

# Adjusting to an Era of Farm Labor Scarcity

## Challenges and Opportunities

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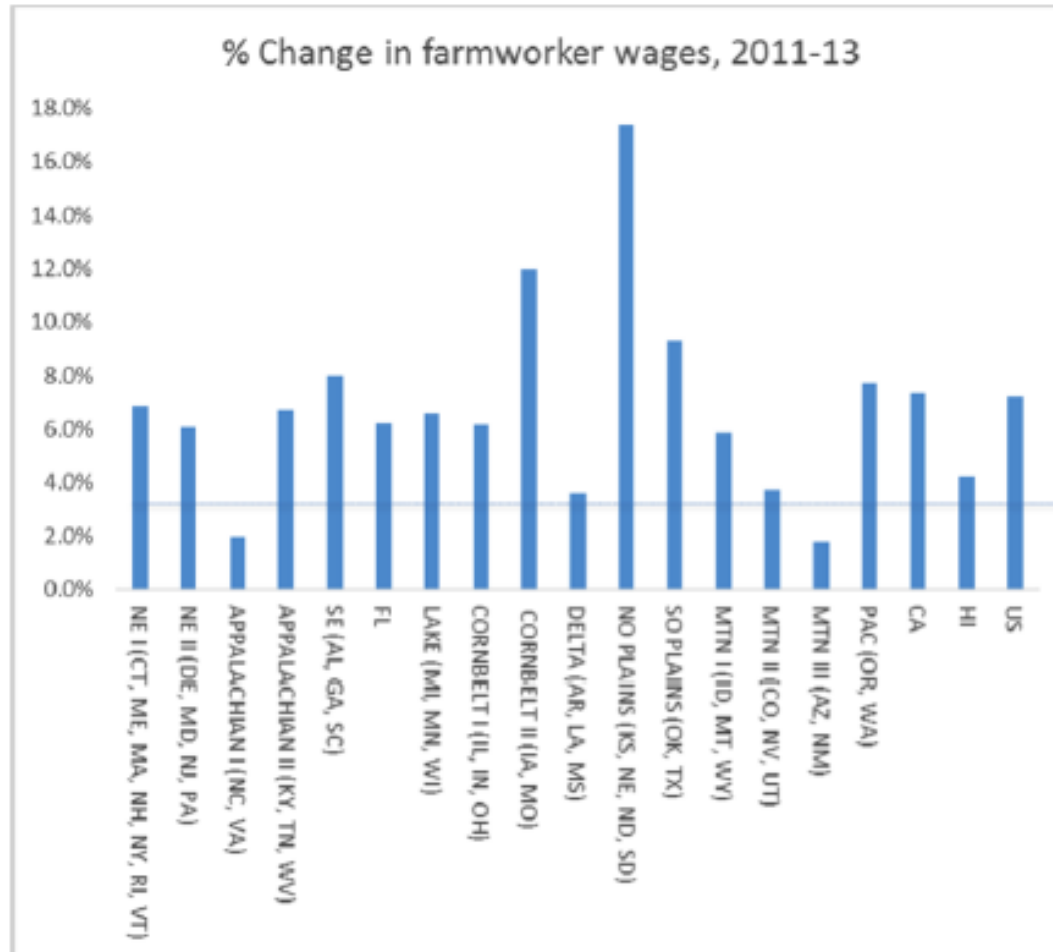
*Chicago, Federal Reserve Bank  
November 17, 2015*



# Rural Mexico's Farm Labor Supply

- Rural Mexico is the primary source of hired labor for U.S. farms
- Throughout the 20<sup>th</sup> century, rural Mexico has provided an elastic supply of farm labor to the U.S.
  - Enabled labor-intensive fruit, vegetable, and horticultural (FVH) production to expand (Martin, 2003)
  - Discouraged labor-saving technological change
  - Created challenges to farm labor organizing
- Is the farm labor supply from rural Mexico becoming less elastic? Are we reaching the end of farm labor abundance?

