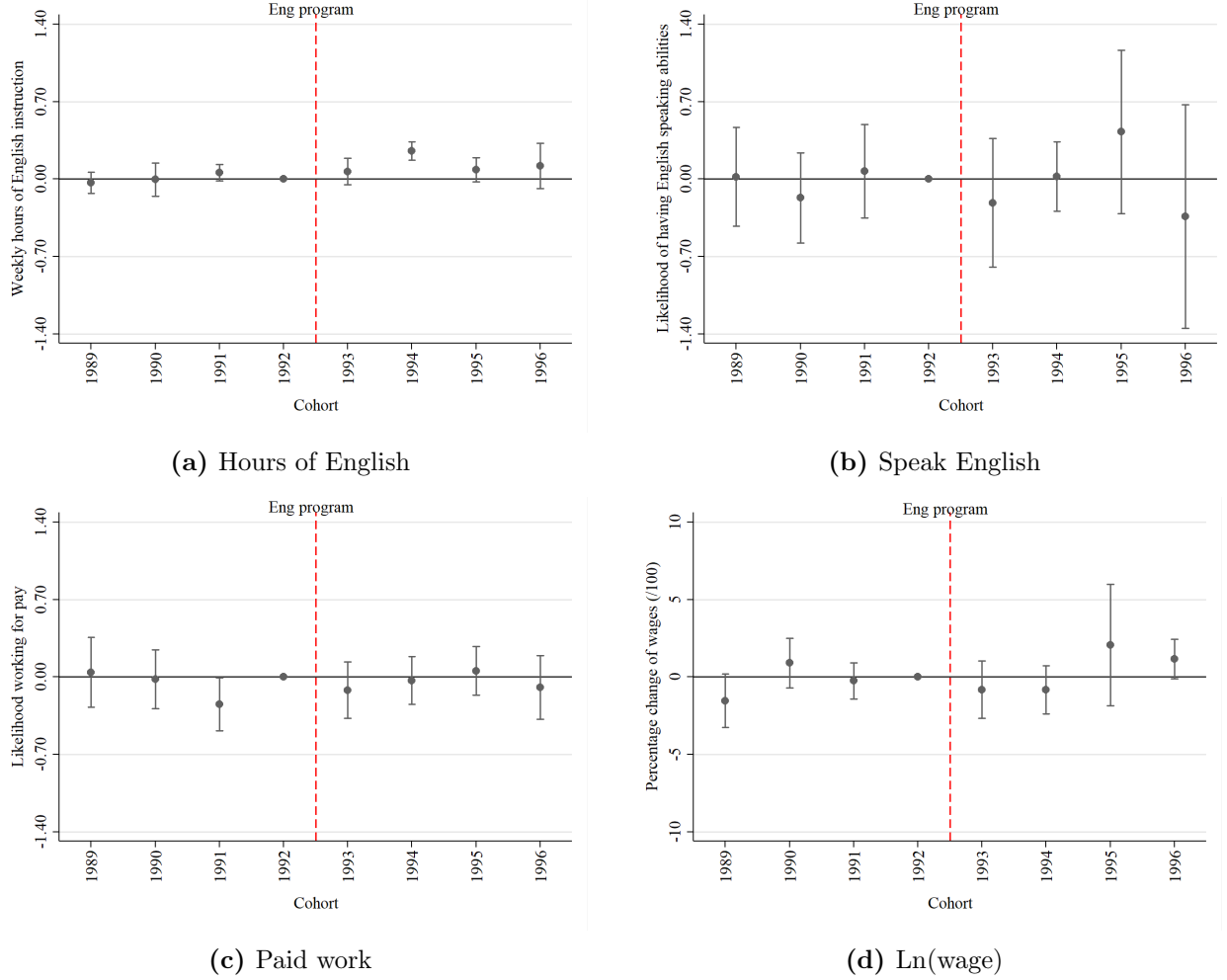
**(c) Paid work**



**(d) Ln(wage)**

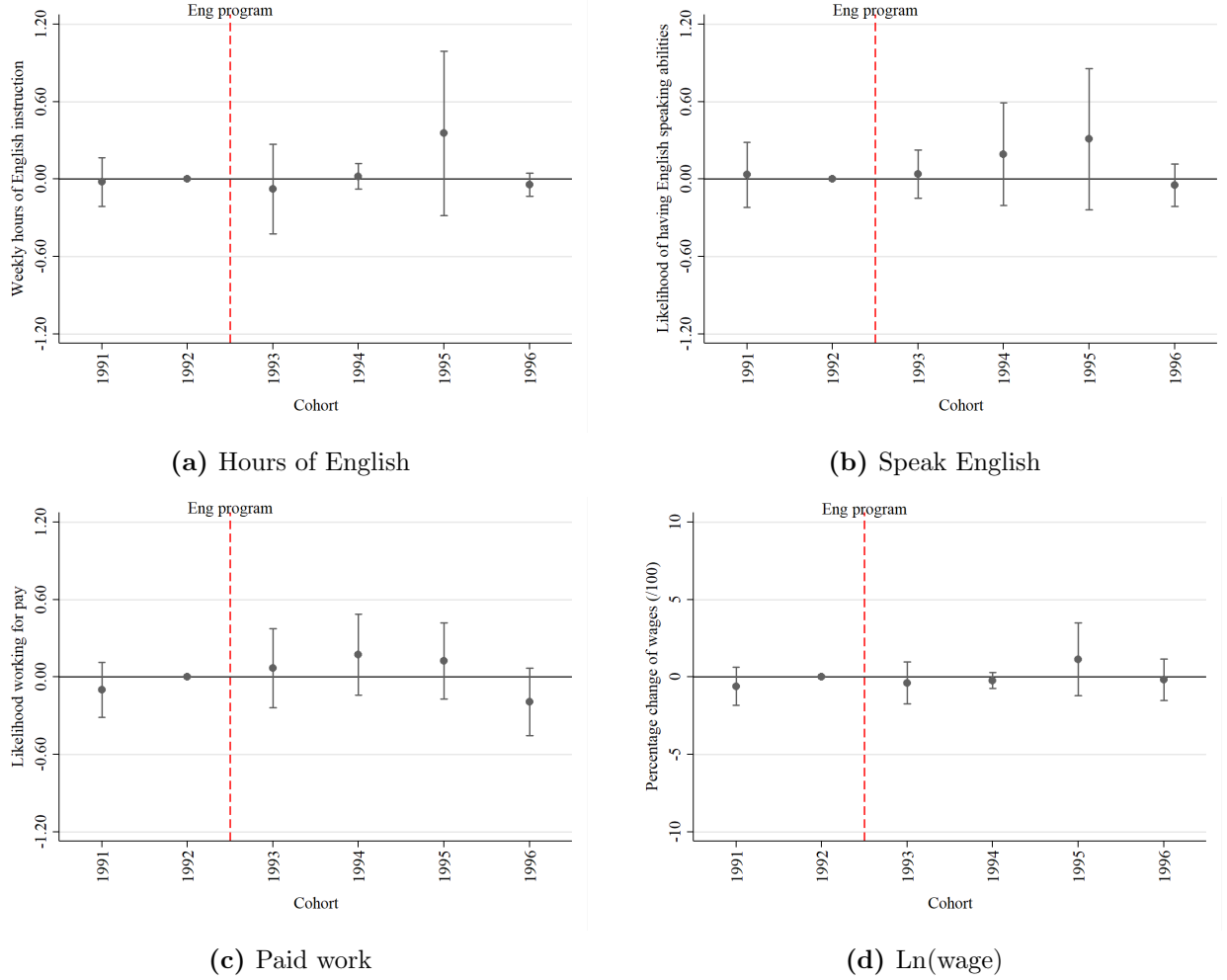
*Note:* Plotted estimates represent the interaction terms between the treatment variable and an indicator function for each cohort (1981-1995) in an event study type regression. The omitted cohort is 1986. The vertical dotted line indicates the introduction of the state English program in Nuevo Leon. The no statistically significant estimates at the left of the vertical dotted line suggest parallel trends before the policy implementation.

**Figure 5: Pre-trends test for Sinaloa**



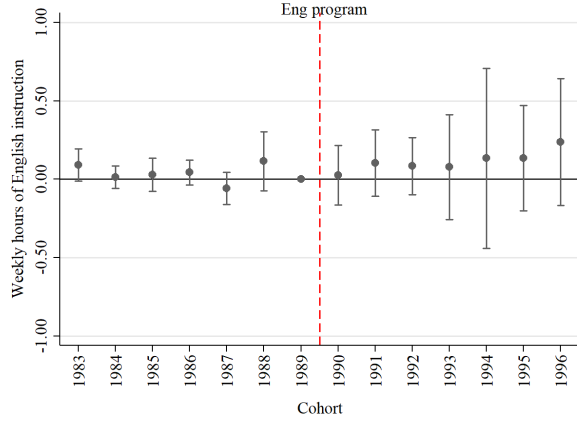
*Note:* Plotted estimates represent the interaction terms between the treatment variable and an indicator function for each cohort (1989-1996) in an event