Are They the Best and the Brightest? Analysis of Employer-Sponsored Tech Immigrants

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- Industry wants more H-1B work visas, fast-track green cards for STEM foreign students.

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  - Does existing policy serve them well?

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- Underpayment found to be 15-20% in (Matloff, 2003) and 33% in (Ong, 1997).
- NRC and GAO employer surveys found many employers admitting to (legally) paying H-1B workers less than comparable Americans.

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- Consider only workers who were originally sponsored by employers but now have green cards or citizenship.
- Consider nonmonetary evidence of outstanding talent, such as awards and patents.

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- Prof. Chen Lixin, China: The system "results in the phenomenon of high scores and low ability."
- The Chinese use the phrase, 填鸭 子, "stuff the duck," to poke fun at rote-memory learning.

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- Relates to the industry lobbyists' cry, "Don't let them return home and work for our competitors!"
- So, are the Chinese hired in the U.S. tech industry "the best and the brightest"? Or are most victims of 填鸭 子?

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- Lacks data on education, age.

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- But, denominator too small by factor of 1.15 to 1.33 (see above).
- So, only (median) values higher than, say 1.25, indicate a firm is hiring mainly the "best and brightest."

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firm	WR	WR, s.e.
Microsoft	1.18	1.15
Intel	1.13	1.08
Google	1.12	1.15
Cisco	1.04	1.04
Oracle	1.13	1.15
HP	1.20	1.08
Motorola	1.00	1.00
Qualcomm	1.00	1.00
eBay	1.05	1.02
PayPal	1.15	1.09

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In any case, not "genius" level. (Some workers have $WR > 2$.)

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- No public data on employer name, worker nationality.

PUMS Analysis/Results

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Logistic regression:

$$\text{probability of } \mathit{Salary} > \$150K =$$

$$\text{logit}(\beta_0 + \beta_1 \mathit{Age} + \beta_2 \mathit{MS} + \beta_3 \mathit{PhD} + \beta_4 \mathit{TmpVisa} + \beta_5 \mathit{China} + \beta_6 \mathit{India})$$

PUMS Analysis/Results, cont'd.

coef.	conf. int.
β_0 (const.)	-4.11 $\pm$ 0.51
β_1 (Age)	0.01 $\pm$ 0.01
β_2 (MS)	0.71 $\pm$ 0.23
β_3 (PhD)	1.36 $\pm$ 0.34
β_4 (spons.)	0.06 $\pm$ 0.25
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Or could be due to language, etc.

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Some possible positive Indian effect at PhD level (analysis not shown here).

But anyway, no evidence of "foreign genius" from any nationality.

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- 25 of the 58 foreign, slightly underrepresented.
- Again, no evidence that the foreign students are outperforming the domestic ones.

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- But only one has calculated *per capita* patents by immigrants, (Hunt, 2010). She finds after controlling for field and education level:

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  This is especially interesting in that the second group is the one the industry lobbyists highlight.

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- We should facilitate the immigration of such talents.
- Recently there has been some concern about long green card waits for employer-sponsored workers. However, for PhDs, who have their own category, the wait continues to be short.

Resources

These slides, and the R programming code used to compile the statistics, will be available at
`http://heather.cs.ucdavis.edu/BGIT.html`.
("Footnotes" in comment lines in **.tex** file.)