



So Close to Mexico: Economic Spillovers Along the Texas–Mexico Border

Roberto Coronado
El Paso Branch
FRB Dallas

Marycruz De Leon
El Paso Branch
FRB Dallas

Eduardo Saucedo
College of Busn. Admin.
UT-Pan American

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Outline

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2. Why is this important?
3. What do we know about maquiladora cross-border impacts?
4. Our model
5. Empirical results (preliminary)
6. Concluding remarks and future research



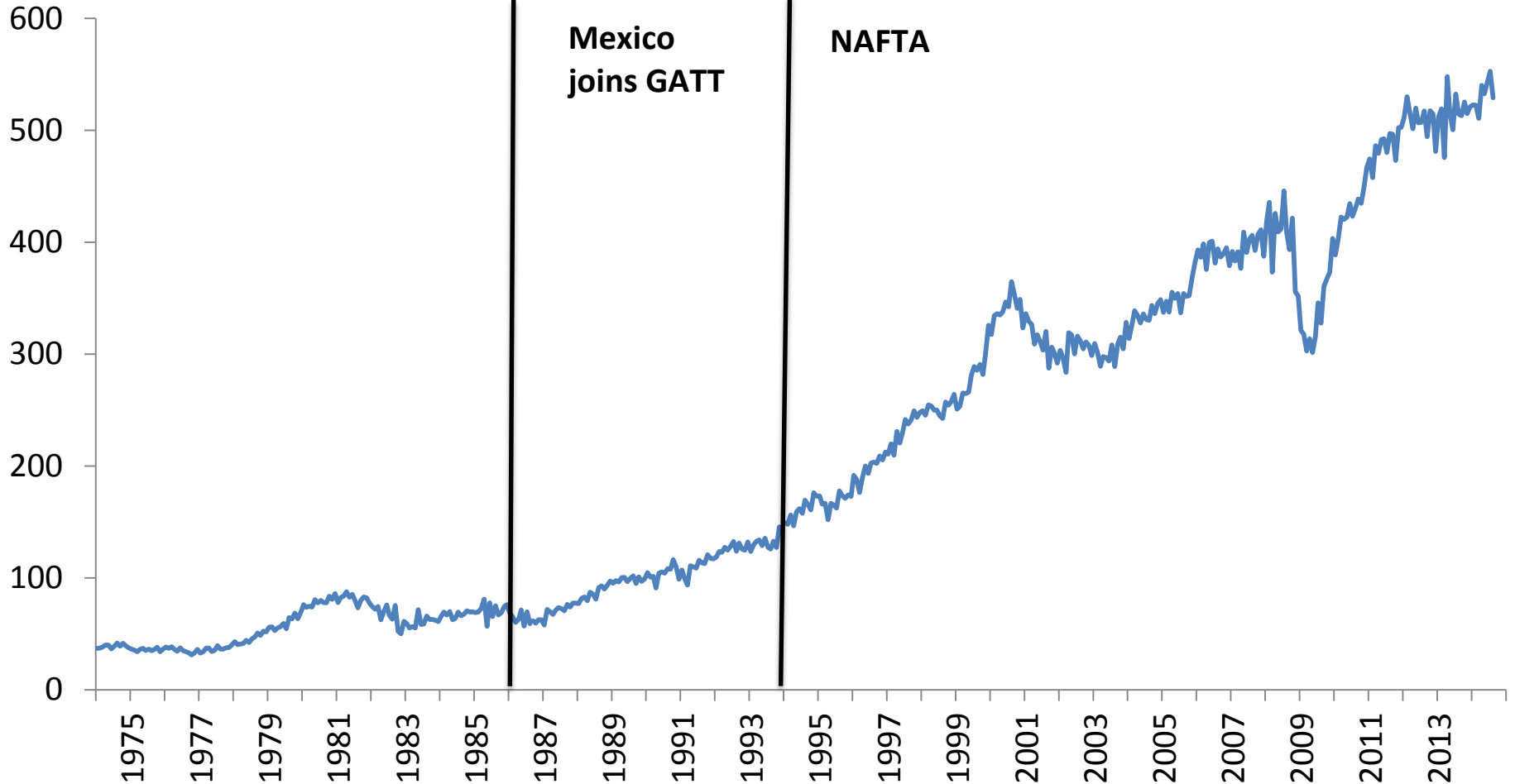
Background on the maquiladoras

- Started in the mid-1960s with the end of the Bracero Program
- Important industry to the Mexican economy:
 - Employs 4.5% of total employment
 - Represents 65% of all manufacturing jobs
 - Accounts for half of total exports
- Maquiladoras have been a major economic engine along the U.S.-Mexico border