study type regression. The omitted cohort is 1991. The vertical dotted line indicates the introduction of the state English program in Sinaloa. The no statistically significant estimates at the left of the vertical dotted line suggest parallel trends before the policy implementation.

**Figure 6:** Pre-trends test for Sonora

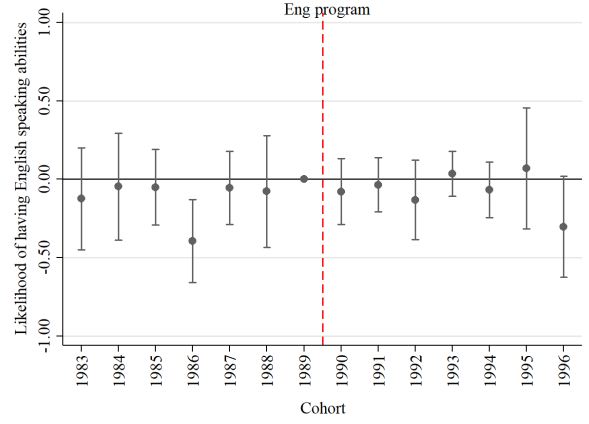


*Note:* Plotted estimates represent the interaction terms between the treatment variable and an indicator function for each cohort (1989-1996) in an event study type regression. The omitted cohort is 1991. The vertical dotted line indicates the introduction of the state English program in Sonora. The no statistically significant estimates at the left of the vertical dotted line suggest parallel trends before the policy implementation.

