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#### Foreign Tech Workers in the U.S.: Failures and Remedies

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February 9, 2016

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http://heather.cs.ucdavis.edu/ASEESlides.pdf

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• Two older Americans in Bay Area.

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## Concrete Examples: "Dan" and "Ike"

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- Two older Americans in Bay Area. "Dan" and "Ike."
- Can't get full-time work. (Occasional contract work.)
- Dan has MS from Top 5 university;

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- Can't get full-time work. (Occasional contract work.)
- Dan has MS from Top 5 university; Ike has TWO MS degrees, from Top 10 university.

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• Have up-to-date skillsets.

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- Have up-to-date skillsets.
- Articulate, team players etc.

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- Have up-to-date skillsets.
- Articulate, team players etc.
- Over 35.

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- Dan has MS from Top 5 university; Ike has TWO MS degrees, from Top 10 university.
- Have up-to-date skillsets.
- Articulate, team players etc.
- Over 35.
- But my foreign students apply to the same firms, and get jobs.

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#### Concrete Example: "Jim"

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• Son of Chinese immigrant parents.

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• The field of engineering lost this highly innovative engineer.

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- The field of engineering lost this highly innovative engineer.
- Meanwhile, lots of foreign students were hired.

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- Never got steady engineering work after that.
- Today working as a technician, e.g. installing office PCs.

- The field of engineering lost this highly innovative engineer.
- Meanwhile, lots of foreign students were hired.
- I've seen many, many Dans, Ikes and Jims.

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• Saving on labor costs.

#### Two Central Issues

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Saving on labor costs.

• Having immobile workers.

#### The Wage Factor

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#### • Hard data,

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#### The Wage Factor

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• Hard data, consistent with economic theory.

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### The Wage Factor

- Hard data, consistent with economic theory.
- On average, the foreign tech workers are paid less than *comparable* (age, education etc.) Americans.

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#### The Wage Factor

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- Hard data, consistent with economic theory.
- On average, the foreign tech workers are paid less than *comparable* (age, education etc.) Americans. This is across the board, not just the "Infosyses" but also the "Intels."

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#### • Hard data, consistent with economic theory.

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The Wage Factor

• **Young** foreign tech workers are paid *a lot* less than otherwise comparable **older** Americans (age 35+).

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#### • Hard data, consistent with economic theory.

- On average, the foreign tech workers are paid less than *comparable* (age, education etc.) Americans. This is across the board, not just the "Infosyses" but also the "Intels."
- **Young** foreign tech workers are paid *a lot* less than otherwise comparable **older** Americans (age 35+).

**Note:** Unless stated otherwise, *American* means U.S. citizens (native, naturalized) and permanent residents.

# The Wage Factor

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#### The Age Factor

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### The Age Factor

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• Job opportunities poor for those over age 35.

### The Age Factor

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• Job opportunities poor for those over age 35. See studies by NRC, American University/IEEE-USA etc.

### The Age Factor

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- Wall Street Journal, Feb. 4, 2016:

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Pete Edwards, EE; age 53; experience with 3-D printing!; having big difficulties finding work.

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- Job opportunities poor for those over age 35. See studies by NRC, American University/IEEE-USA etc.
- Wall Street Journal, Feb. 4, 2016:

Pete Edwards, EE; age 53; experience with 3-D printing!; having big difficulties finding work.

• The bottom line: Employers are hiring young foreign tech workers instead of older Americans.

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### The Immobility Factor

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### The Immobility Factor

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• Employers don't want engineers to leave for another firm in the midst of an urgent project.

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- D. Swaim, former architect of Texas Instruments' immigration policy, now in private practice:

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  - Instead, hire a foreign student (and sponsor him/her for a green card), because they must stay 7-12 years.

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• Google!

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# Data Showing the Problems

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- Various data sources: NRC, GAO, NCSG/NSF, BLS, NACE, etc.

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- Key factors include: age, education, job type, **geographic** region.

