

# Managing immigration: what's the role of projections?

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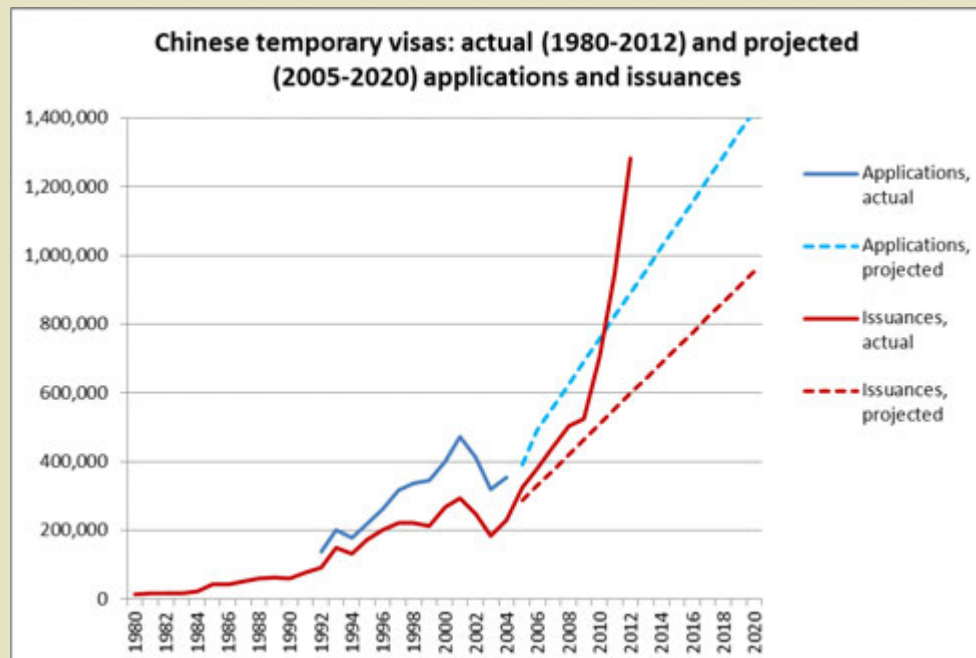
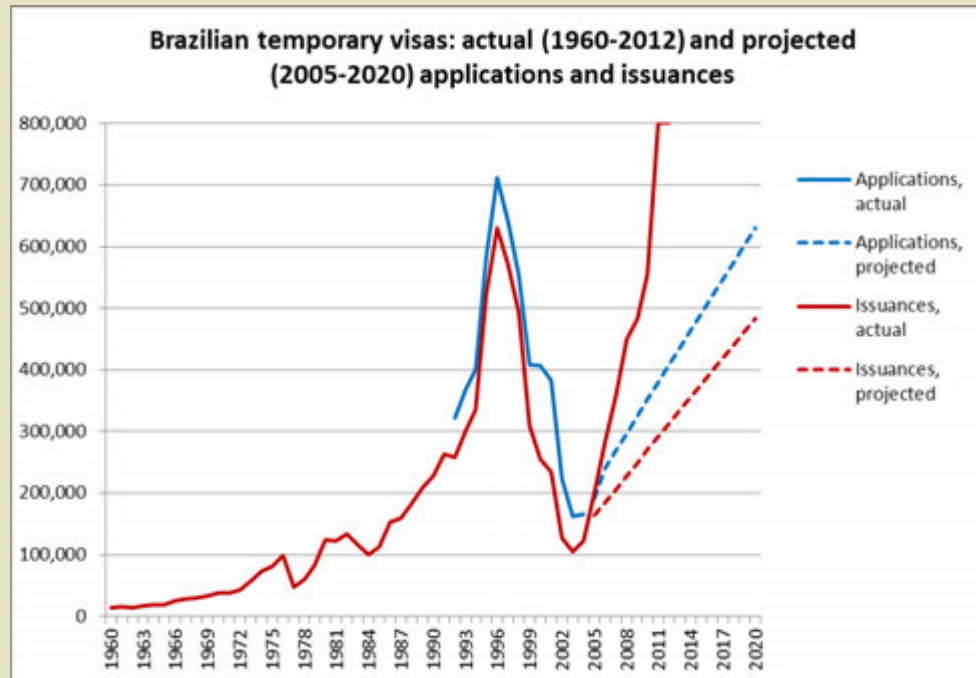
Presentation to Expert Commissions and Immigration Policy Making,  
April 18-19, 2013

- **Projections necessary but poor tools, examples type & method:**
  - *NIV visa demand* & trend – fail 2 years out, big shifts in cyclic growth
  - *Legal visas* & assumed use – disparate assumptions, disparate results
  - *Mexican migration* & demo/econ – fail 5 years out
- **Economy signals demand but loosely, examples phase shifts:**
  - *Mexican migration* – pro-cyclic thru 1990s then breaks mid-2000s; due to enforcement, return, substitution or other?
  - *H-2A temps* – not on charts until mid-2000s; growth due to shortages or restructuring of agricultural market?
  - *H-1B temps* – pro-cyclic since mid-1990s: apparently but growth in temp workforce counters the impression?
    - Pace perceptions, no shortages of potential supply
    - BLS employment projections, poor for occupations in question

# Projecting immigration

# Visa trend projections

- State Department tasked to project total temporary “visa demand” to manage flow (75% business B visas)
  - Unmet demand thought to cause illegal entry
- Congressional Budget Office assessed projections & found them technically adequate but too low within 1-3 years
- Substantial variation in cyclical rates of growth and decline, have to assume angle of future trend