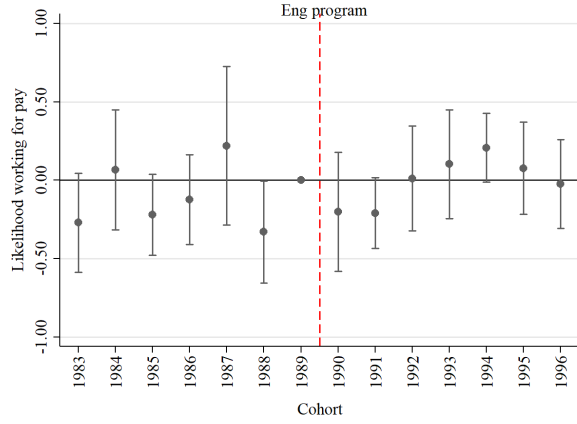
**Figure 7: Pre-trends test for Tamaulipas**



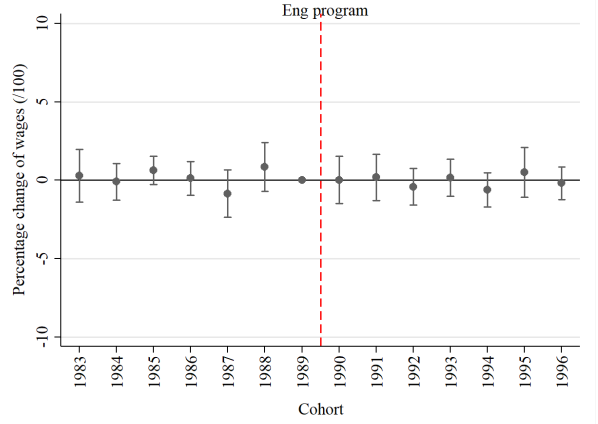
**(a) Hours of English**



**(b) Speak English**



**(c) Paid work**

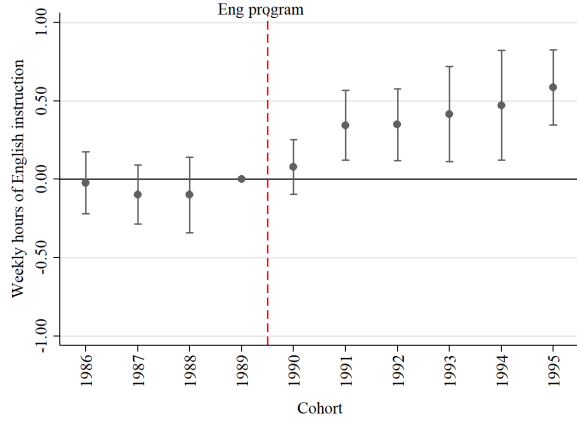


**(d) Ln(wage)**

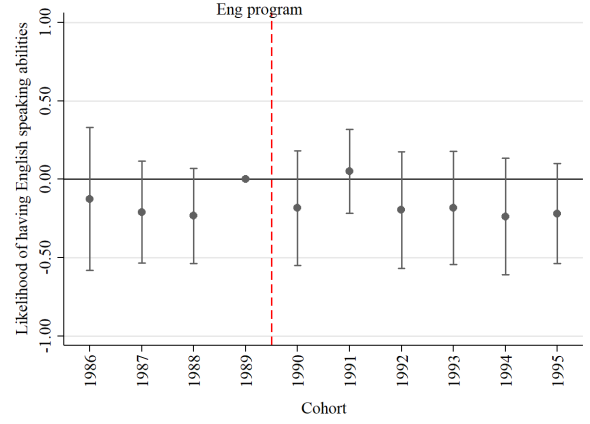
*Note:* Plotted estimates represent the interaction terms between the treatment variable and an indicator function for each cohort (1983-1996) in an event study type regression. The omitted cohort is 1991. The vertical dotted line indicates the introduction of the state English program in Tamaulipas. The no statistically significant estimates at the left of the vertical dotted line suggest parallel trends before the policy implementation.



