



BY THE NUMBERS: WHAT COUNTS AS STEM EDUCATION?

Are U.S. universities minting enough engineering graduates? Compared to other countries, we could be doing more.

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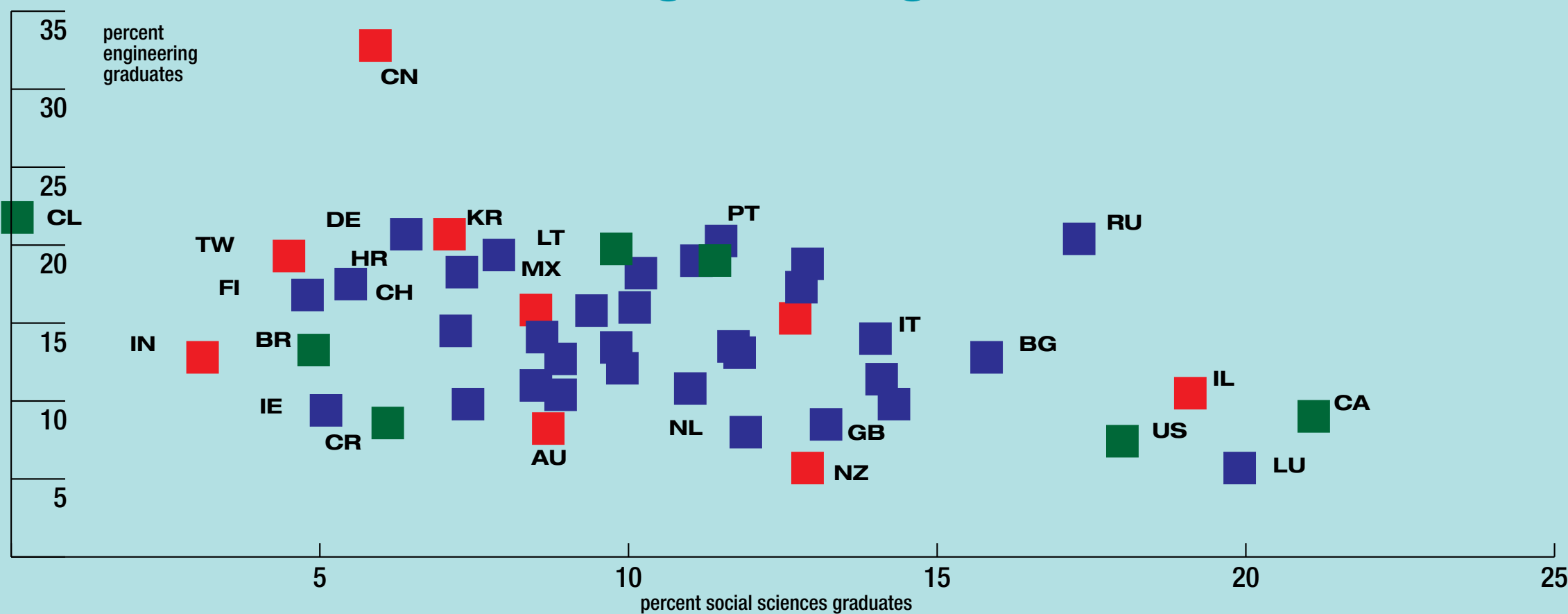
In 2022, the National Science Foundation produced a report, *Higher Education in Science and Engineering*, which looked at key indicators for all graduates in science and engineering fields from many nations. In terms of percentages of all students receiving their first degrees, science and engineering accounts for as many as 47 percent of graduates in Russia and only 25 percent in Brazil, but most major countries are around 40 percent, including the United States.

What differs is the mix of STEM degrees. Some countries award far more social and behavioral degrees than engineering ones. In others the reverse is true: Germany, for instance, awards three times as many engineering degrees and India four times as many. Among all the countries listed in the NSF report, some 17 percent of graduates received engineering degrees, while nearly 8 percent got social and behavioral science degrees—nearly the opposite of the mix in the U.S. See the chart below for the comparisons.

Top Nations in Producing Engineering Graduates, 2018

Country	All University Graduates	Graduates in Engineering	Graduates in Social Sciences
China	3,868,358	1,269,173	229,645
India	6,474,715	831,504	203,929
Russia	831,676	169,259	143,738
Brazil	1,264,288	163,310	61,622
United States	1,987,274	147,712	358,600
Mexico	624,411	118,690	61,452
Japan	582,020	87,835	49,476
Germany	368,985	76,211	23,543
South Korea	347,179	71,922	24,791
Turkey	454,995	69,460	57,958
France	354,407	50,011	30,396
Taiwan	231,003	44,546	10,418
Colombia	226,506	41,370	25,904
Poland	196,266	37,293	21,883
United Kingdom	405,105	34,353	53,469
Italy	238,792	33,536	33,336
Spain	195,382	24,735	19,062
Canada	198,564	17,686	41,834
Australia	206,726	15,522	17,924
Romania	73,430	13,328	7,511
Portugal	57,269	12,046	6,606
Chile	47,035	9,820	36
Switzerland	55,268	9,679	3,022
Greece	48,004	9,024	6,200
Netherlands	104,948	8,438	12,492
Sweden	47,881	8,269	6,132
Belgium	69,797	6,823	5,194
Finland	38,362	6,453	1,827
Israel	56,274	5,902	10,775
Hungary	36,814	5,818	3,443
Czechia	44,426	5,620	3,951
Denmark	44,158	4,875	3,732
Ireland	47,411	4,476	2,422
Austria	35,028	4,225	3,453
Norway	38,963	4,052	3,460
Lithuania	20,091	4,046	1,595
Bulgaria	29,700	3,808	4,702
Croatia	18,409	3,497	1,349
Costa Rica	36,049	3,055	2,186
Slovakia	22,191	2,400	2,443
New Zealand	30,002	1,697	3,858
Slovenia	9,441	1,511	955
Latvia	8,245	1,080	969
Estonia	5,941	862	430
Cyprus	3,098	418	364
Iceland	2,516	288	354
Malta	2,383	234	340
Luxembourg	627	36	125

2018 Graduates, Engineering vs. Social Sciences



Data source: National Science Foundation, *Higher Education in Science and Engineering*