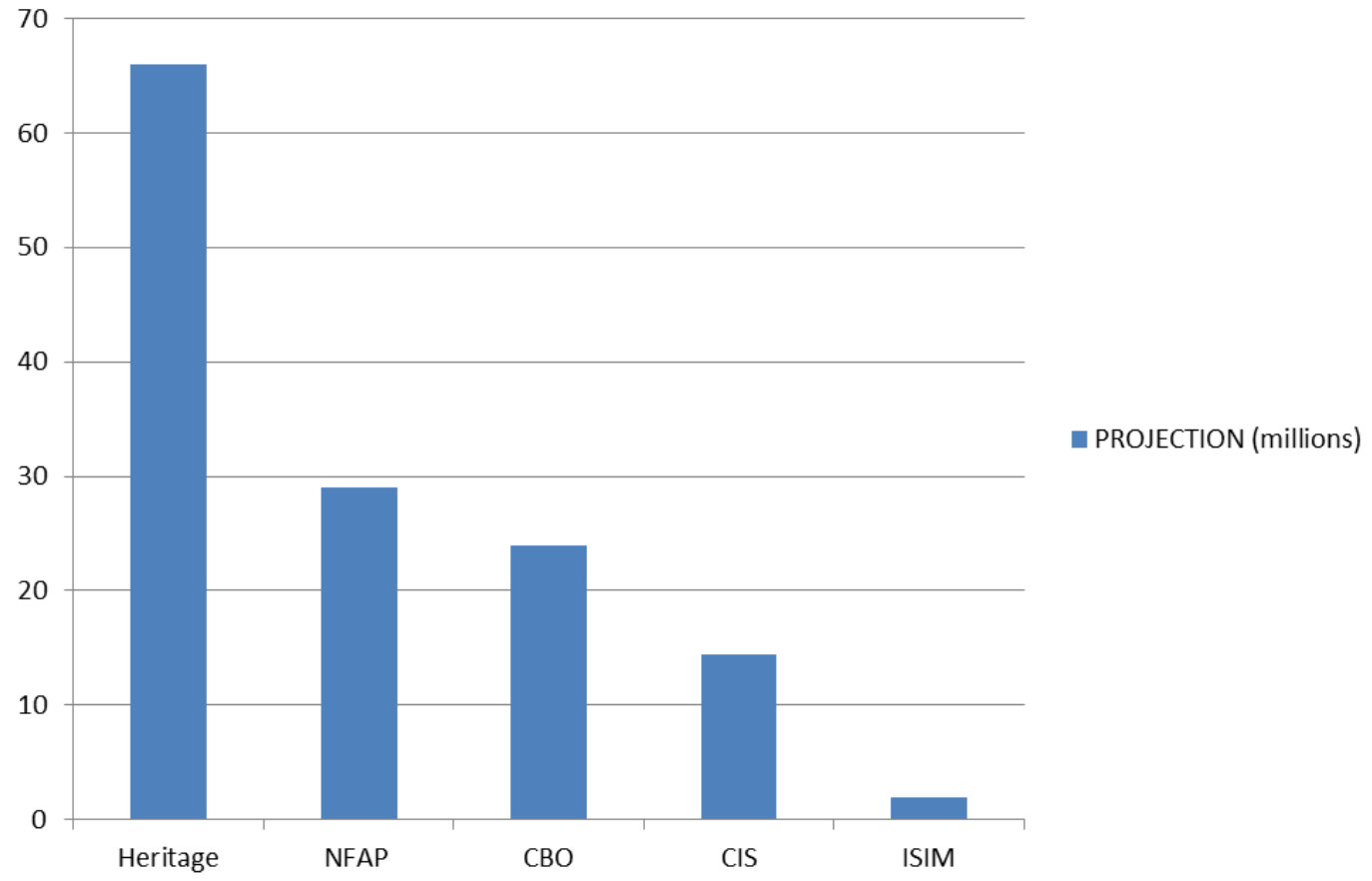
**Table 3.2: Past Non-immigrant Cycles, Average Change and Duration**

	Average Annual Change, Percent						Duration of Cycle, Years					
	Two Cycles Prior		One Cycle Prior		Most Recent		Two Cycles Prior		One Cycle Prior		Most Recent	
	Growth	Decline	Growth	Decline	Growth	Decline	Growth	Decline	Growth	Decline	Growth	Decline
<b>Tier 1 - Large Volume Countries</b>												
Brazil	23	-51	23	-14	17	-23	4	1	5	2	12	7
China	--	--	--	--	13	-21	--	--	--	--	16	2
Colombia	17	-13	19	-8	7	-14	7	2	6	1	14	3
India	11	-9	10	--	17	-20	11	1	15	0	8	2
Korea	19	--	27	-18	20	-11	15	--	7	2	12	5
Mexico	19	-28	36	-37	34	-5	3	1	4	2	5	7
Peru	15	-14	24	-12	16	-23	3	3	4	3	6	2
Philippines	15	-41	26	-15	9	-14	7	1	5	1	4	3
Poland	21	-3	13	-40	12	-5	9	1	6	2	7	3
Taiwan	24	--	18	--	14	-12	6	0	15	0	11	7
Tier Averag	18	-23	22	-21	16	-15	7	1	7	1	10	4
<b>Tier 2 - Fast Growth and Moderate Volume</b>												
Argentina	56	-51	52	-53	32	-40	2	1	4	2	4	5
Ecuador	27	-24	24	-23	42	-21	5	2	4	3	2	2
Egypt	26	--	20	-5	5	-43	9	0	7	1	15	2
Indonesia	22	--	19	-7	36	-24	15	0	7	1	2	3
Israel	14	--	18	-4	6	-12	15	0	5	4	9	3
Nigeria	32	--	32	-25	13	-7	9	0	6	3	8	9
Saudi Arabia	37	-9	8	-5	6	-33	10	4	6	3	4	4
Thailand												
Turkey	32	--	65	-29	13	-12	2	0	2	1	8	4
Venezuela	18	-10	18	-48	10	-27	10	1	6	2	4	2
Tier Averag	29	-24	28	-22	18	-24	9	1	5	2	6	4