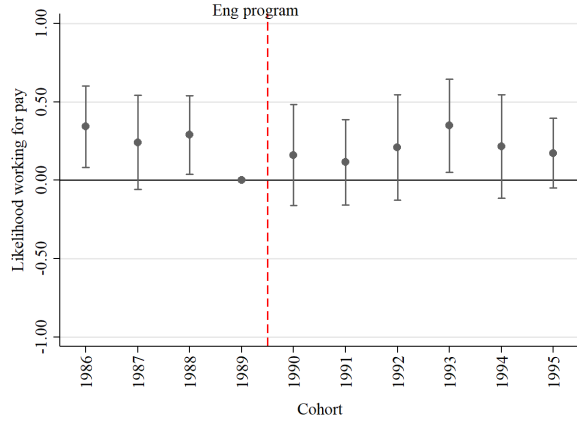
**Figure 8:** Pre-trends test for Aguascalientes (multiple comparison groups)



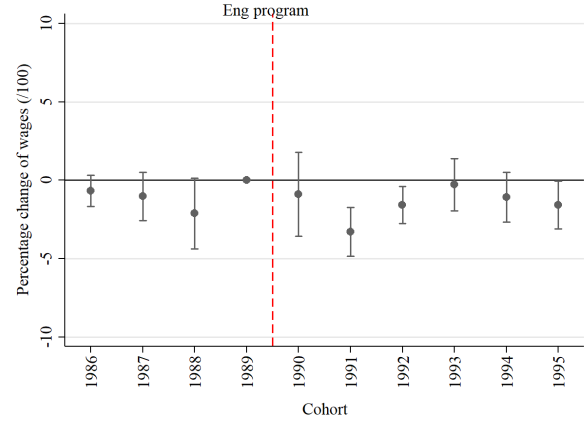
(a) Hours of English



(b) Speak English



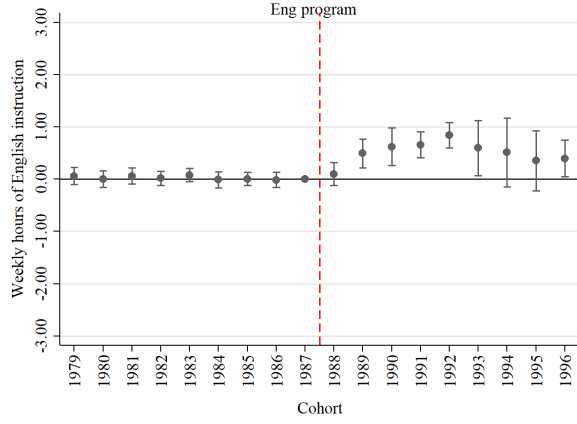
(c) Paid work



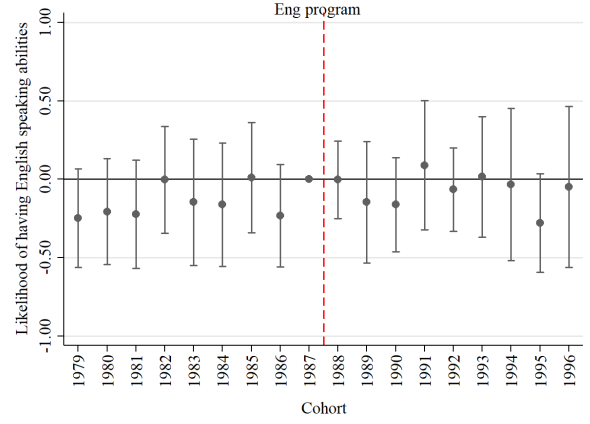
(d) Ln(wage)

*Note:* Plotted estimates represent the interaction terms between the treatment variable and an indicator function for each cohort (1986-1995) in an event study type regression. The omitted cohort is 1989. The vertical dotted line indicates the introduction of the state English program in Aguascalientes. The no statistically significant estimates at the left of the vertical dotted line suggest parallel trends before the policy implementation.

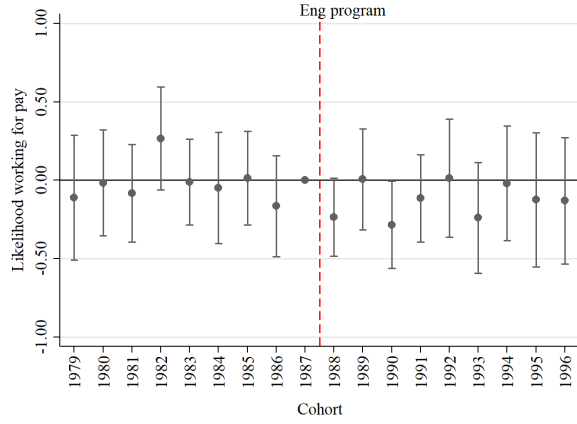
**Figure 9:** Pre-trends test for Coahuila (multiple comparison groups)



