SOUTH DAKOTA BOARD OF REGENTS

Full Board

AGENDA ITEM: 21

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SUBJECT: Educational Attainment in South Dakota

This analysis examines data from the US Census Bureau's 2013 *American Community Survey* in an effort to establish a general portrait of educational attainment in South Dakota. The analysis explores several correlates of educational attainment, including employment rate, worker earnings, and poverty status.

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RECOMMENDED ACTION OF THE EXECUTIVE DIRECTOR

Information only.

*** Special Data Analysis ***

Educational Attainment in South Dakota

Over the next decade, national job growth will be dominated by positions requiring a postsecondary degree. According to the US Bureau of Labor Statistics, the number of positions requiring a postsecondary degree will grow by 14.0 percent in the United States between 2012 and 2022, while jobs requiring a high school diploma will grow by only 7.9 percent.[1] The nation's rapid transition toward a knowledge-based, service-based economy will continue to call for an increasingly skilled workforce, to the point that – by 2020 – 65 percent of jobs in South Dakota are expected to require some level of postsecondary education.[2] With these observations in mind, the following analysis offers a summary of where South Dakota currently stands with respect to educational attainment.

Data Notes

Data used in this analysis are sourced from the US Census Bureau's 2013 American Community Survey (ACS) Public Use Microdata Sample (PUMS). The ACS is a continuous survey project that samples approximately three million addresses each year, or approximately one percent of the total US population. PUMS files contain a subset of actual responses to the ACS, along with weighting coefficients that allow calculated estimates to be scaled back to the population level. The flexibility of PUMS datasets allows for custom analyses that are not available through the Census Bureau's pre-tabulated estimates.

It is important to remember, then, that data used in this analysis are based on self-reported survey responses, and thus are subject to the same sources of sampling and nonsampling error associated with any other type of survey research. Accordingly, all figures presented in this analysis should be understood as estimates, not hard counts.

In order to facilitate comparability with related research conducted by the Census Bureau, the scope of this analysis is limited to working-age adults only (defined here as all persons aged 25 years or older). For reference, South Dakota's working age population in 2013 is estimated at 554,844, out of a total state population of 844,877.

[1] United States Bureau of Labor Statistics (2013). *Occupational Employment Projections to 2022.*
[2] Georgetown University Public Policy Institute, Center on Education and the Workforce (2013). *Recovery: Job Growth and Education Requirements through 2020.*

Analysis

Educational Attainment Overall

In 2013, 37.2 percent of working-age South Dakotans held an associate's degree or higher. Roughly one quarter (25.9 percent) of South Dakotans held a four-year degree or higher, and 7.1 percent held a graduate degree.[3] Table 1 (below) presents attainment data from other states, and shows that – across all categories of attainment – South Dakota's attainment rates are among the lowest in the region, and also fall below national figures.

Table 1
Educational Attainment by State, 2013

	Associate's Degree or Higher	Bachelor's Degree or Higher	Master's Degree or Higher	Doctoral or Professional Degree
Iowa	36.7%	26.0%	8.1%	2.5%
Minnesota	44.1%	33.6%	11.0%	3.5%
Montana	38.4%	29.3%	9.4%	2.6%
Nebraska	40.1%	30.3%	10.0%	3.2%
North Dakota	41.4%	27.8%	7.3%	2.1%
South Dakota	37.2%	25.9%	7.1%	2.0%
Wyoming	37.5%	27.1%	8.8%	2.9%
United States	37.7%	29.6%	11.2%	3.3%

As shown in Table 2, data suggest that South Dakota's distribution of college degrees is somewhat anomalous in the nation. Among South Dakotans with a college degree, 30.3 percent hold an associate's degree, compared to a national rate of only 21.4 percent. Graduate degree holders, in contrast, account for a disproportionately small share of South Dakota's total degree-holders (19.1 percent, compared to 29.7 percent for the nation). Combined, these figures suggest not only that South Dakota's net educational attainment is lower than most other states, but also that its pool of postsecondary degrees is skewed somewhat toward lower-level credentials.