# Projecting legislated visas

- In 2006 Senate legislation would have granted amnesty, but also increased caps on employment visas fivefold; built in escalators on H-1B temporary visas
- Legislation was, in part, diverted by the large numbers of new immigrants projected: “perfect bombshells”
- Assumptions and projected populations varied: different multipliers; optimal vs. realistic scenarios
- It appeared that – if legislated visa optimals were reached – supply would outstrip projected demand for skilled workers

# Visa projections of Senate S211

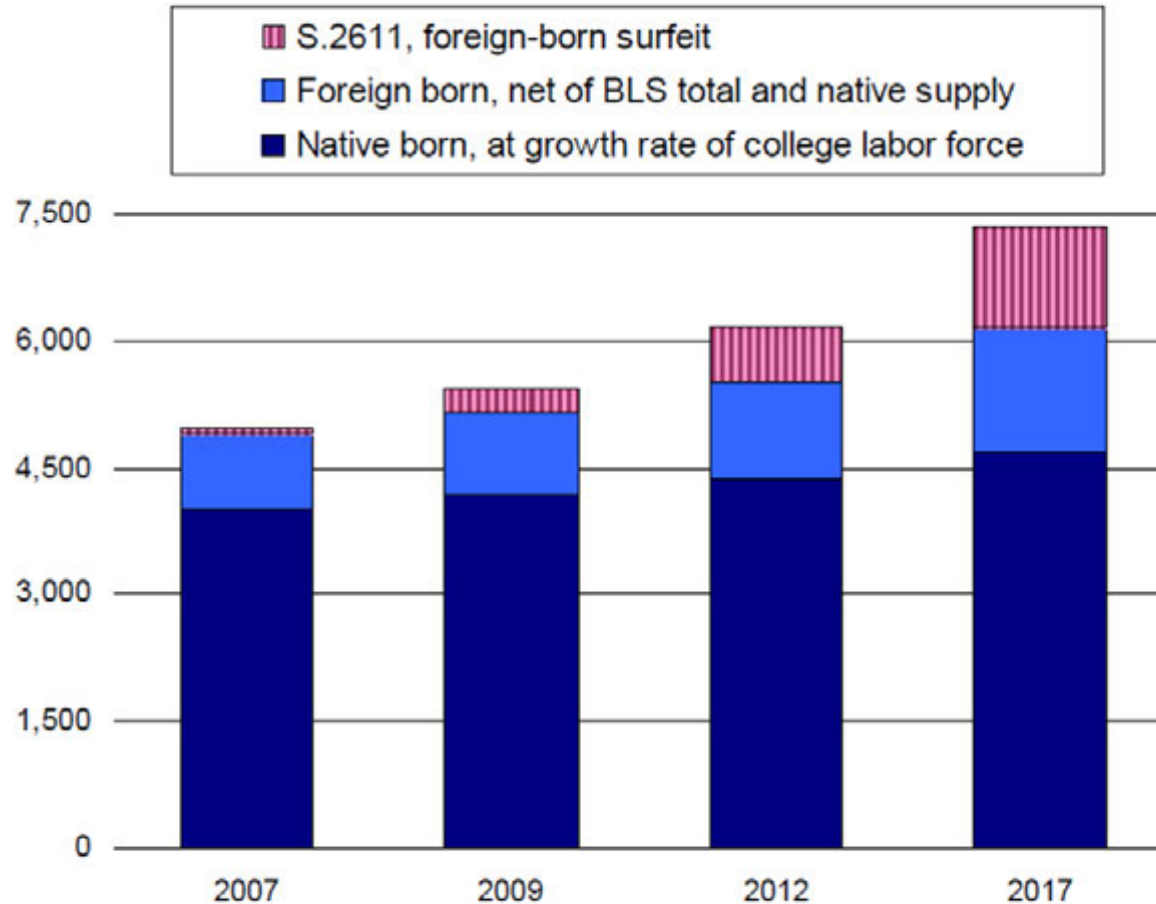




### Comparison of Elements of Different Projections of S.2611

	Heritage	NFAP	CBO	CIS	ISIM
<b>PROJECTION (millions)</b>	<b>66</b>	<b>29</b>	<b>24</b>	<b>14.4</b>	<b>1.9</b>
New above old levels	47	•	14.5	4.5	1.5
Resident/or at old levels	19		9.5	9.9	0.4
<b>YEARS IN THE FUTURE</b>	20	20	20	na	10
<b>VISA TYPES</b>					
All visa classes	•	•	•		
Earned Amenity				•	
Employment based					•
<b>BENCHMARK COMPARISONS</b>					
Low and high estimate	•				
New to old levels					•
New to alternative projections					•
<b>MULTIPLIERS</b>					
Unification (newly sponsored)	0.6	1.2	1.2	1.45	
Reproduction (fertility)			0.8		
<b>EMIGRATION</b>			•	0.50%	3.20%
<b>MORTALITY</b>			•	0.40%	•
<b>TRANSITIONAL VISAS</b>				•	•
<b>LABOR FORCE</b>					•
<b>PROJECTION TYPE</b>					
Optimal visas available	•			•	•
Forecast likely number		•	•		
<b>COMMENTS</b>	Uses half the rate (10 %) of permitted escalators, includes current illegal residents	Assumes low levels of family migration and subtracts current trends	Assumes administrative brakes on growth	Limited to legal temporary programs	Limited to computing and engineering workers