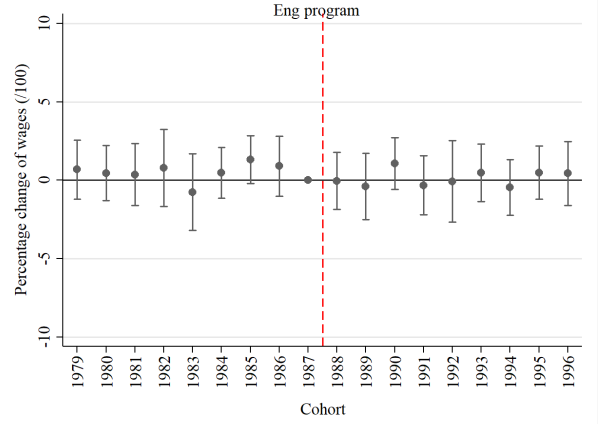
(a) Hours of English



(b) Speak English



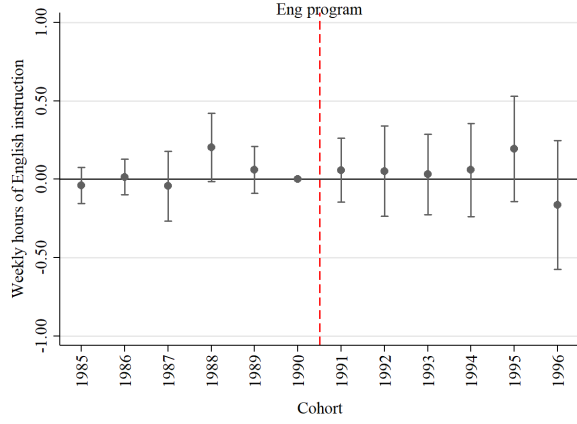
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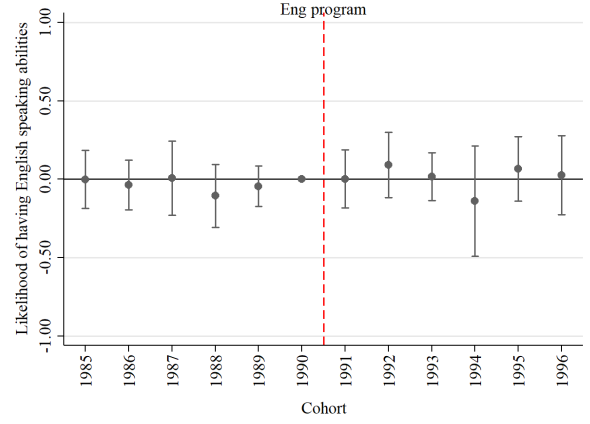
(d) Ln(wage)

*Note:* Plotted estimates represent the interaction terms between the treatment variable and an indicator function for each cohort (1986-1995) in an event study type regression. The omitted cohort is 1989. The vertical dotted line indicates the introduction of the state English program in Coahuila. The no statistically significant estimates at the left of the vertical dotted line suggest parallel trends before the policy implementation.

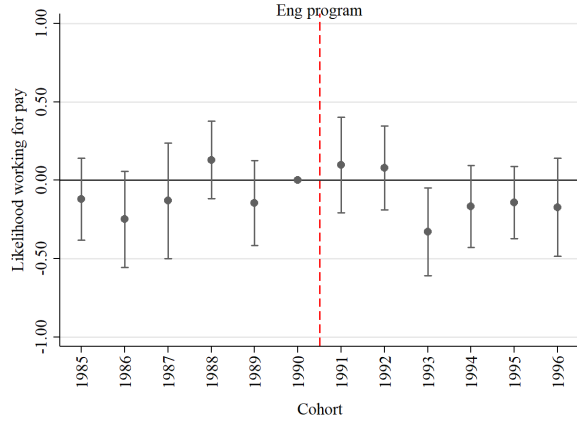
**Figure 10:** Pre-trends test for Durango (multiple comparison groups)



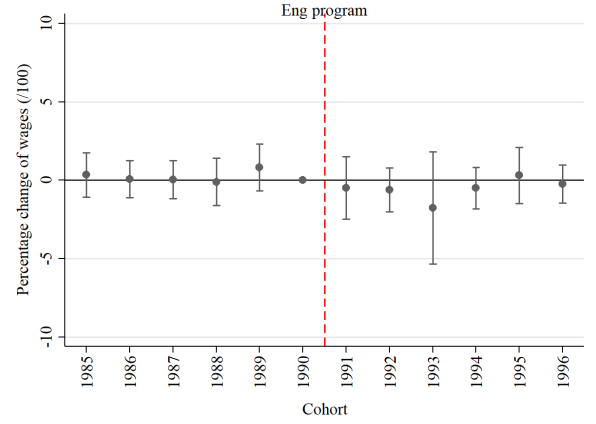
**(a)** Hours of English



**(b)** Speak English



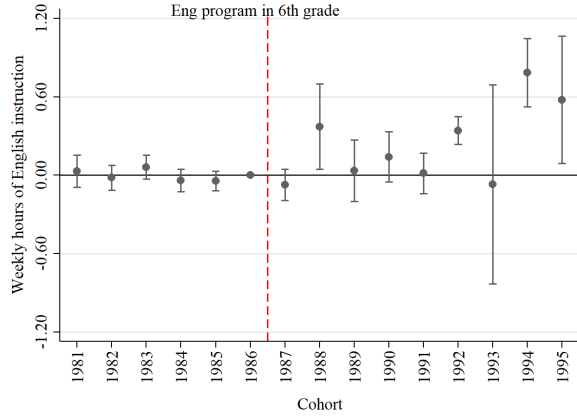
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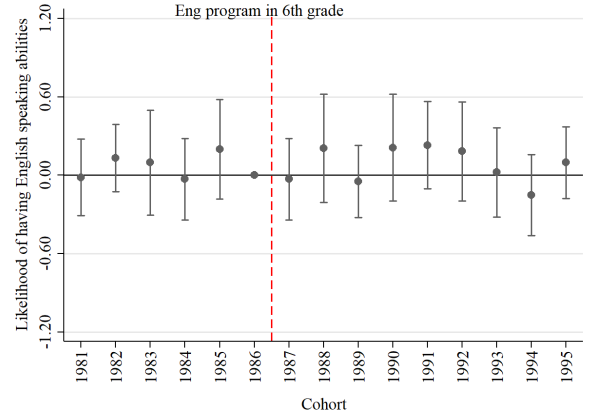
**(d)** Ln(wage)

