STEM Labor Shortage Pushed by Lobbyists To Get More H-1B Visas, Researcher Says

By Laura D. Francis

May 8 — Concerns about domestic labor shortages in science, technology, engineering and mathematics fields are “not new,” and the issue is more complex than lobbyists make it out to be, Harvard Law School senior research associate Michael Teitelbaum said May 8.

Speaking at an Economic Policy Institute event about his book, Falling Behind? Boom, Bust, and the Global Race for Scientific Talent, Teitelbaum said “there has been and continues to be a very expansive and highly effective lobbying campaign by information technology employers” to convince policy makers that there is a STEM shortage.

Those companies' “top lobbying goal,” he said, “seems to be to expand the H-1B visa program” for highly skilled guestworkers.
Teitelbaum said those pursuing more H-1B visas on the ground that there is a STEM labor shortage are larger and more well-organized than those who believe there is no shortage, and so “it's not even a contest” in terms of who wins the debate.

But Jonathan Rothwell, a senior research associate and associate fellow with the Brookings Institution's Metropolitan Policy Program, disagreed with Teitelbaum's contentions that the STEM shortage doesn't exist.

He criticized Teitelbaum's book for ignoring research from labor economists, and said there is research showing “alarming results” in terms of students at colleges and universities dropping out of STEM majors.

Teitelbaum had argued that, while science and math education isn't evenly distributed among all U.S. K-12 students, the country still is producing a sufficient number of high-caliber graduates to fill the industry's needs. Rothwell objected to this conclusion and said the number of such graduates isn't enough to realize the country's “full potential for innovation and entrepreneurship.”

No Concern About Competing With H-1Bs

Rothwell also said there doesn't appear to be a particular concern among undergraduate and graduate students pursuing STEM majors that they will lose out to H-1B workers in competing for jobs. Only about 5 percent of STEM workers are on H-1B visas, and STEM students are concerned about competition for jobs generally, not competition with foreign workers in particular.

Teitelbaum agreed that there aren't many H-1B workers in STEM occupations overall, but in certain fields the H-1B program is a “significant factor.”
“There are lots of problems with the H-1B visa,” Teitelbaum said, in particular that it worked out essentially the opposite from what the original bill sponsors had intended. According to Teitelbaum, the H-1B cap was intended to signal to employers that H-1B visas were a temporary fix while employers

provided continuing education to their U.S. workforces so they could keep up to speed on the latest technology.

“I think we know what happened,” he said—Congress simply wound up raising the H-1B cap based on employer demand to its current level of 85,000 per year, with unlimited H-1B visas for colleges and universities.

“It was supposed to be a temporary fix and, like many temporary fixes in the United States, they become a permanent structural element in the economy,” Teitelbaum said.

Teitelbaum, a former member of the U.S. Commission on Immigration Reform—also known as the Jordan Commission—said the commission unanimously recommended in 1997 that the U.S. not rely on temporary foreign worker programs. Instead, if there really is a labor need requiring employers to hire foreign talent, the visas should be permanent, otherwise they will undercut the wages and working conditions of domestic workers, including recent immigrants, he said.

According to Teitelbaum, only a small number of employers actually attempt to hire U.S. workers before petitioning for H-1B workers, and employers are drawn to the program's “weak wage standards” coupled with “weak enforcement.”

Historical Patterns Cited

Teitelbaum said the issue historically has followed a pattern of initial alarm about a STEM labor shortage based on some national need, followed by a boom of STEM workers and then a bust.

Currently, he said, “we all know that the United States has real problems with its K-12 science and math quality,” with U.S. students ranking “average” or “mediocre” in comparison with other countries in those subjects. But Teitelbaum pointed out that those results are skewed both because of “unusually high levels of inequality” among the education provided to U.S. students and because the U.S. is compared to “very small” countries or even city-states, such as Liechtenstein and Singapore.

At the college level, Teitelbaum said the U.S. underproduces graduates in some STEM fields but overproduces them in others, and colleges and universities tend not to share information about the labor market with students as they are choosing their majors. He said students often are encouraged to go into certain majors, only to find out that the market for such occupations has waned by the time they graduate.

In addition, Teitelbaum said the structure of research and development funding creates “perverse incentives” for research universities to continue to increase their budgets from year to year, which creates a “financial crisis” if the grants that are expected wind up falling through.

Although there is “clear evidence of large variations” in labor shortages geographically and from field to field, Teitelbaum said there is no “credible evidence of general shortages” in STEM because if there were, there would be rising real wages for these occupations relative to other highly skilled fields, higher employment growth and relatively low and declining unemployment rates.

Robert Charette, president of the ITABHI Corp. and a contributor to the Institute of Electrical and Electronics Engineers' Spectrum magazine, largely agreed with Teitelbaum's conclusions.

“If the industry wants to have a massive amount of engineers and scientists, let them put up the money for it,” Charette said. “You won't find one company who's willing to do that, because the bottom line drives it.”