**Figure 4. Projection of Total C&E Workers Consistent with BLS Projections and Estimated Surfeit of Foreign Born Under S.2611 (1,000s)**



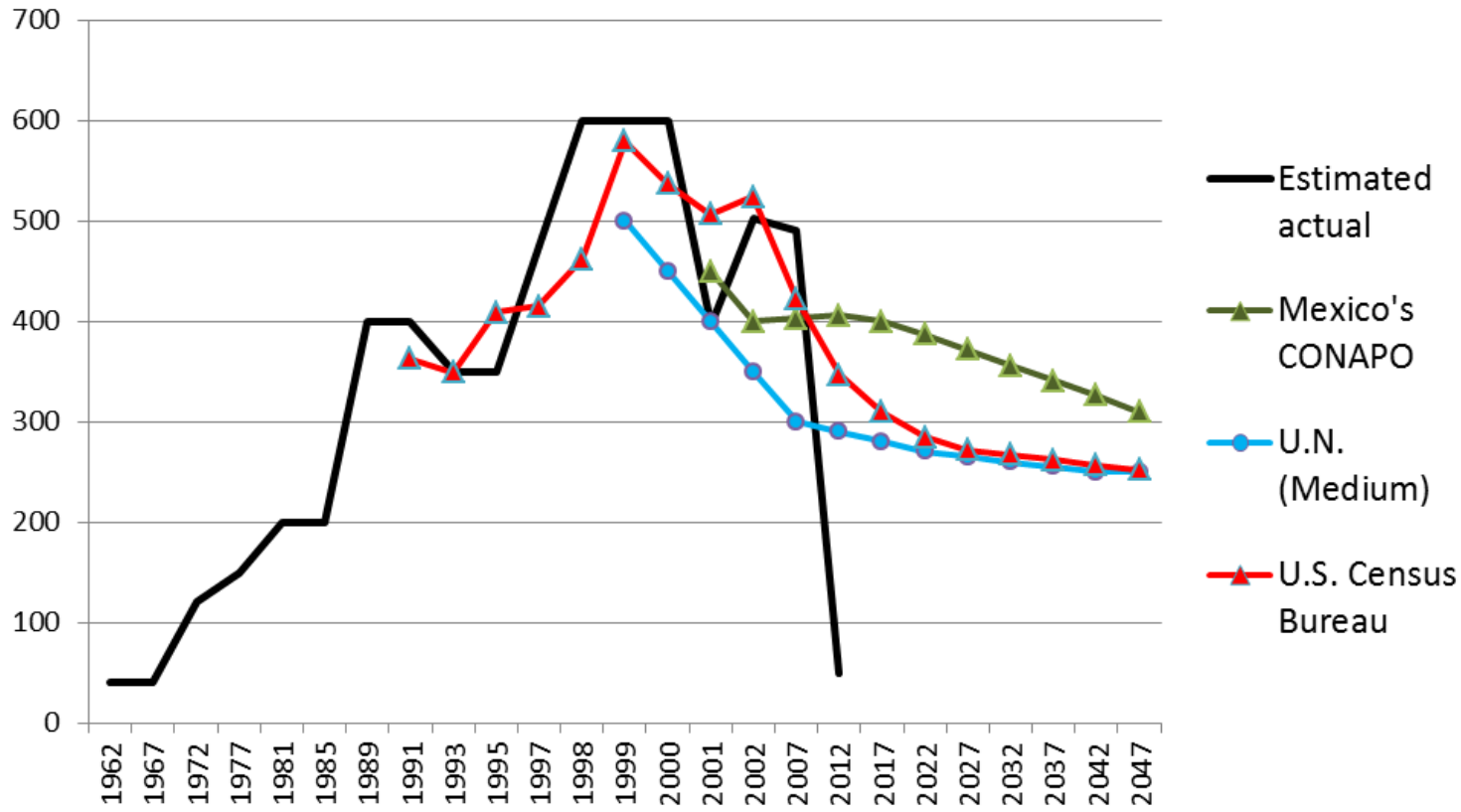
Source: BLS occupational projections and author's estimates

