

The End of Farm Labor Abundance*

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Economic Perspectives and Policy*, December, 2012



The Bottom Line: New Data Show That...

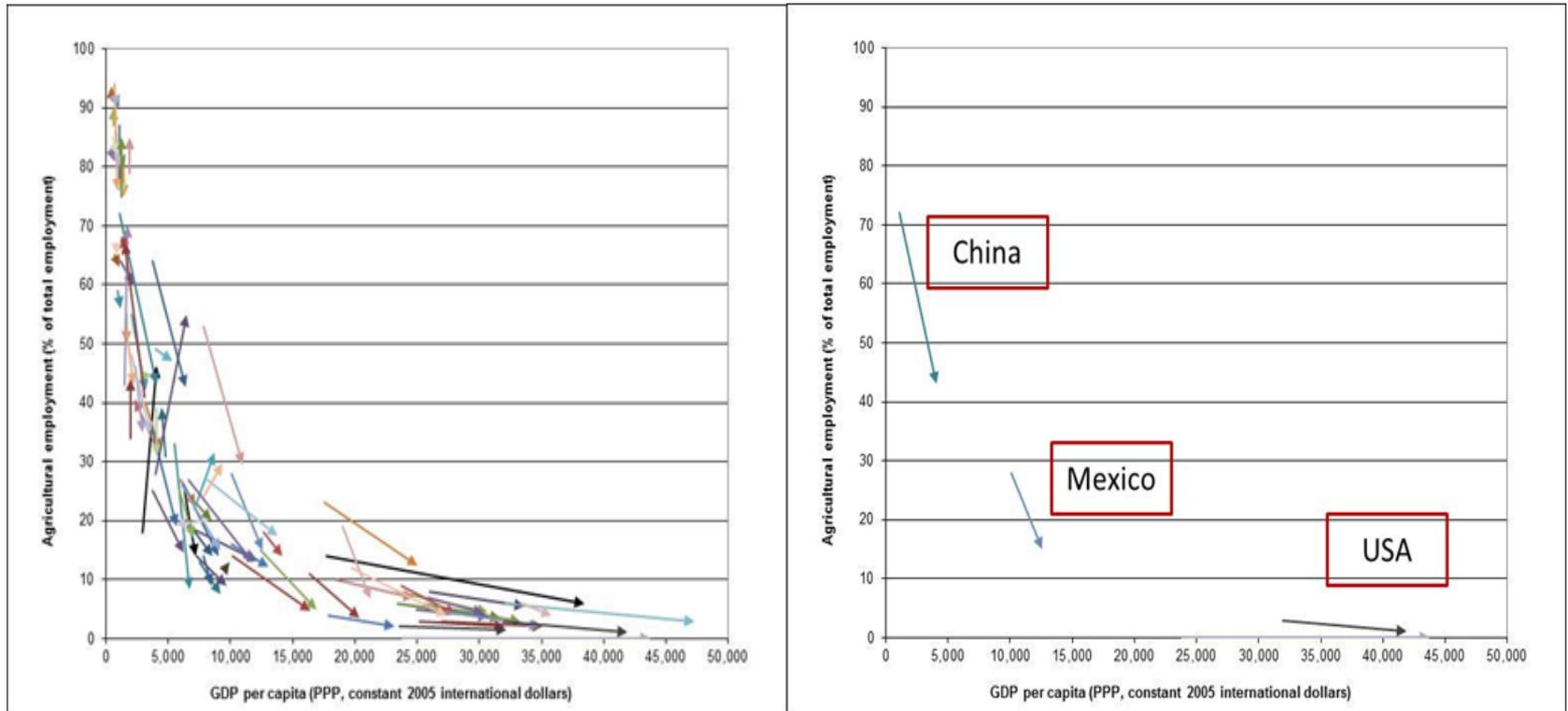
- Mexico's farm labor supply is declining
- The demand for labor on Mexican farms is rising
- The reservation wage (minimum wage needed to induce new workers to migrate) is increasing
- What does this mean for immigration policy?
- U.S. growers must look for labor substitutes
 - Shift our to labor-intensive FVH production
 - Seek migrant workers from other countries
 - Invest in labor-saving agricultural technologies

