

**SOUTH DAKOTA BOARD OF REGENTS
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SUBJECT: Drexel Labor Market Study

In 2013, the South Dakota Workforce Development Council commissioned the Drexel University Center for Labor Markets and Policy – directed by Dr. Paul Harrington – to conduct a comprehensive labor market study for the state of South Dakota. Researchers were tasked with crafting a detailed assessment of labor market dynamics in the state, including trends related to population, educational attainment, labor force, and job growth. The goal of the study was to help the state establish a clear context for economic and educational policy planning. A preliminary draft of the study was presented to taskforce members and a panel of state legislators in February 2014. The following report provides a summary of the study’s central findings.

Study Overview

The Drexel study examines three general topics: population and labor force change, labor market developments, and job growth trends. Within each of these areas, data are sourced primarily from the US Census Bureau (Decennial Census, American Community Survey) and the US Bureau of Labor Statistics (Current Population Survey, Quarterly Census of Employment and Wages). All data presented in this summary are taken from the original research report.

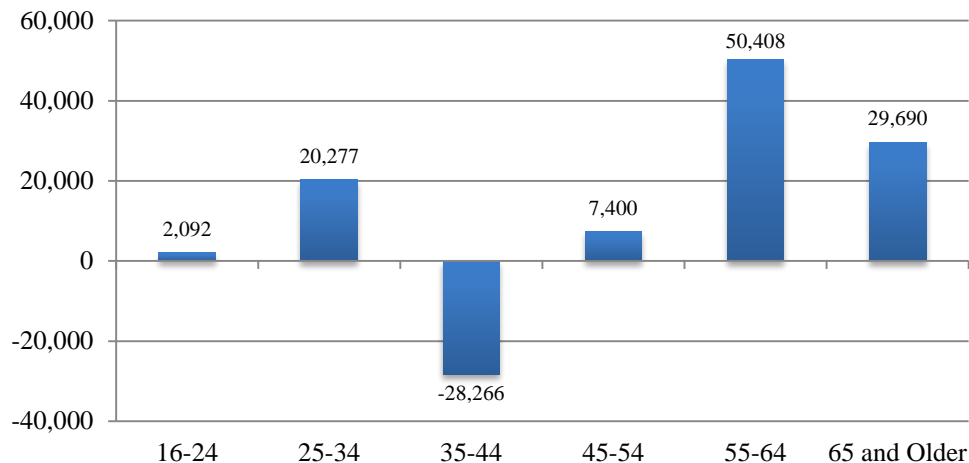
Population and Labor Force Change

Population Change

The report draws on Census data to show that, after thirty years of relative inactivity, the state’s population recently has begun to expand. From 1960 to 1990, South Dakota experienced only marginal population growth and in fact lost population during the 1960s. However, between 1990 and 2000 the state grew by 8.5 percent (somewhat slower growth than the US as a whole) and added another 7.8 percent between 2000 and 2010 (still lower than US-wide totals). Since 2010, the state has grown at a faster rate (3.8 percent) than the United States overall (2.4 percent), and currently is the nation’s 7th fastest-growing state. Growth since 2000 has been driven in large part by positive net migration with other states, though South Dakota currently is a net exporter of college degree holders.

The in-state working-age population has grown at roughly the same rate (15 percent) as the nation (16 percent) since 1990, amounting to a net gain of roughly 82,000 working-age adults in the state.¹ This growth has been led by several key demographic groups, including American Indians (48 percent growth) and Hispanics (222 percent growth). However, growth in the number of working-age adults has varied dramatically by age group. Reproduced from the study report, Figure 1 below displays changes in the size of South Dakota’s working-age population by age group from 1999-2000 to 2012-2013. While the overall size of state’s working-age population increased over this period, it also greyed considerably.