# IMMIGRATION CYCLES & DEMAND

# Immigration flow: Mexico

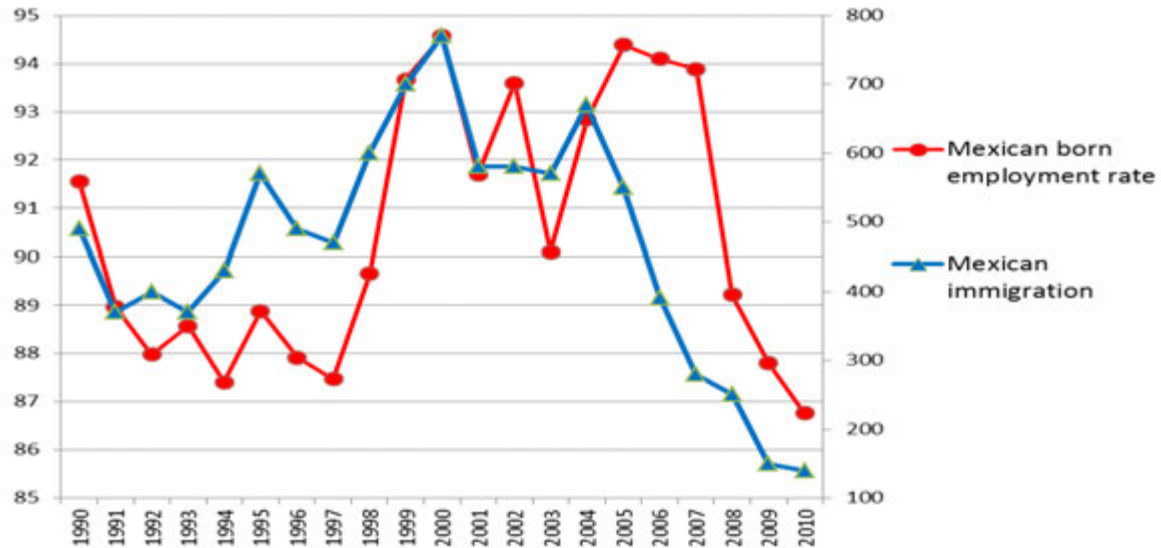
- Census' demographic estimates: assumed ongoing trends in fertility and mortality trends, less assumed emigration
- Mexico' CANAPO: econometric model of future Mexican outflows (required projections of right hand side variables)
- Both completely missed downturn in Mexican migration
- Academic scenarios any help?
  - cumulative causation  for ever
  - Mexican eco-demographic development  mid-2000s??
  - Legal visa substitution  not anticipated, still debated
  - Enforcement  no effect, opposite effect, what effect?

### Past and Future Estimates of Net Mexican Migration by the U.S. Census Bureau, Mexico's CONAPO, and the UN, about 2006