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• H-1B tech workers earn less than comparable Americans (Hunt, 2011; Matloff, 2012).

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- Foreign workers experience a big spike in earnings when they receive their green cards and become free agents (Mukhopadhyay, 2012).
- No STEM labor shortage, including in CS (Salzman, 2013; Costa, 2012).
- Wages essentially flat, both generally (BLS) and for new grads (NACE).

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The average quality of the former foreign students now in the U.S. workforce is substantially lower than that of U.S. natives (Bound, 2009; Hunt, 2011; Matloff, 2013).

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Given the indirect and direct displacement of Americans, this says we are replacing more-talented people with workers of lesser talent — an alarming situation for our national economy etc.

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### Quality Examples

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### Quality Examples

 "Ike" was rejected for a job in a group in which the workers (a) all were recent foreign students and (b) all came from very "ordinary" schools, e.g. University of Cincinnatti. Good workers, surely, but likely not "the best and the brightest" — and probably not as good as Ike.

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- A 2009 Washington Post column highlighted a worker from India hired by Microsoft, with an MS from the University of North Texas, and working in Quality Assurance. So, likely a person of ordinary talent, doing ordinary work hardly supporting the column's claim that the foreign workers are "the seeds of tomorrow's innovation."

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- The same column profiled another student from India, with an MS from UVa, hired by TI as a test engineer again, hardly consistent with the "innovation" claim.

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## Pro-Industry "Research"

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## Pro-Industry "Research"

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• Most research with findings favorable to the industry are by researchers with financial ties to the industry (e.g. Zavodny "Each H-1B creates 2.62 jobs"), Peri, the Brookings people).

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- Much of this research cuts ethical corners, e.g. Zavodny paper.
- Bias is clear: Most bibliographies have NO citations to research counter to their goal.
- Common flaw: Failure to look at <u>per-capita</u> rates, e.g. in patenting and entrepreneurship.

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• Industry claims the H-1Bs are either brilliant or possess rare skills.

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- Ban ageist practices, e.g. auto rejection of experienced U.S. workers.
- Have OPT revert to the original 12-month "training" period.
- Broaden the "best and brightest" categories (O-1 work visa, National Interest Waiver for green cards).

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#### **NON-Remedies**

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• Do NOT add funds for enforcement. Most abuse is LEGAL.

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## • Do NOT add funds for enforcement. Most abuse is LEGAL.

• Do NOT just ban replacing Americans by H-1Bs;

## **NON-Remedies**

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- Do NOT add funds for enforcement. Most abuse is LEGAL.
- Do NOT just ban *replacing* Americans by H-1Bs; ban hiring H-1Bs *instead of* Americans.

### **NON-Remedies**

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- Do NOT just ban *replacing* Americans by H-1Bs; ban hiring H-1Bs *instead of* Americans.
- Do NOT enact "Staple a Green Card."

## **NON-Remedies**

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- Do NOT add funds for enforcement. Most abuse is LEGAL.
- Do NOT just ban *replacing* Americans by H-1Bs; ban hiring H-1Bs *instead of* Americans.
- Do NOT enact "Staple a Green Card." (Auto green cards to foreign STEM grad students.)

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## Just Say No to Staple-a-Green-Card

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# Just Say No to Staple-a-Green-Card

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• Most new grads are YOUNG.

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• Most new grads are YOUNG. So, would exacerbate the already-awful age issue.

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# Just Say No to Staple-a-Green-Card

- Most new grads are YOUNG. So, would exacerbate the already-awful age issue.
- Would reduce PhD production.

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## Just Say No to Staple-a-Green-Card

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- Most new grads are YOUNG. So, would exacerbate the already-awful age issue.
- Would reduce PhD production.
- NSF (1989): Staple-a-Green-Card would drive Americans away from grad study.

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- Would be even worse with SAGC.

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- I leave you with this question:

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• These slides available at

http://heather.cs.ucdavis.edu/ASEESlides.pdf