Figure 1.
Working-Age Population in SD by Age, 1999-2000 to 2012-2013



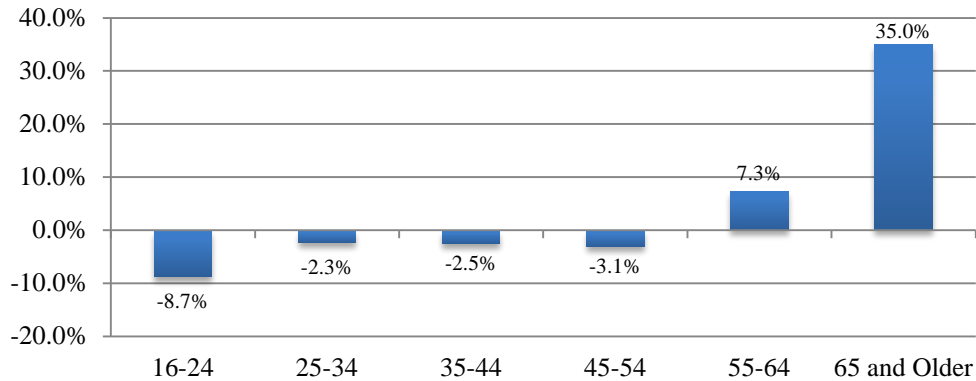
In addition, South Dakota has not kept pace with the rest of the nation with respect to bachelor’s degree attainment since the year 2000. Approximately 24 percent of working-age South Dakota residents currently hold a bachelor’s degree or higher, compared to 28 percent of working-age adults in the United States. While these figures are not far off, differences in the *rate of growth* in bachelor’s degree attainment since 2000 have been more stark, with South Dakota increasing by only 24 percent while the nation increased by 38 percent. The report notes that this observation “suggests that the higher education gap between South Dakota and the nation as a whole has increased since the end of the 1990s,” (p. 16).

Labor Force Change

Labor force participation rate (LFPR) – that is, the percentage of the working-age population that is attached to the workforce (i.e., is either employed or unemployed) – is a key gauge of a state’s production potential. Since 2000, South Dakota has tended to have among the highest LFPRs of all US states. However, the state’s (like the nation’s) LFPR figures have tailed off somewhat in recent years, falling from 74 percent in 2007 to 70 percent in 2013. The study’s authors suggest that this decline stems not merely from an aging workforce, but likely owes to a combination of several other trends, including: general withdrawal from the labor force due to the economic recession, pronounced declines in LFPR among younger age groups due to displacement by older workers postponing retirement, and steeply falling participation by the state’s American Indian population. Figure 2 (next page) shows data related to changing LFPRs by age group among South Dakota residents over the last decade.

¹ “Working-age population” refers to persons age 16 or higher.

Figure 2.
LFPRs in SD by Age, 1999-2000 to 2012-2013



On the whole, the state’s labor force has grown by 10.3 percent since the year 2000 (a numeric gain of 40,600 workers), which roughly matches the nation’s growth rate over the same period. Similar to trends in the broader working-age population, growth in the labor force has been powered disproportionately by older workers. Persons over the age of 55 not only were far more numerous in South Dakota in 2012-2013 than in 1999-2000, but also were much more likely to participate in the labor force. Consequently, the Drexel study projects that while South Dakota’s workforce will continue to grow between 2012 and 2022, much of this growth will be limited to older worker cohorts. Only a slight expansion in the number of young and middle-aged workers can be expected (see Table 1), stemming mostly from the effects of continued net migration to the state.

Table 1.
Projected Change in SD Labor Force by Age, 2012 to 2022

Age	2012	2022	Change (n)	Change (%)
16-24	70,752	65,576	-5,177	-7.3%
25-54	263,289	279,882	16,593	6.3%
55 and Older	110,728	156,247	45,519	41.1%
Total	444,770	501,705	56,935	12.8%

Labor Market Developments

The Drexel study suggests that South Dakota – unlike the nation as a whole – currently is experiencing a condition of near full-employment (i.e., a ratio of roughly one job seeker for every job vacancy). At only 3.8 percent as of 2013, the state’s unemployment rate is among the lowest in the nation, and since the onset of the economic recession has hovered near half the national rate. Further, low unemployment in the state is widespread, with 80 percent of the state’s counties reporting an unemployment rate of only 4.9 percent. Given this staggeringly low level of unemployment, several of the state’s industrial sectors and occupational areas may now be experiencing labor shortages. These industries and occupations – whose current unemployment rates are lower than 3.0 percent – are displayed in Figures 3 and 4.