Regional Farm Labor Markets in Transition

- Mexico is the major supplier of hired labor to U.S. farms
 - Only 2% of California's hired farm workers are U.S.-born
- Guatemala has become a supplier of farm labor to Mexico
- Mexico is in the transitional phase of being both a farm labor exporter and importer

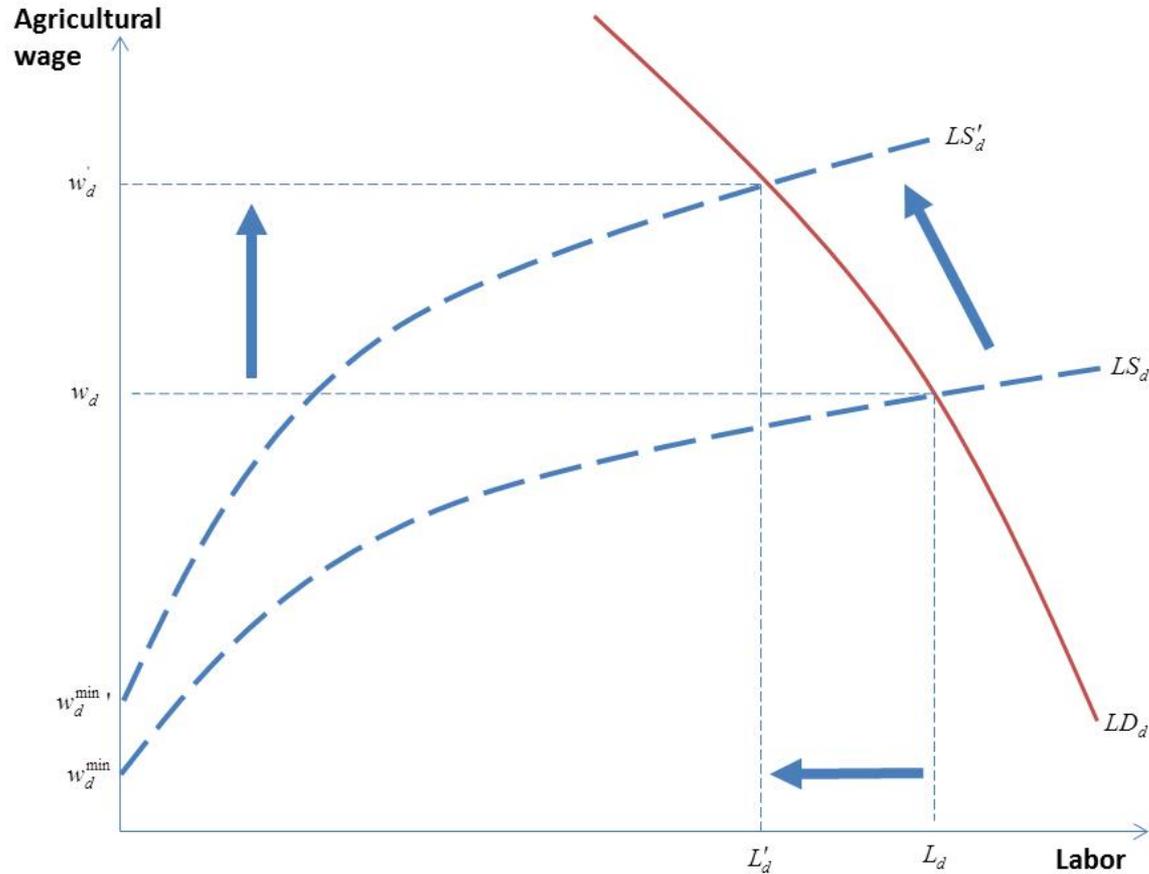
Fleeing the Farm

Income Growth and Ag Labor Shares

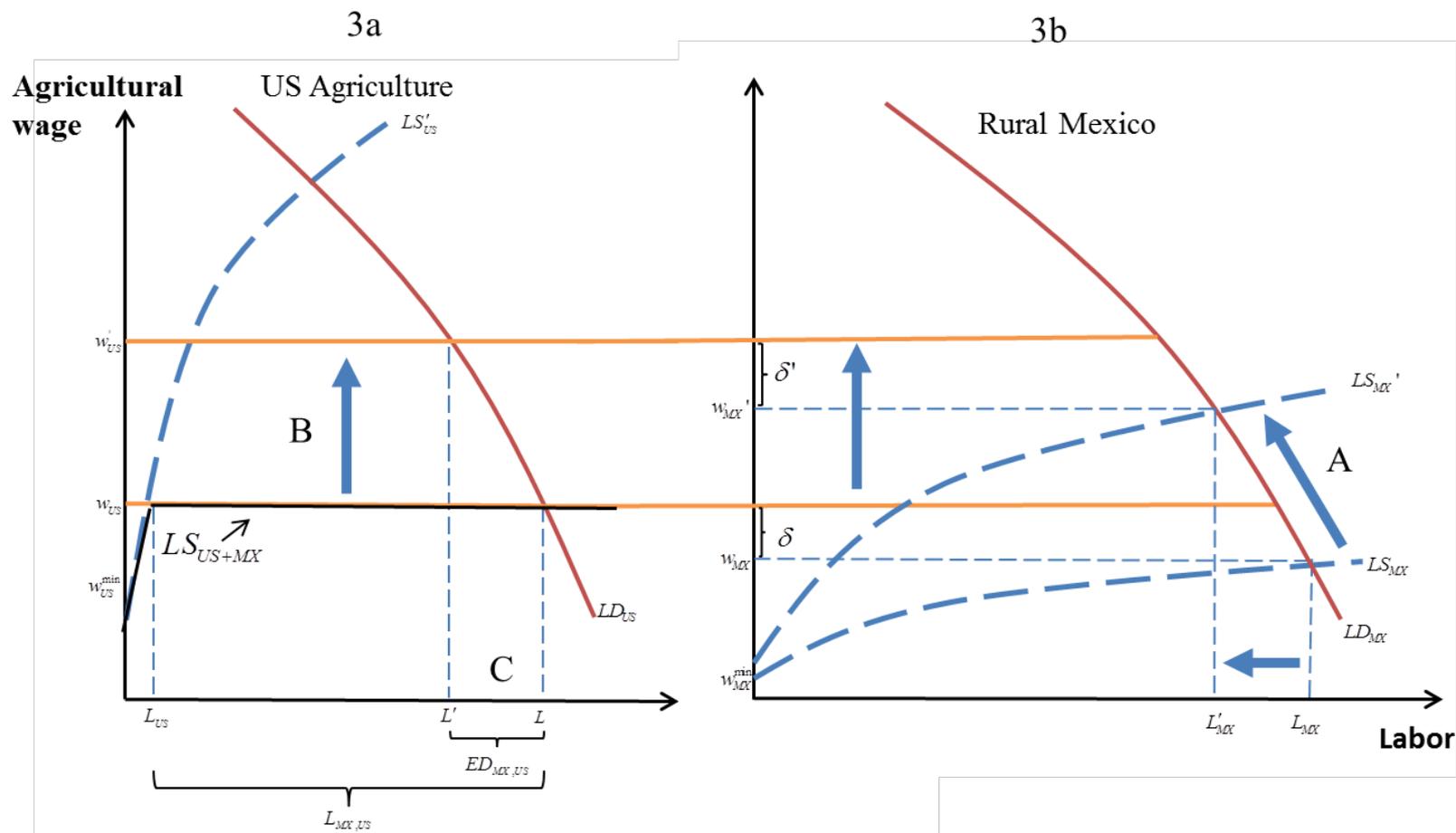


Source: Taylor and Lybbert, *RebelText: Essentials of Development Economics*, 2012