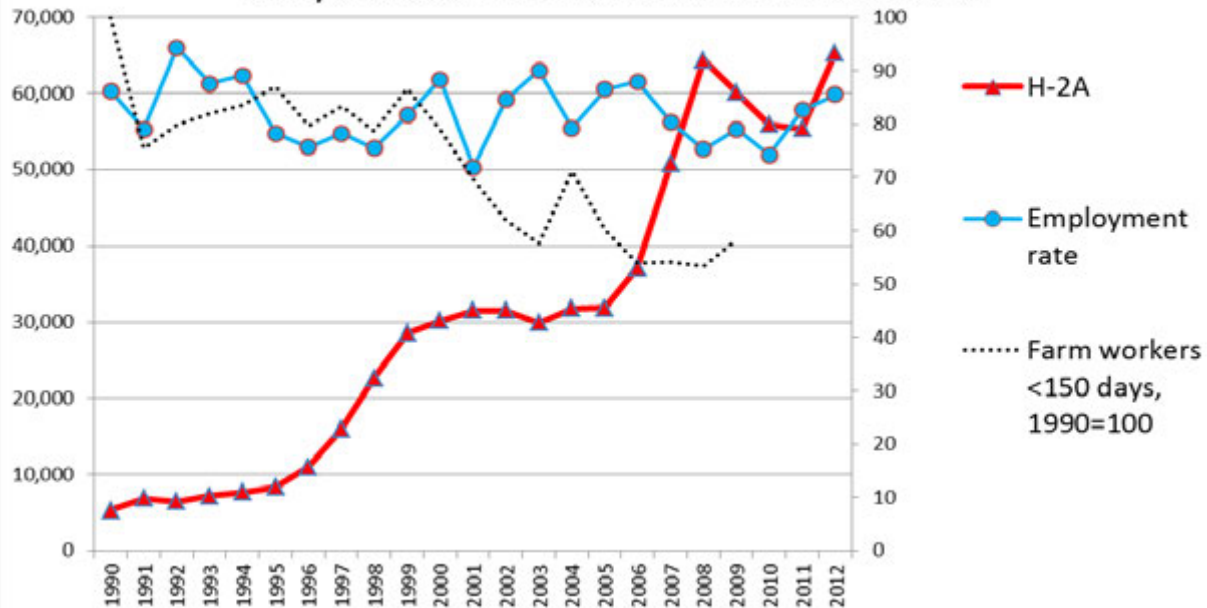


Note: compressed time scale

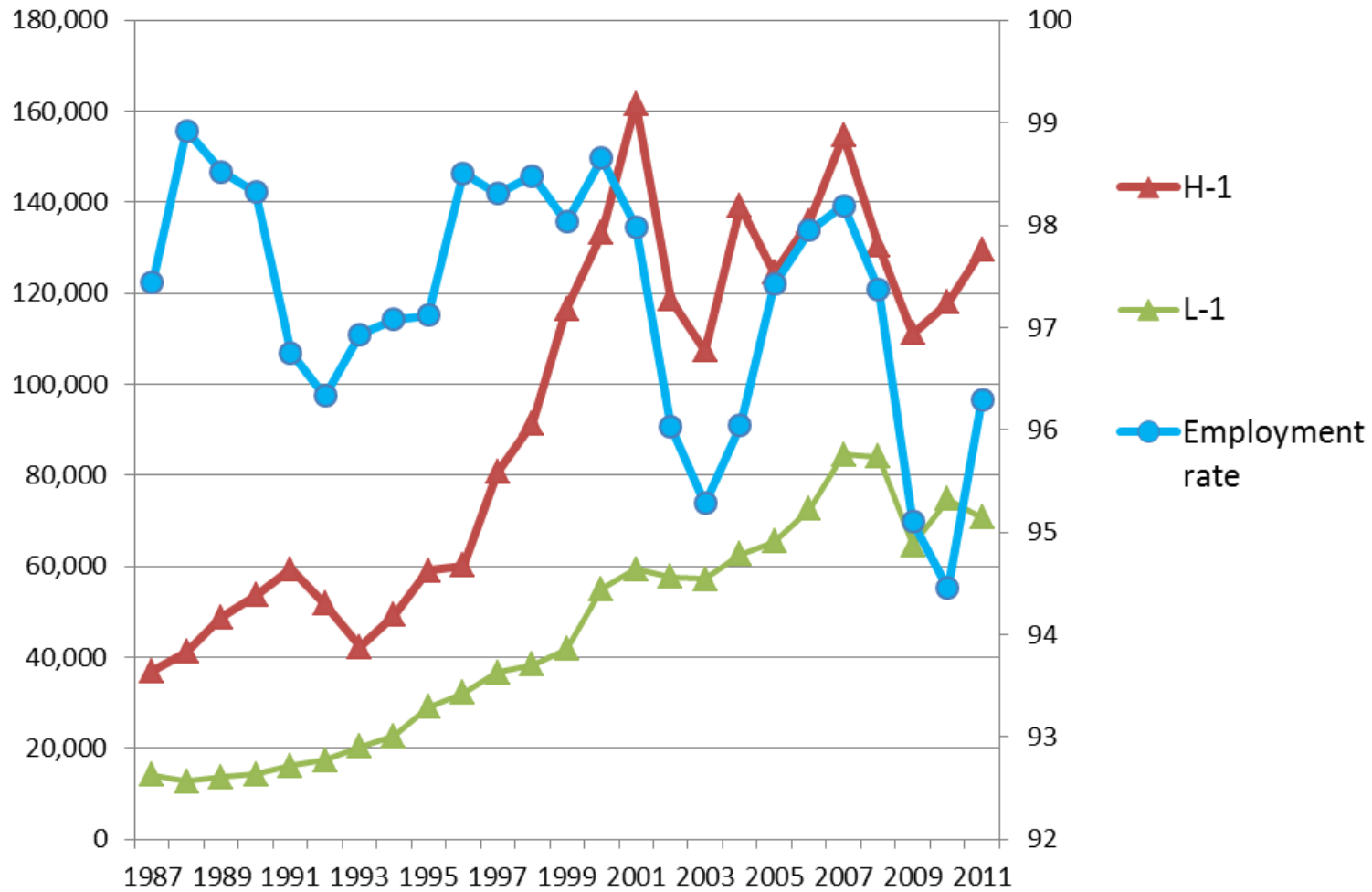
**Mexican immigration and Mexican-born employment rate**



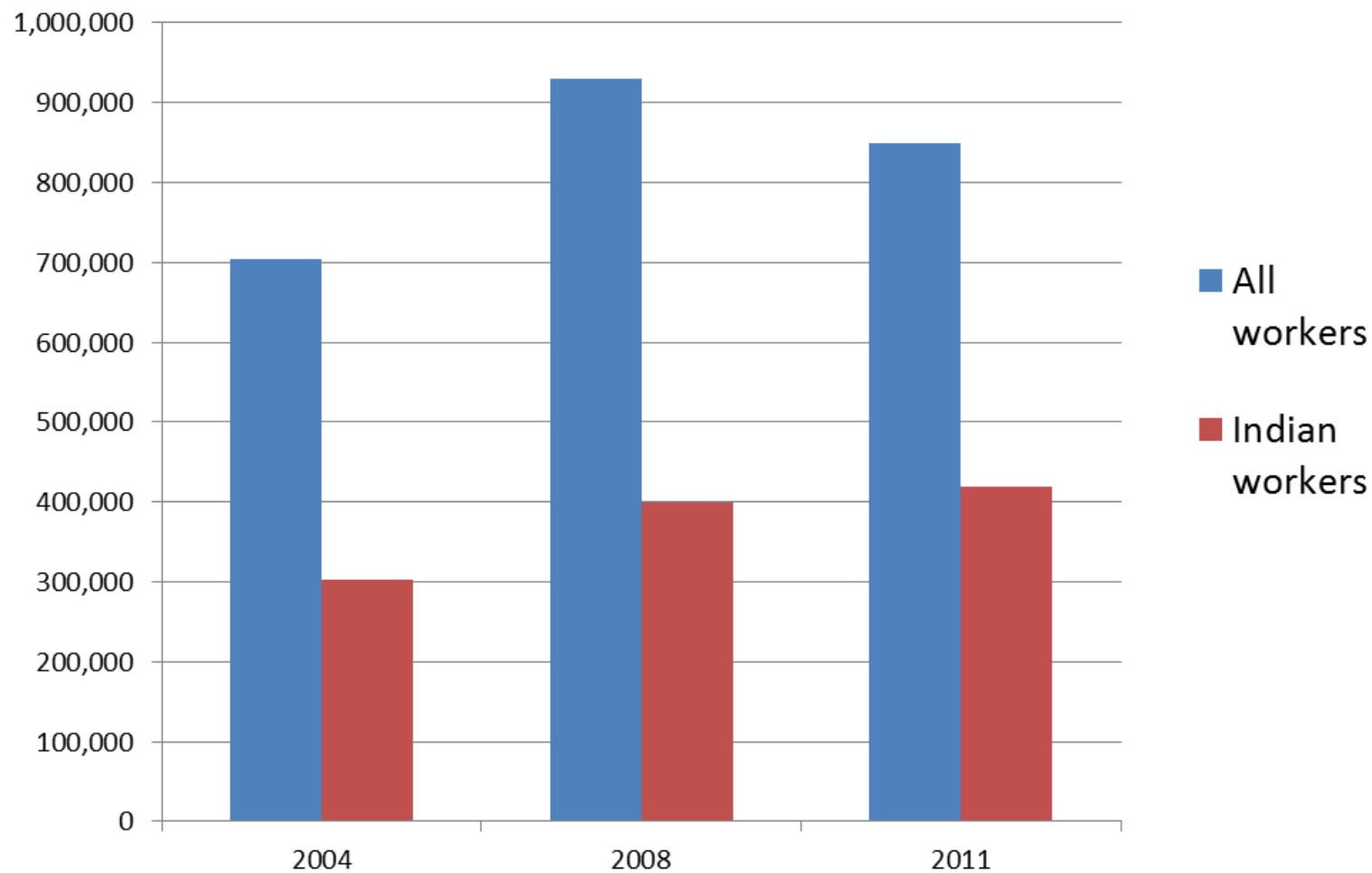
**Seasonal agricultural H-2A visas and worker employment rate; and decline in total seasonal workforce**