Table 2
Share of Degrees by State, 2013

	Associate's Degree	Bachelor's Degree	Graduate Degree
Iowa	29.2%	48.8%	22.0%
Minnesota	23.8%	51.3%	24.9%
Montana	23.6%	51.9%	24.6%
Nebraska	24.5%	50.7%	24.9%
North Dakota	33.0%	49.4%	17.6%
South Dakota	30.3%	50.6%	19.1%
Wyoming	27.8%	48.8%	23.4%
United States	21.4%	48.9%	29.7%

[3] It can be noted that South Dakota's educational attainment rates have risen since the year 2000, but not by dramatic margins. In 2000, 28.6 percent of the state's population held an associate's degree or higher, 21.5 percent held a bachelor's degree or higher, and 6.0 percent held a graduate degree. (Source: US Census Bureau (2000). Decennial Census, Summary File, Table DP-2.)

Educational Attainment by Group

Table 3 depicts educational attainment rates by population group in South Dakota, and appears to reveal several demographic disparities. Notably, rates of educational attainment vary widely by race and ethnic group. Roughly 38.5 percent of the state's white residents hold a college degree, compared with only 19.9 percent of American Indian residents and 15.5 percent of Hispanic residents. This variation is even more pronounced with respect to bachelor's degree (or higher) attainment, with white residents reporting an attainment rate of 26.9 percent, compared with 10.5 percent and 8.8 percent for American Indians and Hispanics, respectively. Regional variation is evident as well. Overall attainment rates in excess of 40 percent exist in the southeast corner of the state, while rates in west river South Dakota hover near 30 percent. On the whole, this table suggests that the state is not homogenous with respect to educational attainment, but rather is fragmented into a mix of high- and low-attainment subgroups.

Table 3
Educational Attainment by Group, 2013[4]

	Associate's Degree or Higher	Bachelor's Degree or Higher	Master's Degree or Higher
Gender			
Male	36.2%	25.4%	7.1%
Female	38.1%	26.4%	7.1%
Age			
25 to 39	45.6%	31.4%	7.8%
40 to 64	38.2%	25.8%	7.4%
65 or more	23.7%	18.8%	5.6%
Race/Ethnicity			
White	38.5%	26.9%	7.4%
American Indian	19.9%	10.5%	3.2%
Hispanic	15.5%	8.8%	0.4%
Household Language			
English	38.4%	26.7%	7.4%
Spanish	29.4%	20.8%	2.9%
Other	36.2%	25.7%	7.6%
Region			
Rapid City Area	35.6%	23.2%	7.4%
West Central SD	27.6%	17.7%	5.1%
North East SD	32.6%	21.3%	4.3%
East Central SD	38.9%	27.5%	6.7%
South East SD	41.7%	30.8%	9.0%
Sioux Falls Area	43.3%	32.3%	9.0%
Overall	37.2%	25.9%	7.1%

[4] Race categories (white, American Indian) refer to named classification alone or in combination with one or more races. Hispanic ethnicity relates to any Spanish, Hispanic, or Latino origin as reported by the respondent. Geographic regions refer to public use microdata areas (PUMAs), which are established by the Census Bureau and are meant to divide the state into non-overlapping population units of roughly 100,000 residents.

Socioeconomic Indicators

It is well-established in popular and empirical literatures that educational attainment is positively associated with a range of socioeconomic benefits.[5] Table 4 presents a list of major socioeconomic indicators, showing data for two groups in South Dakota: working-age adults with a college degree (bachelor's degree or higher), and working-age adults without a bachelor's degree.[6]

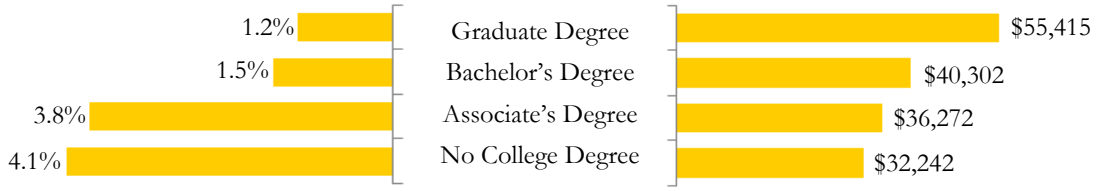
In all cases, bachelor's degree-holders demonstrate a stronger socioeconomic position than non-degree-holders. Notably, South Dakota adults with a college degree are substantially more likely than adults without a degree to own a computer (94.9 percent to 81.1 percent), have personal internet access (92.9 percent to 77.3 percent), have health insurance coverage (95.1 percent to 83.3 percent), and own their own home (79.3 percent to 72.4 percent). Correspondingly, degree-holders are less likely to receive food stamps (4.8 percent to 15.9 percent) or live below the poverty threshold (4.6 percent to 13.4 percent).