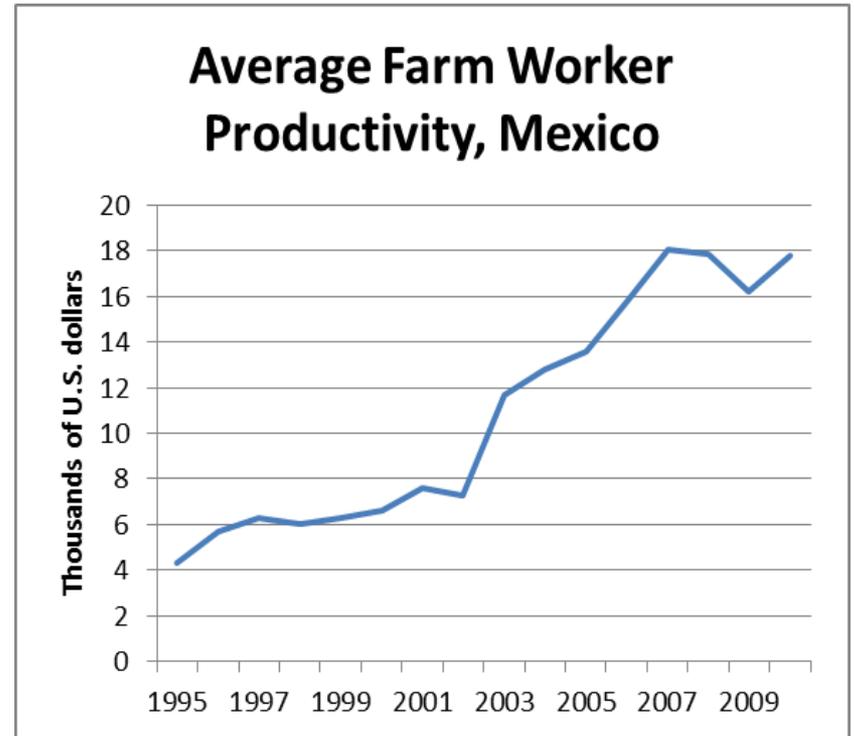
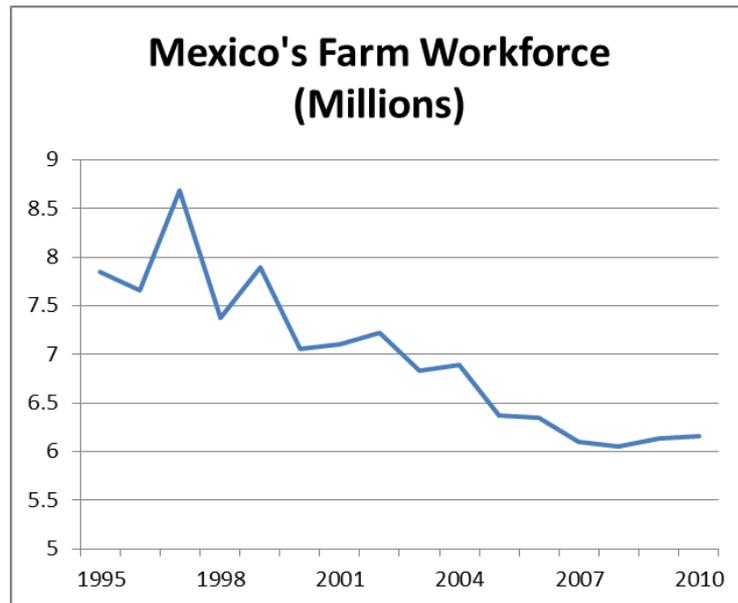
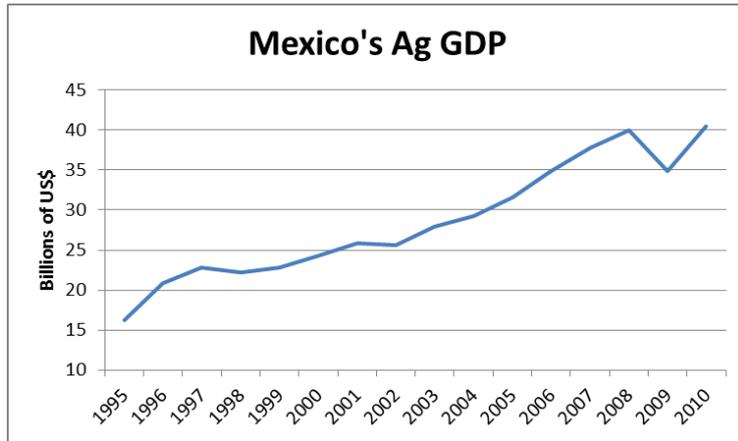
Mexico: Shifting domestic farm labor supply



U.S.-Mexico Interconnected labor markets



Mexico: More with Less



Rising Productivity in Mexico Means a Higher “Ag Reservation Wage” in the US

Is Something Happening Out There?

Farmers across California are experiencing the same problem: Seasonal workers who have been coming for decades to help with the harvest, planting and pruning have dropped off in recent years.

SF Chronicle, May 27, 2012

The workforce has been decreasing in the last two to three years, but last year it was drastic.