U.S.-Mexico bilateral trade flows

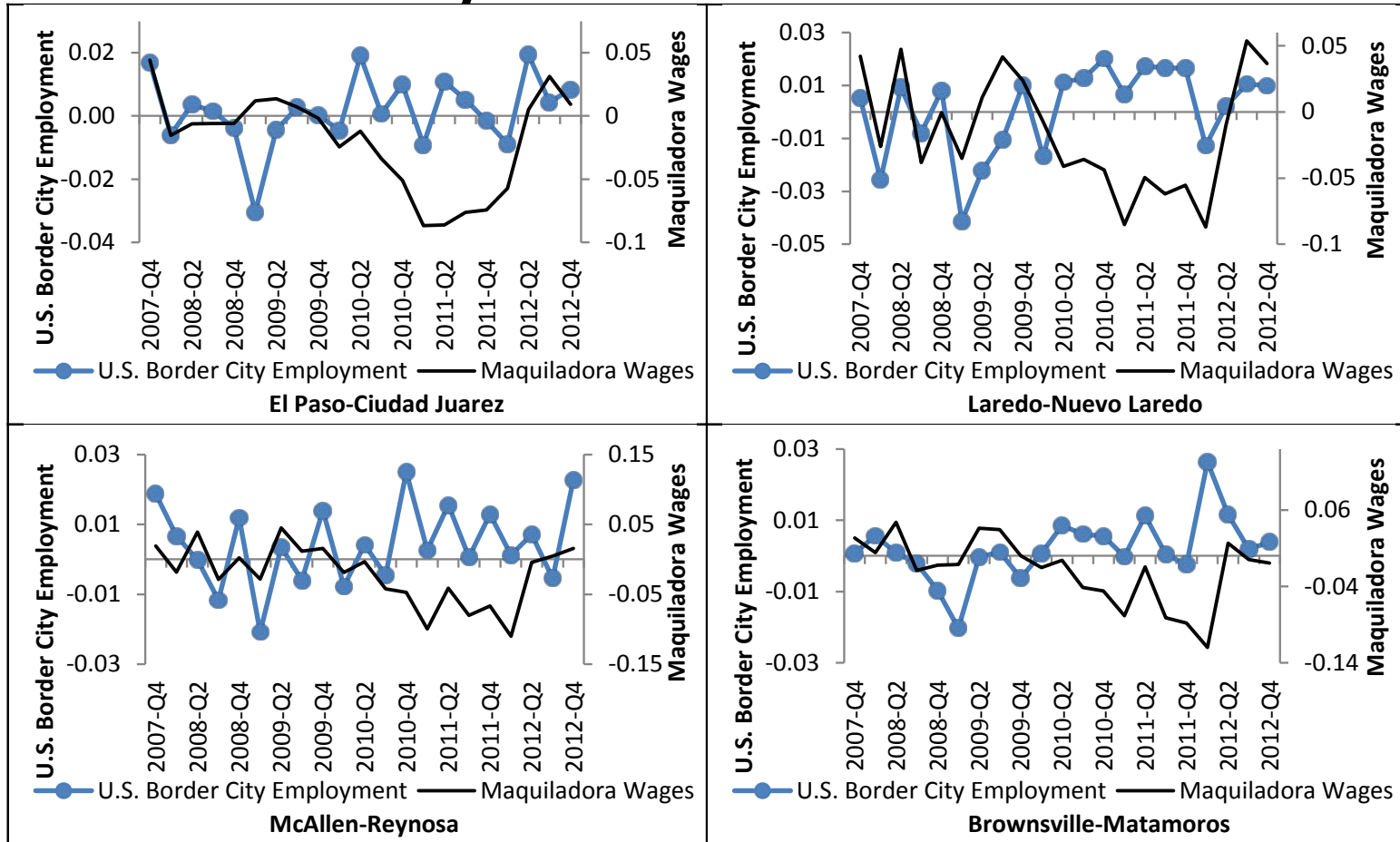
Billions of real \$, SA, annual rates



Source: U.S. Census Bureau, Bureau of Labor Statistics



Texas-Mexico border economic synchronization



Why is this important?