Table 4
Socioeconomic Indicators by Education Attainment Group, 2013

	No Bachelor's Degree	Bachelor's Degree or Higher
Has Running Water	99.2%	99.6%
Has Telephone	97.6%	98.8%
Has Computer	81.1%	94.9%
Has Internet Access	77.3%	92.9%
Has Health Insurance	83.3%	95.1%
Receives Food Stamps/SNAP	15.9%	4.8%
Owns Home	72.4%	79.3%
Lives Below Poverty Line	13.4%	4.6%

The socioeconomic advantages that flow from high educational attainment owe mainly to one root outcome: higher earnings. Figure 1 underscores the escalating earning power associated with each step up the higher education ladder.[7] In addition to earning higher wages, degree holders also are more likely to be employed than are those without a college degree.

Figure 1
Unemployment Rate and Median Earnings by Educational Attainment, 2013



[5] For examples of such analyses, see, http://trends.collegeboard.org/sites/default/files/education-pays-2013-full-report.pdf and http://www.bls.gov/emp/ep_chart_001.htm.
[6] "Has Telephone" indicator includes home service and cell phones. "Has Computer" indicator includes desktop, laptop, notebook, handheld, and smart phone devices. "Has Internet Access" includes home and mobile internet plans.
[7] Earnings (wages plus self-employment income) are calculated for full-time, employed workers only.

Industries and Occupations

Postsecondary education provides a pathway to higher-paying, skilled positions. Naturally then, workers with college degrees tend to cluster in certain industries, and once in those industries – tend to earn more than workers without a college degree. Tables 5a and 5b show – for workers with and without bachelor's degrees, respectively – the top industries (by number of workers) in South Dakota in 2013.[8] Even in industries shared by both groups (e.g., educational services, health care), workers with a bachelor's degree earned considerably more in 2013 than did workers without a bachelor's degree.

Table 5a
Top Industries, Workers with Bachelor's Degree or Higher, 2013

	Number of Workers	Percent of Workers	Median Earnings
Educational Services	18,989	20.7%	$38,287
Health Care and Social Assistance	16,814	18.3%	$45,340
Finance and Insurance	9,332	10.2%	$43,325
Professional, Scientific, and Technical Services	7,545	8.2%	$60,453

Table 5b
Top Industries, Workers without Bachelor's Degree, 2013

	Number of Workers	Percent of Workers	Median Earnings
Manufacturing	28,085	14.1%	$33,249
Retail Trade	23,258	11.7%	$31,234
Health Care and Social Assistance	22,629	11.4%	$32,242
Agriculture, Forestry, Fishing, and Hunting	20,411	10.3%	$40,302

Field of Degree

Focusing on bachelor's (or higher) degree holders specifically, Table 6 shows that employment outcomes vary somewhat by field of study.[9] Workers with degrees in arts and humanities fields (such as English, history, music, political science, psychology) earned somewhat less than workers from professional fields (e.g., education, nursing, agriculture), and much less than workers from STEM fields (i.e., science, technology, engineering, mathematics). These differences are, however, subject to other mediating factors (such as age and degree level) that tend to produce considerable variation within these general earnings estimates.[10]

Table 6
Unemployment Rates and Median Earnings by Field of Bachelor's Degree, 2013

	Unemployment Rate	Median Earnings
Arts and Humanities	0.6%	$36,272
Professional Fields	1.6%	$43,325
STEM Fields	1.8%	$65,491

[8] Table 5 includes full-time, employed workers only. Industries are grouped according to 2012 NAICS classifications.
[9] In Table 6, earnings estimates reflect full-time, employed workers only. Workers are grouped by first field of study.
[10] For more information, see http://sdbor.edu/theboard/agenda/2014/October/CommA/I_B_CommA1014.pdf.