*Note:* Plotted estimates represent the interaction terms between the treatment variable and an indicator function for each cohort (1985-1996) in an event study type regression. The omitted cohort is 1990. The vertical dotted line indicates the introduction of the state English program in Durango. The no statistically significant estimates at the left of the vertical dotted line suggest parallel trends before the policy implementation.

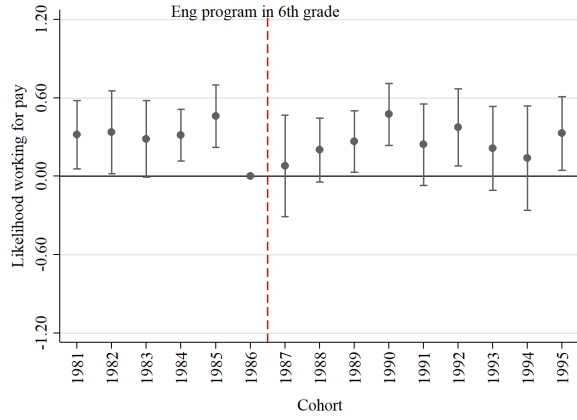
**Figure 11:** Pre-trends test for Nuevo Leon (multiple comparison groups)



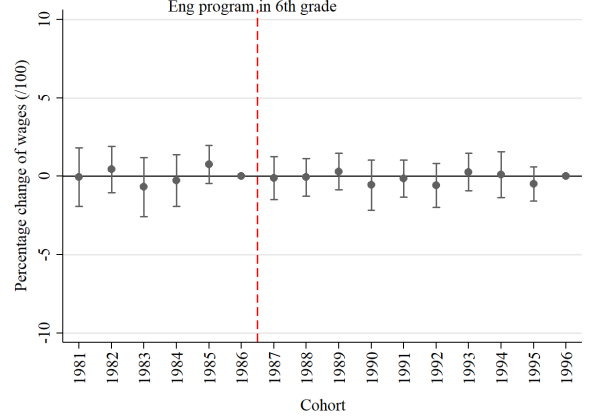
(a) Hours of English



(b) Speak English



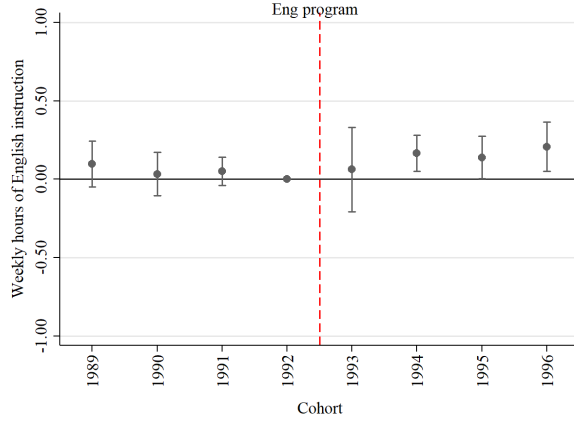
(c) Paid work



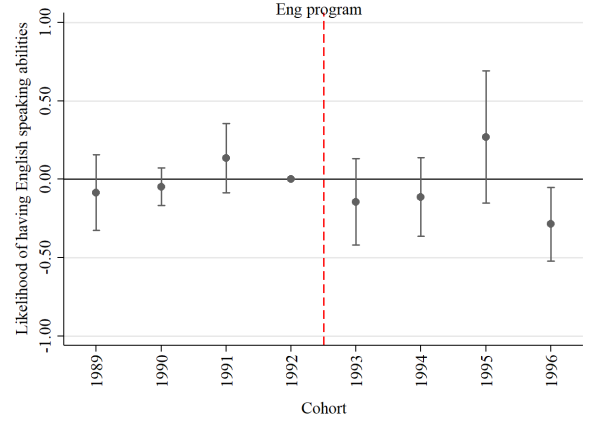
(d) Ln(wage)

*Note:* Plotted estimates represent the interaction terms between the treatment variable and an indicator function for each cohort (1981-1995) in an event study type regression. The omitted cohort is 1986. The vertical dotted line indicates the introduction of the state English program in Nuevo Leon. The no statistically significant estimates at the left of the vertical dotted line suggest parallel trends before the policy implementation.