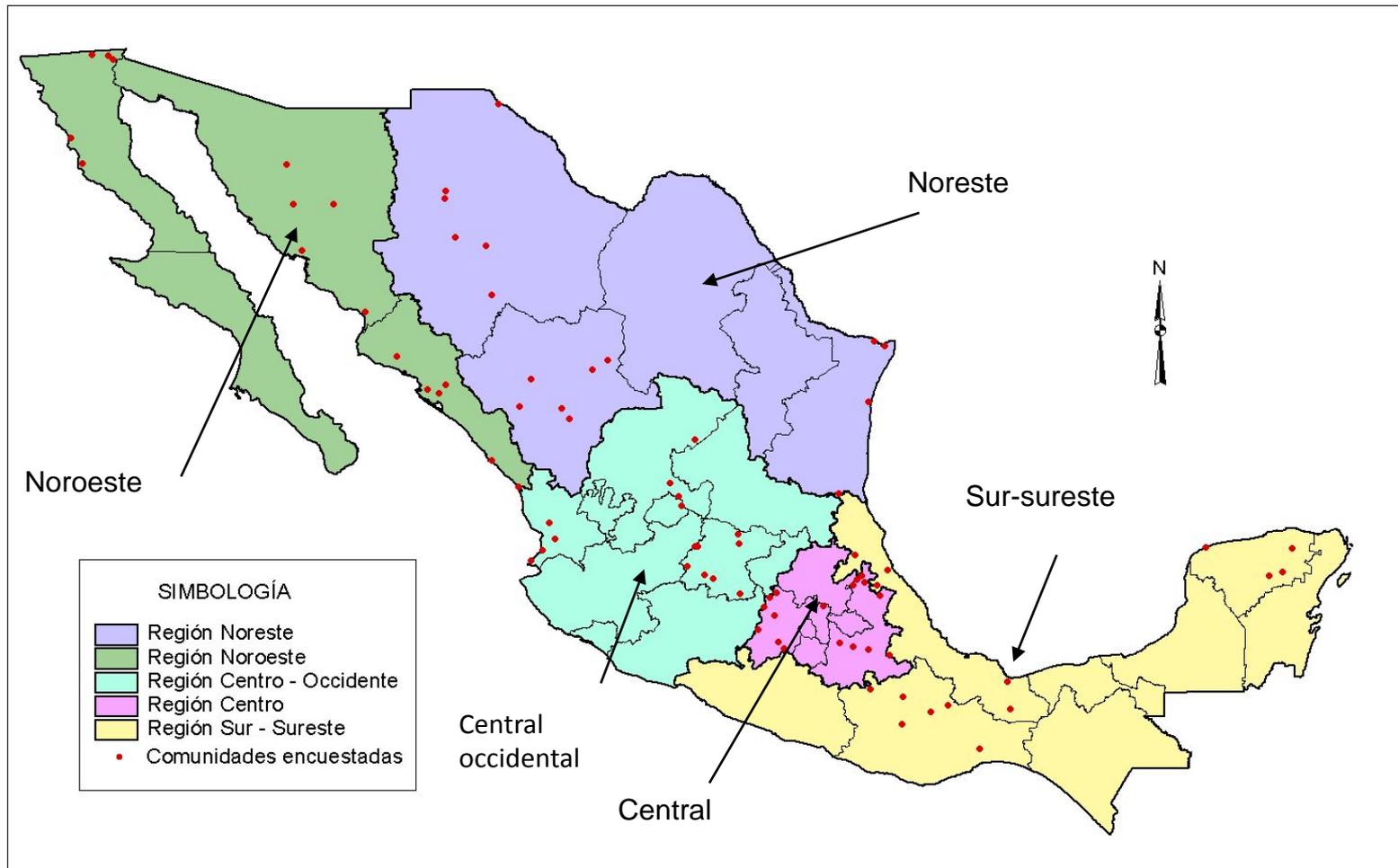
Kristi Boswell, Farm Bureau

The supply of Mexican labor available to work in the United States has fallen due to a sharp decrease in Mexico's total fertility rate and employment growth in Mexico.