# Rising U.S. Farm Wages



CPI Change:  
3.45%

# ...And things are changing in Mexico too

## Farm Workers are Demanding Higher Wages in Mexico

**Baja farm workers push for more pay: San Quintin farm workers launch bus caravan as they seek higher wages, benefits**

-Sandra Dibble, UTSanDiego, March 28, 2015



(Misael Virgen/ UT San Diego)

**Pickers back at work in Baja California, but animosity remains**

-Richard Marosi, LATimes, March 30, 2015

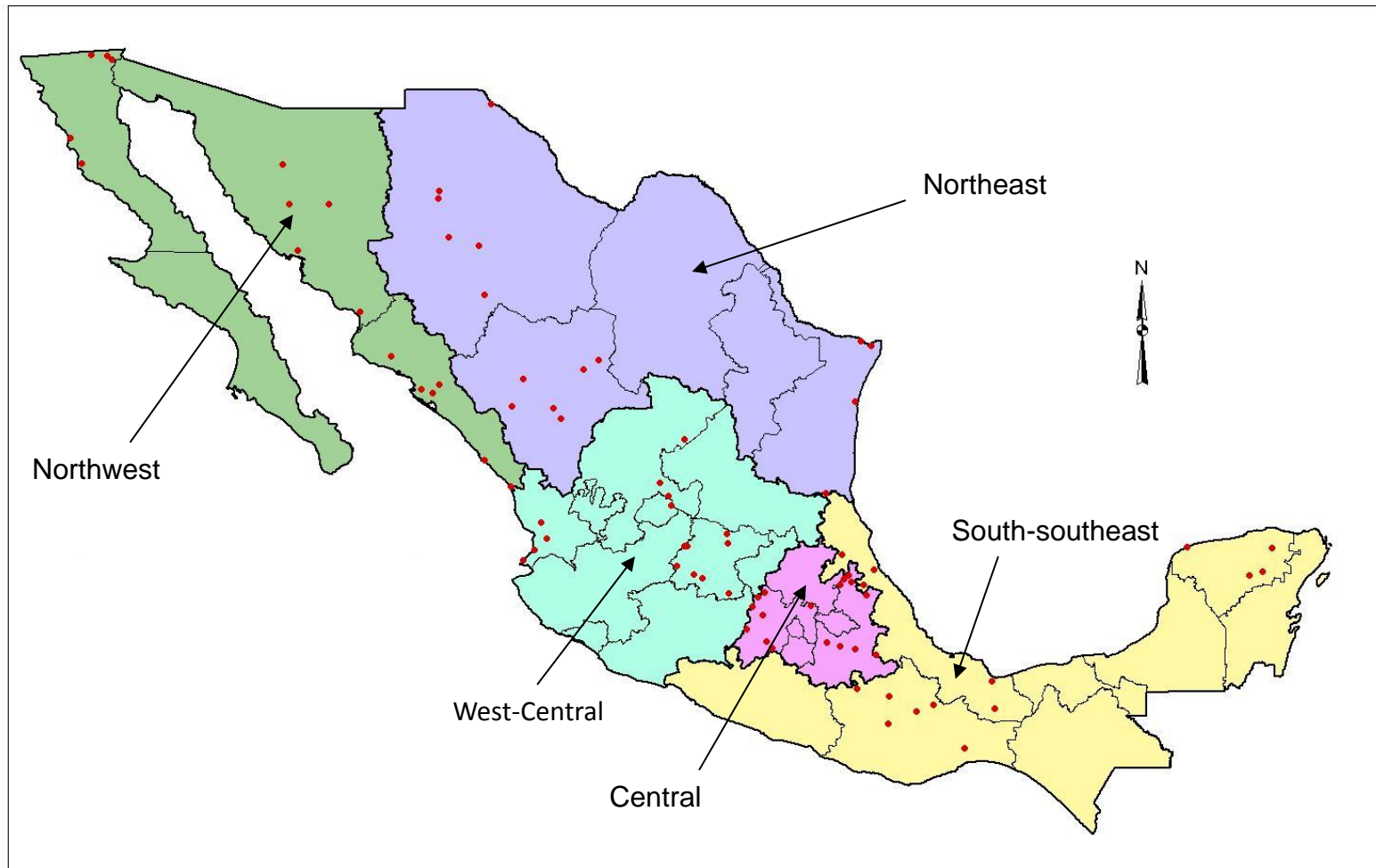


Farmworkers harvest strawberries last week in Baja California. A strike is winding down Monday after nearly two weeks.

