

Is President Obama Right About Engineers? Significant Numbers Unemployed or Underemployed

By Steven A. Camarota

During a recent video chat session, President Obama told a woman that he could not understand why her engineer husband was unemployed because “industry tells me that they don’t have enough highly skilled engineers.” However, data from the American Community Survey collected by the Census Bureau show that there are a total of 1.8 million U.S.-born individuals with engineering degrees who are either unemployed, out of the labor market, or not working as engineers. This is true for those with many different types of engineering degrees.

The 2010 American Community Survey shows:

- There are 101,000 U.S.-born individuals with an engineering degree who are unemployed.
- There are an additional 244,000 U.S.-born individuals under age 65 who have a degree in engineering but who are not in the labor market. This means they are not working nor are they looking for work, and are therefore not counted as unemployed.
- In addition to those unemployed and out of the labor force, there are an additional 1.47 million U.S.-born individuals who report they have an engineering degree and have a job, but do not work as engineers.
- President Obama specifically used the words “highly skilled.” In 2010, there were 25,000 unemployed U.S.-born individuals with engineering degrees who have a Master’s or PhD and another 68,000 with advanced degrees not in the labor force. There were also 489,000 U.S.-born individuals with graduate degrees who were working, but not as engineers.
- Relatively low pay and perhaps a strong bias on the part of some employers to hire foreign workers seems to have pushed many American engineers out their profession.
- There are many different types of engineering degrees. But unemployment, non-work, or working outside of your field is common for Americans with many different types of engineering degrees. (Detailed employment figures for specific types of engineers are provided below.)
- The key policy question for the United States is how many foreign engineers should be admitted in the future. Contrary to President Obama’s statement, the latest data from the Census Bureau indicate there is a very large supply of American-born engineers in the country. It would be better for the president to seek more diverse sources of information than simply relying on “industry” to determine what is going on in the U.S. labor market.

Data Source: Figures for the above analysis come from a Center for Immigration Studies analysis of the public-use file of the 2010 American Community Survey (ACS) collected by the U.S. Census Bureau. Figures on degrees and employment are based on self-reporting in the survey and have been rounded to their nearest thousand. The survey asks about undergraduate degrees, so some of the individuals who have a Master’s or PhD may not

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have their graduate degree in engineering. Also, those who indicated that they have a “professional degree” are not included in the discussion of those with Master’s and PhDs because a large share have law degrees. The 2010 data is the most recent ACS available.

Table 1. U.S.-Born Individuals Who Report Having an Engineering Degree (Ages 21 to 65)

Degree	Unemployed	Not in Labor Force	Unemployed Plus Not in Labor Force	Working, but Not as an Engineer
General Engineering	12,415	41,505	53,920	213,821
Aerospace Engineering	2,202	8,078	10,280	49,752
Biological Engineering	1,717	3,954	5,671	18,413
Architectural Engineering	875	1,150	2,025	7,867
Biomedical Engineering	585	3,454	4,039	18,727
Chemical Engineering	7,076	21,766	28,842	111,620
Civil Engineering	14,027	21,436	35,463	163,109
Computer Engineering	3,910	5,572	9,482	80,622
Electrical Engineering	24,158	57,058	81,216	330,023
Engineering Mechanics, Physics, and Science	675	2,164	2,839	15,625
Environmental Engineering	536	1,380	1,916	9,893
Geological and Geophysical Engineering	290	508	798	4,053
Industrial and Manufacturing Engineering	6,961	15,271	22,232	89,862
Materials Engineering and Materials Science	1,281	2,841	4,122	10,892
Mechanical Engineering	19,490	44,798	64,288	273,257
Metallurgical Engineering	711	1,516	2,227	7,219
Mining and Mineral Engineering	383	935	1,318	5,635
Naval Architecture and Marine Engineering	449	2,194	2,643	8,692
Nuclear Engineering	398	2,304	2,702	9,892
Petroleum Engineering	446	1,528	1,974	6,567
Miscellaneous Engineering	2,660	4,476	7,136	34,244
Total	101,245	243,888	345,133	1,469,785

Source: 2010 public-use file of the American Community Survey.