Passel, et al. (2012)

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

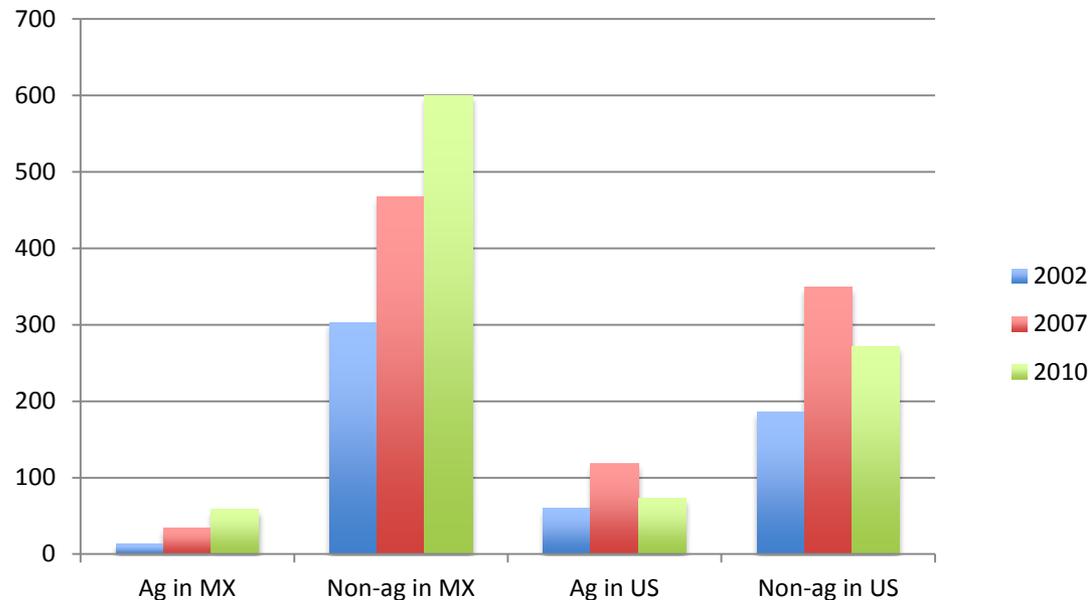
ENCUESTA NACIONAL A HOGARES RURALES DE MÉXICO (ENHRUM), 2003
REGIONES Y DISTRIBUCIÓN GEOGRÁFICA DE COMUNIDADES ENCUESTADAS



The Recession “Quasi Experiment”

Why Did Migration to US Ag Jobs Decrease?

The rural Mexican workforce is shifting into non-agricultural work.



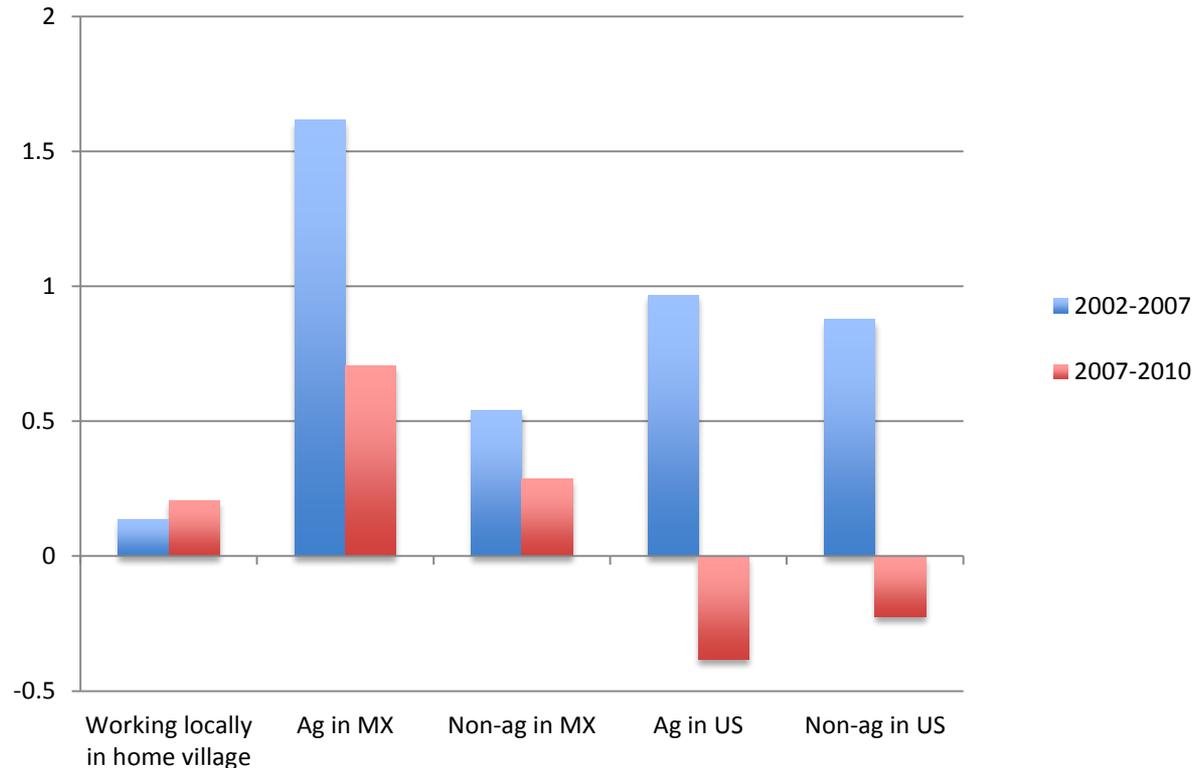
Source: Taylor, Charlton, and Yúnez-Naude, “The End of Farm Labor Abundance,” Applied Economic Perspectives and Policy (in press, 2012)