(Don Bartletti / Los Angeles Times)

# The UCD-COLMEX Mexico National Rural Household Survey (ENHRUM)

ENCUESTA NACIONAL A HOGARES RURALES DE MÉXICO (ENHRUM), 2003  
REGIONES Y DISTRIBUCIÓN GEOGRÁFICA DE COMUNIDADES ENCUESTADAS



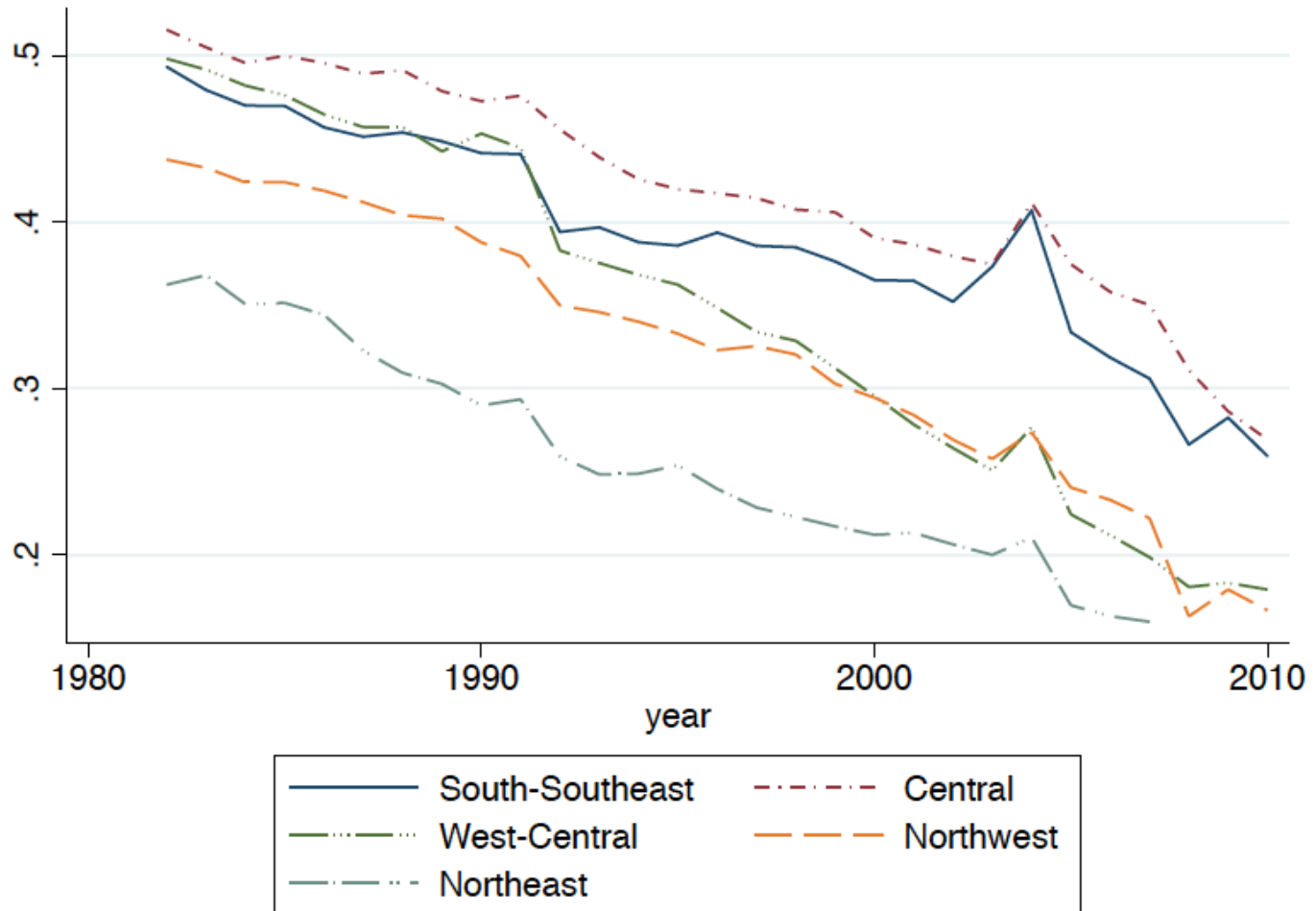
Fuente: Elaborado en el Laboratorio de Análisis Espacial, Coordinación de Servicios de Cómputo, El Colegio de México con base en datos de la ENHRUM, 2003.