- U.S.-Mexico economic integration has intensified
- Border region and the maquiladora industry play a critical role
- The question we try to answer here:

How important are maquiladoras to employment growth in U.S. border cities?



What do we know about cross-border maquiladora impacts?

- Empirical evidence suggests that maquiladoras play a crucial role for U.S. border cities.
- We know that maquiladoras:
 - boost population, employment, and output growth
 - foster cross-border retail activity
 - have brought suppliers to the border region
- Most studies are region- and time-specific



First comprehensive study

- Hanson [2001] provided the first comprehensive research effort to estimate the impact of maquiladoras across the entire U.S.-Mexico border
- Hanson finds that a 10% increase in maquiladora activity in Mexican border cities leads to a 1.1% to 2.0% employment increase in U.S. border cities side:
 - 2.0% to 2.7% in wholesale trade
 - 1.7% to 2.7% in transportation
 - 1.2% to 2.1% in manufacturing
 - 1.0% to 1.8% in retail trade



Our previous research

- We replicated Hanson's study using data for 1990-2006
- We find that we find that a 10% increase in maquiladora output leads to a 0.5% to 0.9% increase in employment for U.S. border cities
- Texas border cities benefit the most
- Maquiladora cross-border impacts concentrate on service sectors



Our model

- We estimate labor demand equations for employment in U.S. border cities
- We use quarterly data from 2007:Q2 – 2012:Q4
- Explanatory variables include:
 - Alternative wage
 - National employment
 - State personal income
 - Maquiladora wages in neighboring city (proxy for maquiladora output)
 - Time- and fixed-effects
- We run regressions using OLS and IV



U.S.-Mexico border city-pairs

	State	U.S. border city	Mexican border city
1	California	San Diego	Tijuana
2		Calexico	Mexicali
3	Arizona	Nogales	Nogales
4	Texas	El Paso	Ciudad Juarez
5		Del Rio	Ciudad Acuna
6		Laredo	Nuevo Laredo
7		McAllen	Reynosa
8		Brownsville	Matamoros

Notes: All U.S. border cities are Metropolitan Statistical Areas (MSAs) according to U.S. Census Bureau.



Our (preliminary) results indicate...

- Our main empirical result suggests that a 10% increase in maquiladora wages in Mexican border cities leads to a 1.1% to 1.5% increase in employment in U.S. border cities
- The maquiladora impact for Texas border cities is somewhat stronger: 1.3% to 1.6%
- We also find significant differences across sectors



Empirical results by sector

	U.S. border cities	Texas border cities
Construction	4.8***	4.8***
Manufacturing	1.5*	2.2***
Transportation	1.7*	1.6***
Wholesale trade	-0.4	0.4
Retail trade	1.1	0.6
Finance, insurance and real estate	1.5	1.5***
Personal and business services	0.1	0.3

Note: This table shows elasticity coefficients by sector. *** indicates significant at 1 percent level; ** indicates significant at 5 percent level; and * indicates significant at the 10 percent level



To sum up

- We find that maquiladoras continue to drive significant job growth in U.S. border cities
- Texas border cities benefit more from maquiladoras
- Maquiladora impact is concentrated on construction, manufacturing, transportation and FIRE sectors
- Our empirical results are consistent with previous research



Caveats and future research

- Our analysis has two main shortcomings:
 1. Maquiladora wages as a proxy for maquiladora output or aggregate economic activity
 2. Limited time span: 2007:Q2-2012:Q4
- We are currently exploring other options to track maquiladora activity
- If we are able to increase the *degrees of freedom*, we can obtain more detailed (and more robust) empirical findings