The Recession “Quasi Experiment”

Why Did Migration to US Ag Jobs Decrease?

Percentage change in the rural Mexican labor force by sector.

Mexican industry is growing.



Mexico's Decreasing Agricultural Labor Supply, 1990-2010

Estimated Impacts on the Probability of Individuals Working
in Farm Jobs (N=88,631; 5,780 individuals)

(Std. Err. adjusted for 5780 clusters in id)

ag	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
year	<u>- .0022483</u>	.0002553	-8.81	0.000	-.0027488	-.0017479
ag L1.	<u>.7166779</u>	.0051306	139.69	0.000	.7066201	.7267358
recession	<u>.0071468</u>	.003486	2.05	0.040	.000313	.0139807
D2003	<u>.0199145</u>	.0033712	5.91	0.000	.0133057	.0265233
tDsur	<u>.000539</u>	.0003481	1.55	0.122	-.0001434	.0012214
_cons	4.243131	.4604641	9.21	0.000	3.340448	5.145813

Ag.L1: Worked in ag job in previous year
 Recession, D2003: Structural break indicators (0-1 dummies)
 tDsur: Southern Mexico indicator (0-1 dummy)

Grappling for a New Comparative Advantage

- FVH agriculture's comparative has rested on access to abundant low-skilled labor
 - Different from other sectors, where it's all about human capital (education and skills)
- Skill requirements are rising fastest for the nonfarm firms that provide services to farmers
 - Finance and equipment, pesticides, chemicals, labor and other inputs
- Most farm workers find it hard to transition to these jobs

Agriculture Will Have to Increase Labor Productivity

- Regional trends in the ag labor supply mean US farms eventually will have to produce more with fewer workers
 - Technological change: mechanization
 - Demand for more skilled workers
 - Rising farm worker productivity and wages
 - Good for rural communities

What Happens to Labor When Farms Tech Up?

Lessons from “Shake and Catch”

- “Shake-and-catch” machines surround a tree and shake fruit and nuts into a catching frame
- They usually replace many low-skilled foreign-born workers with a few US workers with high-school diplomas and sometimes some college
 - Most machine operators speak English and have mechanical skills
 - Some are ex-pickers, but many did not move up from picking to machine operation

Ag Education Will Have to Change

- Rural residents who obtain education and training usually find nonfarm jobs
- Children of farmworkers eschew agriculture
 - Reports and recommendations on agricultural education do not mention hired farm workers or their children
- US agricultural education system trains farmers and food-system workers, not farm workers
 - Are we getting children of farmworkers into FFA and high-school agricultural programs?

Skilled Farm Labor Migration?

- Mexico graduates 113,000 engineers a year, twice the rate per 100,000 residents as the US
- US firms operating in Mexico
 - Praise the technical skills of graduates, including their English-language skills
 - Emphasize that Mexican agricultural education remains more “practical” compared with the increasing “theoretical” orientation of shrinking agricultural programs in US universities
- Some of the foreign workers hired via the H-2A program are skilled, but most are not
- Will there be an expansion of skilled farm labor migration in the future?

“I think a country that's strong really should be able to produce its own food, but you can't do it with domestic labor, and that's just a fact.”

Senator Dianne Feinstein