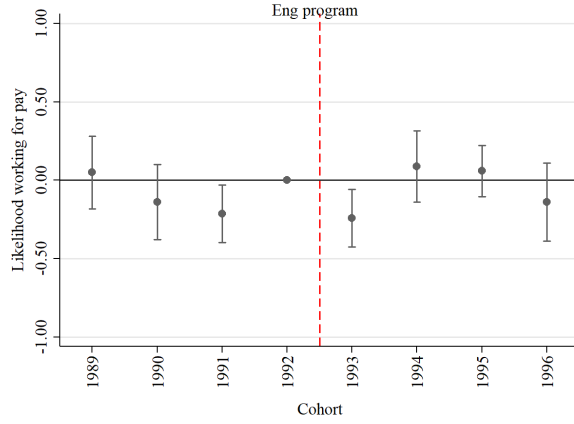
**Figure 12:** Pre-trends test for Sinaloa (multiple comparison groups)



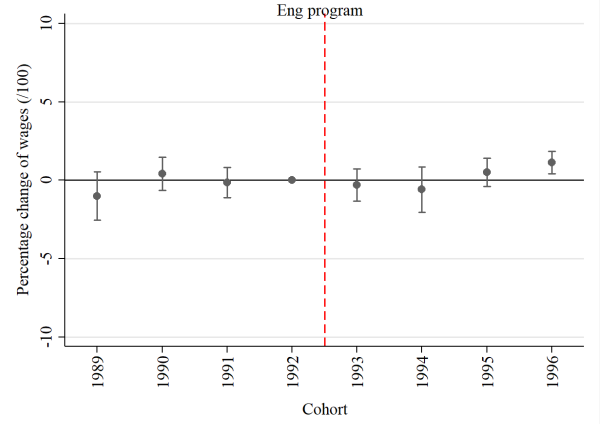
**(a)** Hours of English



**(b)** Speak English



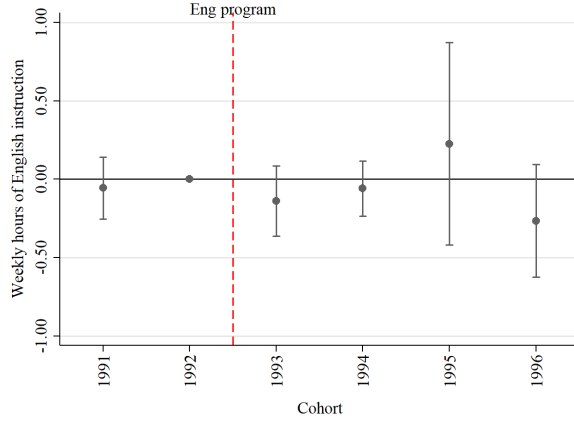
**(c)** Paid work



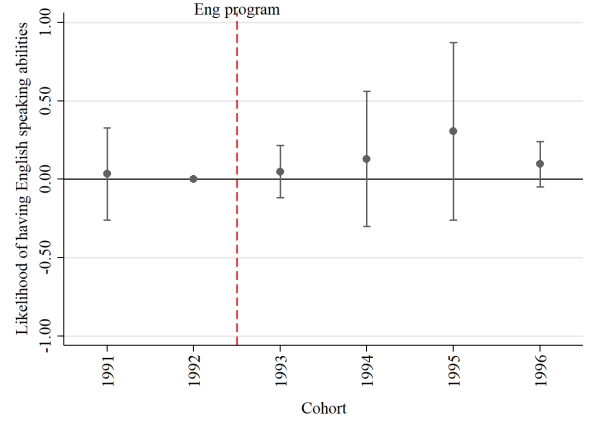
**(d)** Ln(wage)

*Note:* Plotted estimates represent the interaction terms between the treatment variable and an indicator function for each cohort (1989-1996) in an event study type regression. The omitted cohort is 1991. The vertical dotted line indicates the introduction of the state English program in Sinaloa. The no statistically significant estimates at the left of the vertical dotted line suggest parallel trends before the policy implementation.

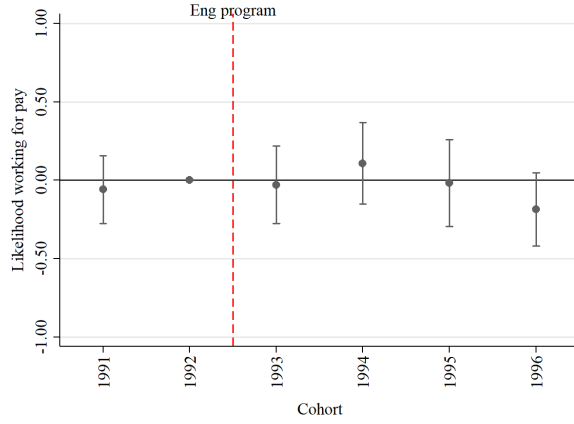
**Figure 13:** Pre-trends test for Sonora (multiple comparison groups)