# Key Findings from Dynamic Panel Analysis

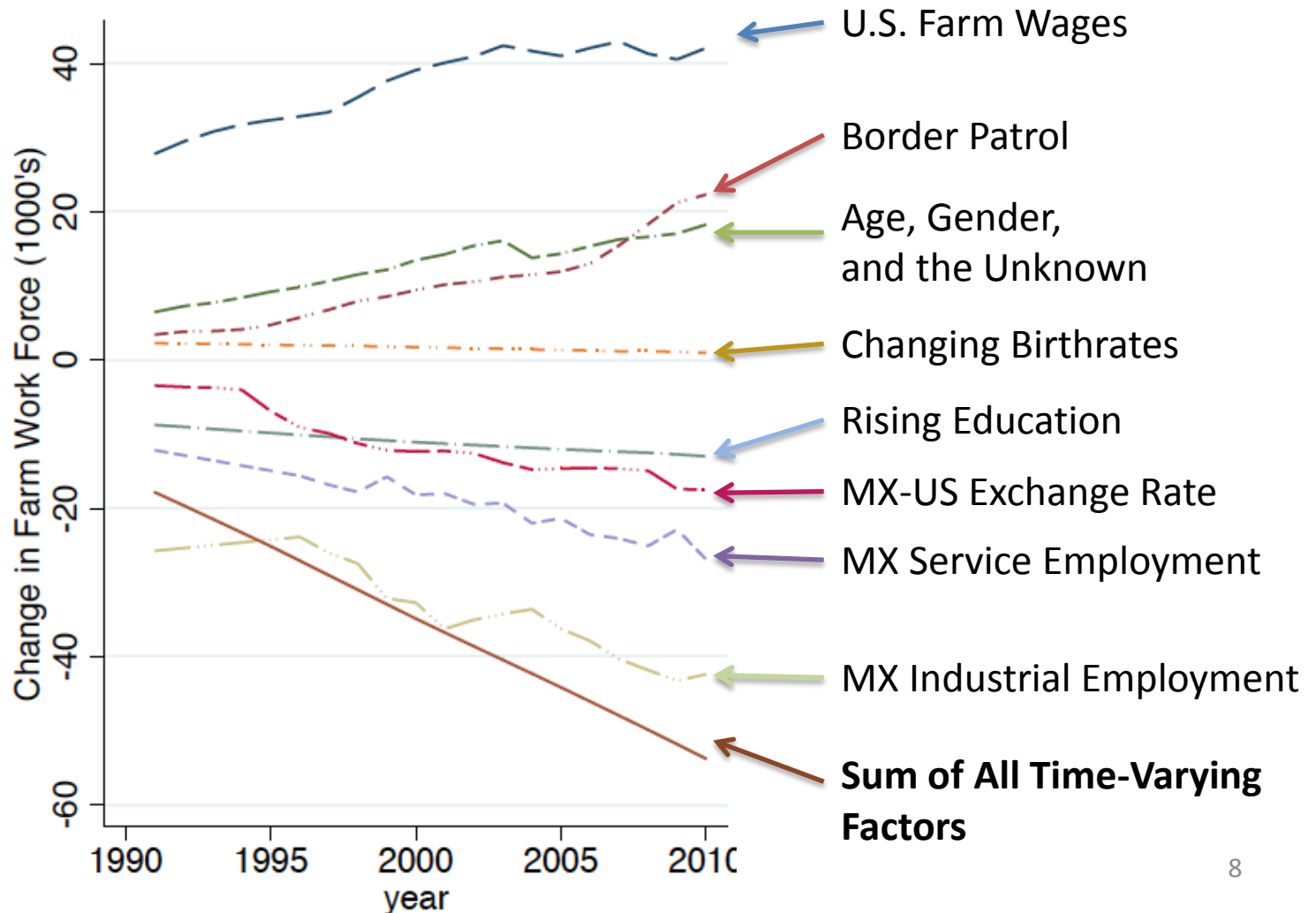
- The farm labor supply from rural Mexico is decreasing by 0.97% each year
- Scaling by the working age population in rural Mexico in 2010, that is **over 150,000** people each year
- U.S. and Mexican farmers compete for this dwindling supply of farm workers