## Specialty H-1B visas and STEM employment rate



## Temporary worker population estimates





## National projections of STEM jobs and current domestic graduates

Occupation and corresponding field of completed education	Employment		Change, 2010-20	Annual average job openings due to growth & replacement	Domestic graduates with Associates up to Doctorate degrees, 2009	Ratio graduates to net openings
	2010	2020				
STEM occupations	7,205,000	8,426,900	1,221,900	278,150	667,764	2.4
Computer and Mathematical Occupations	3,542,800	4,321,100	778,300	143,780	96,905	0.7
Database, Systems, Network & Support Technicians	1,577,100	1,895,500	318,400	63,930	--	--
Architecture and Engineering Occupations	2,433,400	2,686,200	252,800	79,790	93,023	1.2
Drafters, Engineering & Mapping Technicians	714,000	759,000	45,000	18,290	--	--
Life, Physical, and Social Science Occupations	1,228,800	1,419,600	190,800	54,570	477,836	8.8
Life Scientists	285,900	344,300	58,300	10,620	137,909	13.0
Physical Scientists	282,000	317,700	35,700	12,190	24,334	2.0
Social Scientists and Related Workers	306,100	362,600	56,500	15,460	315,593	20.4
Life, Physical, and Social Science Technicians	2,010	395,000	40,300	16,300	--	--

Sources: BLS projections: [http://www.bls.gov/emp/ep\\_data\\_occupational\\_data.htm](http://www.bls.gov/emp/ep_data_occupational_data.htm), NSF S&E Indicators: <http://www.nsf.gov/statistics/seind12/appendix.htm#c2>