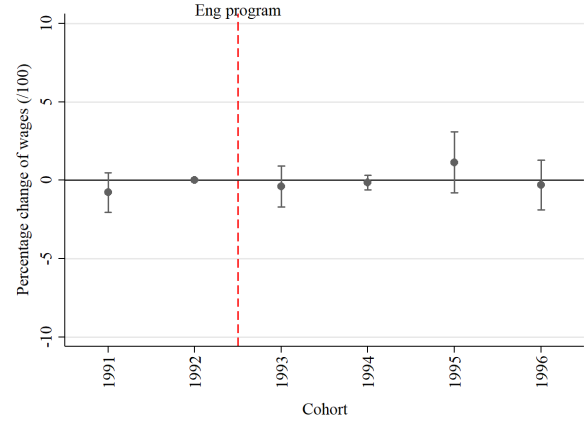
**(a)** Hours of English



**(b)** Speak English



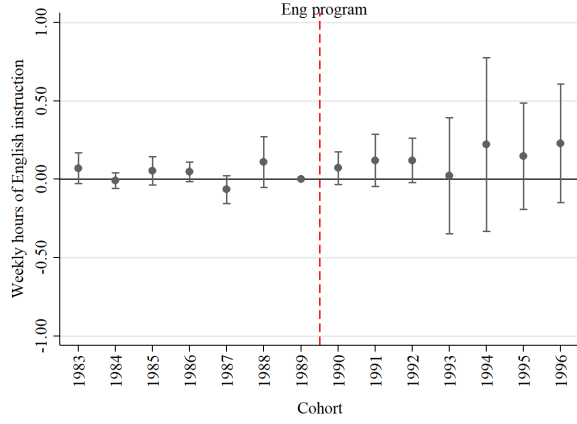
**(c)** Paid work



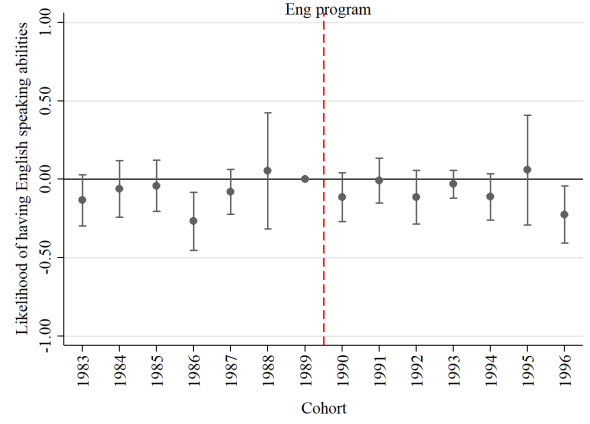
**(d)** Ln(wage)

*Note:* Plotted estimates represent the interaction terms between the treatment variable and an indicator function for each cohort (1989-1996) in an event study type regression. The omitted cohort is 1991. The vertical dotted line indicates the introduction of the state English program in Sonora. The no statistically significant estimates at the left of the vertical dotted line suggest parallel trends before the policy implementation.

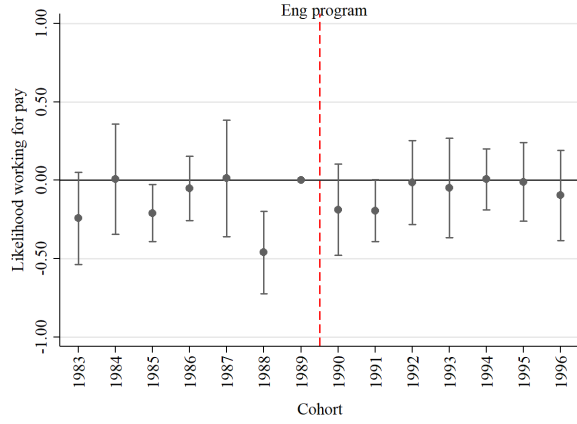
**Figure 14:** Pre-trends test for Tamaulipas (multiple comparison groups)



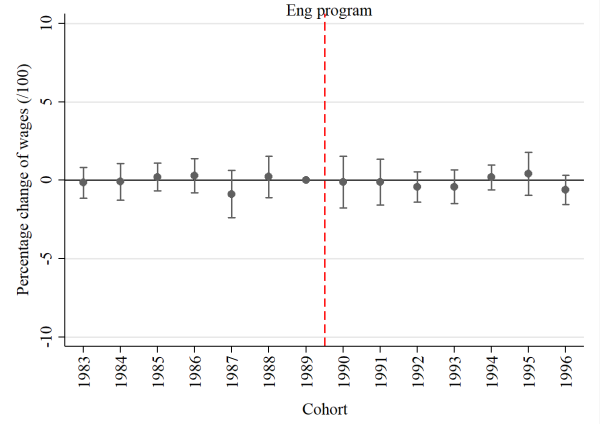
(a) Hours of English



(b) Speak English



(c) Paid work



(d) Ln(wage)

*Note:* Plotted estimates represent the interaction terms between the treatment variable and an indicator function for each cohort (1983-1996) in an event study type regression. The omitted cohort is 1991. The vertical dotted line indicates the introduction of the state English program in Tamaulipas. The no statistically significant estimates at the left of the vertical dotted line suggest parallel trends before the policy implementation.