# Regional Trends

Predicted Probability of Working in Agriculture by Region



# “Unpacking” the Trend: How It All Stacks Up





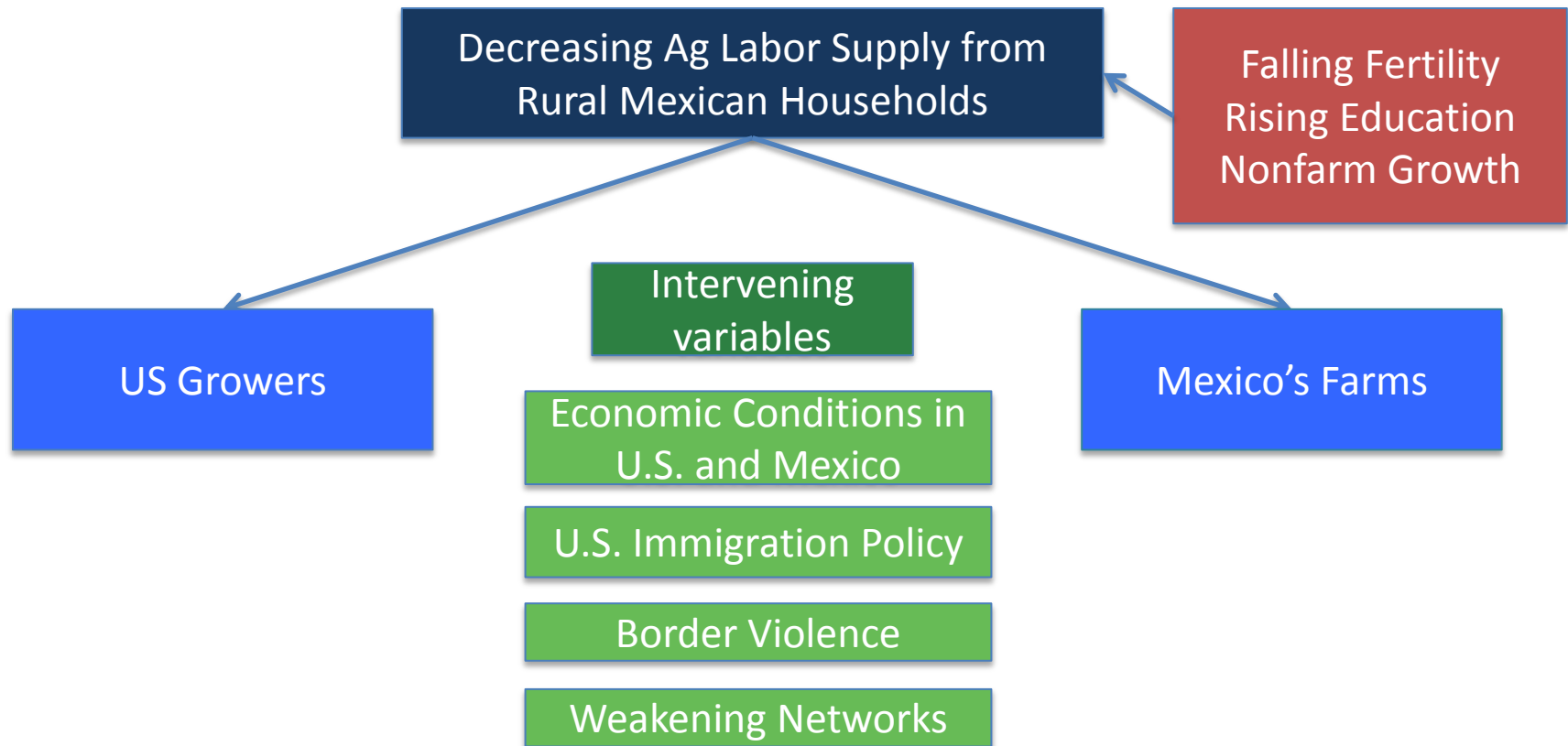
# What Does this Mean for Growers and Ag Suppliers in the Short-Run?