## Earned STEM degrees by citizens and permanent residents, numbers and trend

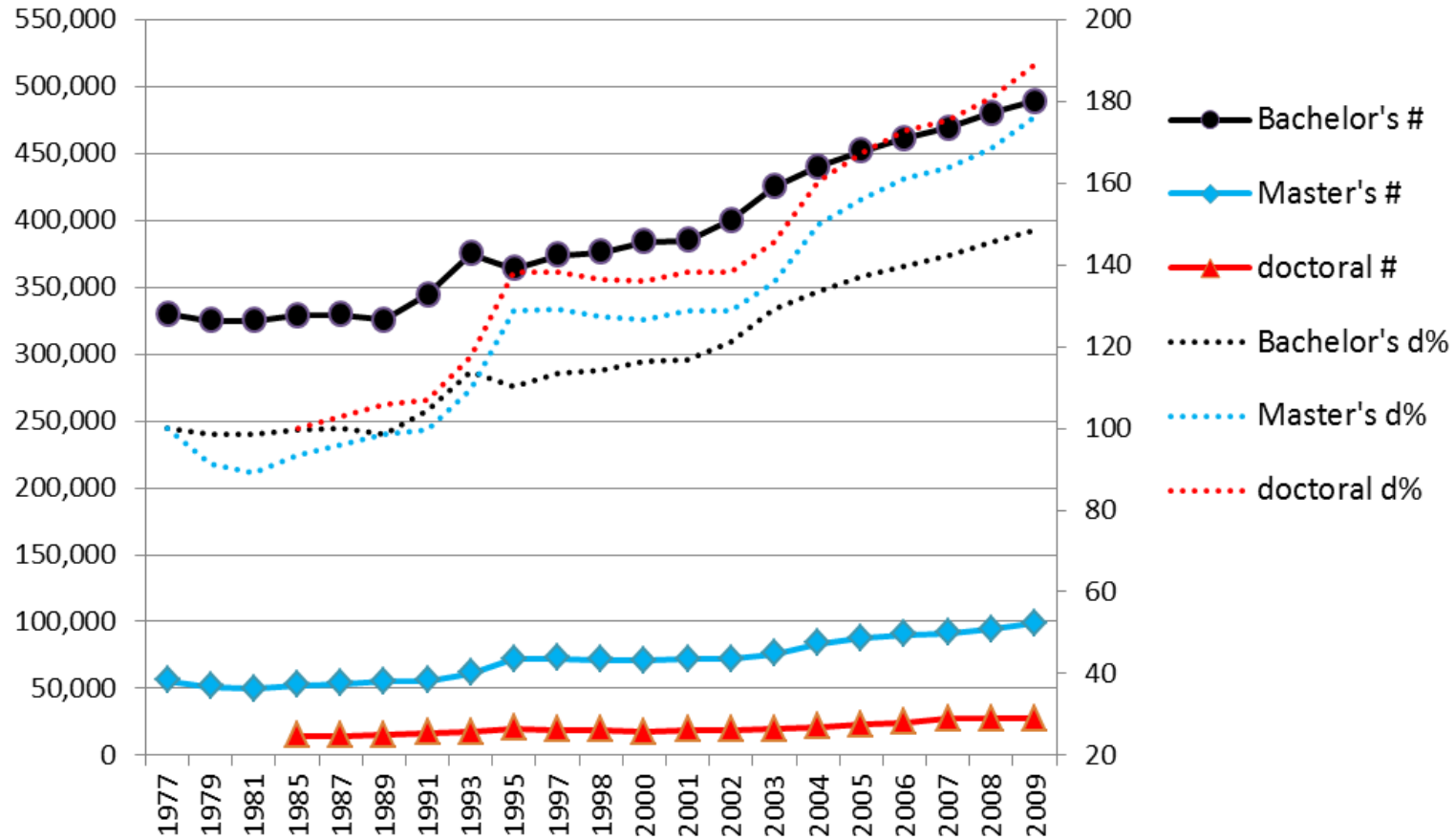
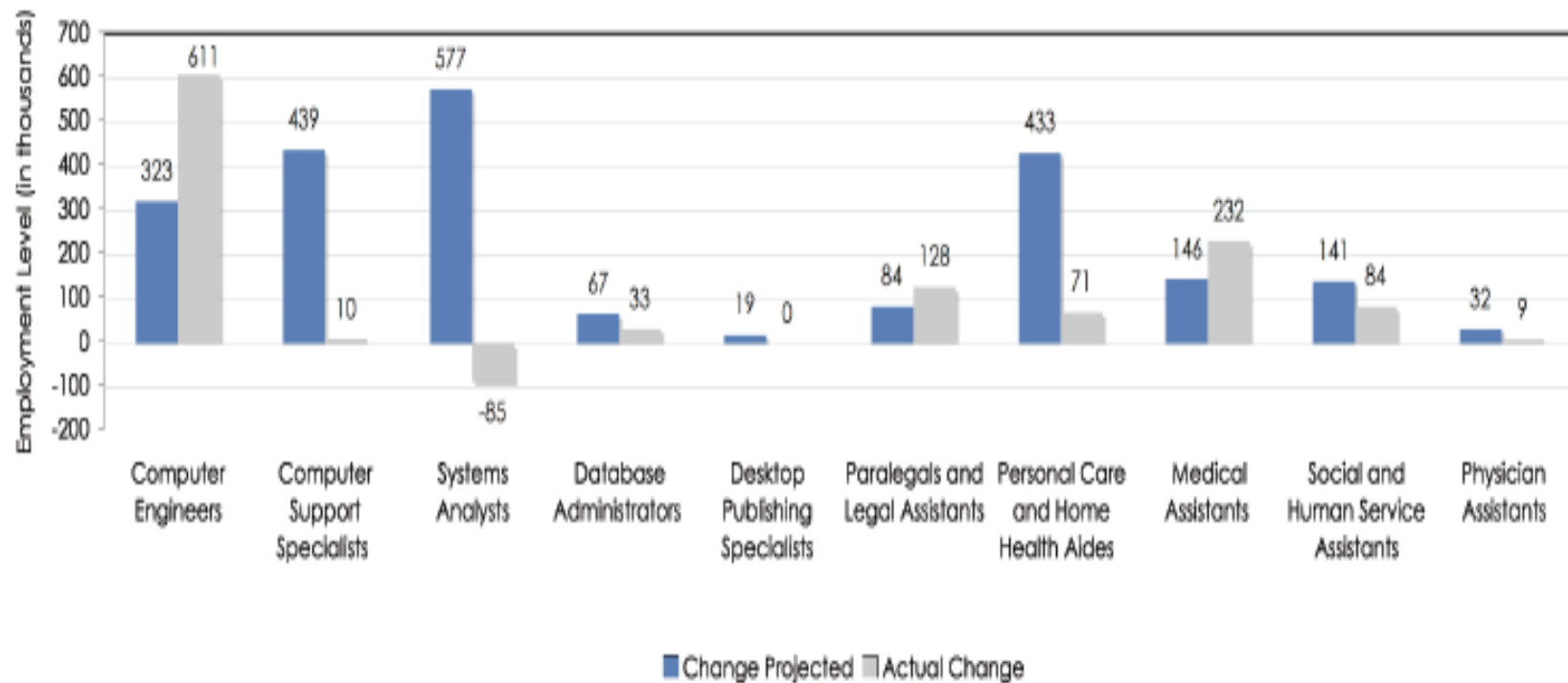


Figure 6: Fastest Growing Occupations: As Projected in 1998 through 2008, Against Actual Employment Level in 2008



# CONCLUSIONS?

- The economic, demographic and psychological factors that drive migration are either difficult or impossible to predict with precision
- That appears to be the case regardless of *what*-- large or small scale, in the short or intermediate run--or the *methods* used
  - Prediction, nevertheless, is a necessary exercise because planning requires some idea of one or alternate futures; it's a tool
- Expert judgment is also problematic because assumptions and theories differ
  - Migration management should use multiple indicators *and* numerical-management tools (say caps, auctions, pricing, points)