- Growers
  - The supply of farm workers will decrease, and wages will rise.
  - This raises the prices of farm outputs.
  - Agricultural production will decrease if demand for farm products is elastic.
- Ag Suppliers
  - Demand for agricultural inputs shifts inward if agricultural production declines.
  - The labor supply will shift outward. Workers leaving farm work will seek employment elsewhere.
  - Net impact on agricultural suppliers in the short-run is ambiguous.
- But what will happen in the long-run?

# What Does this Mean for Agriculture in the Long-Run?

- Regional trends in the ag labor supply mean US farms eventually will have to produce more with fewer workers
  - Technological change: mechanization
  - Changing crop mixes
  - More efficient labor management practices
    - Demand for more skilled workers
    - Rising farm worker productivity and wages
      - Could be good for rural communities

# Immigration Policy in an Era of Diminishing Ag Labor Supply



- Immigration policy plays a role, but it is only an intervening variable against a backdrop of diminishing farm labor supply in Mexico

# Conclusion

- Significant negative trend in the farm labor supply from rural Mexico between 1980 and 2010
- Increased border enforcement → more workers remain in agriculture, though not U.S. agriculture
- Industrial growth in Mexico and rising rural education reinforce the negative trend
- Higher U.S. farm wages slow Mexicans' transition out of agriculture, but do not reverse the trend
- Best viable option for agricultural producers:
  - Less labor-intensive crops, technologies, and management practices

# Thank you



Veracruz, MX, July 2015

# References

- J.E. Taylor and D.E. Charlton (2014). Adjusting to a Post-NAFTA Mexico: What It Means for California. Prepared for the Senate Hearing “NAFTA: Challenges and Opportunities after 20 Years,” Select Committee on California-Mexico Cooperation, State Capitol Building, May 5, 2014.
- D.E. Charlton and J.E. Taylor (2013). ARE Update. “Mexicans Are Leaving Farm Work: What Does It Mean for U.S. Agriculture and Immigration Policy?” *Agricultural and Resource Economics Update* 16(4): 1-4, 2013.  
[http://giannini.ucop.edu/media/are-update/files/articles/V16N4\\_1.pdf](http://giannini.ucop.edu/media/are-update/files/articles/V16N4_1.pdf)
- J. E. Taylor, D.E. Charlton, and A. Yunez-Naude (2012). “The End of Farm Labor Abundance.” *Applied Economic Perspectives and Policy*, [34\(4\):587-598](#),  
<http://aepp.oxfordjournals.org/content/34/4/587.full.pdf+html>.
- D.E. Charlton (in progress). A Declining Farm Workforce: Analysis of Panel Data from Rural Mexico and Implications for U.S. Farms. Chapter in Ph.D Thesis, UCD Department of Agricultural & Resource Economics.