Figure 3.
SD Industries with Potential Labor Shortages, 2012-2013

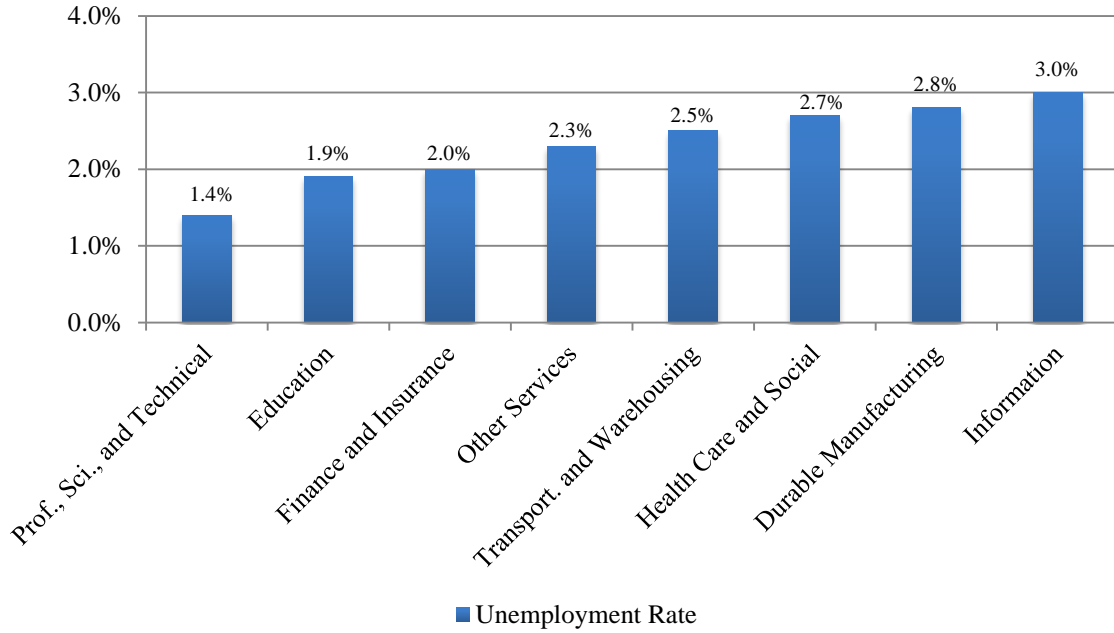
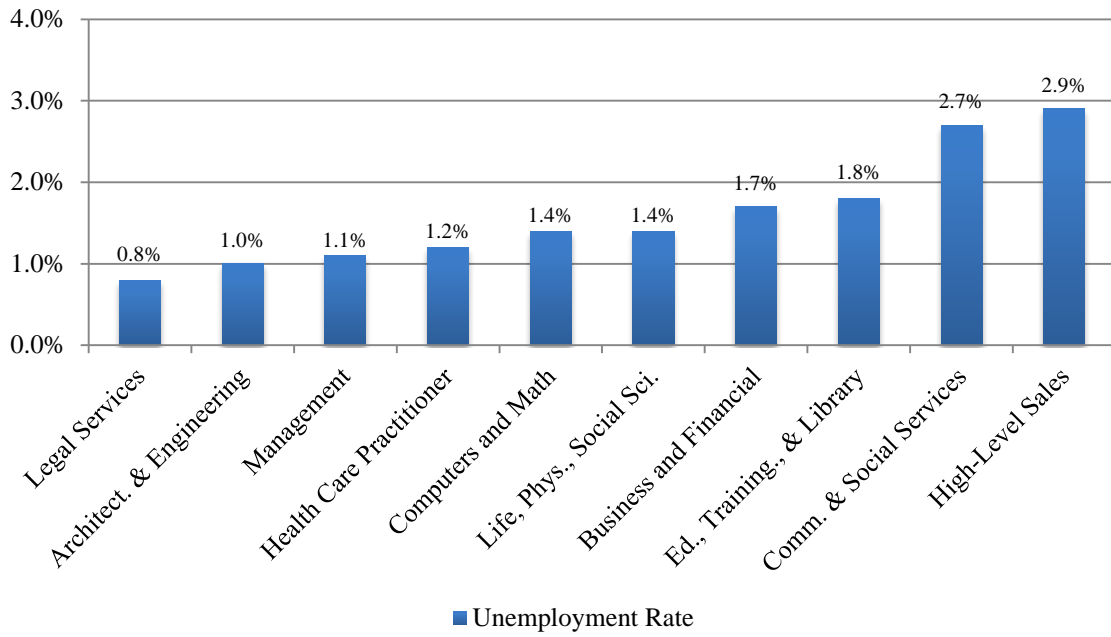


Figure 4.
SD Occupational Areas with Potential Labor Shortages, 2012-2013



The study's authors observe that many of the labor-scarce industries and occupations identified above are associated with job types that tend to require "long periods of formal schooling, apprenticeships, or other kinds of on-the-job training...to develop the abilities, knowledge, and skills required to work in these occupations," (p. 48). In other words, the labor shortages currently seen in South Dakota appear to be more characteristic of skilled fields. Conversely, industries and occupations in South Dakota now dealing with excess labor supplies tend to be associated with unskilled positions. These observations speak to the heightened importance of postsecondary training, which the authors found (among South Dakota workers) to be inversely associated with both unemployment rate and duration of unemployment.

Job Growth Trends

The Drexel report asserts that South Dakota's rate of job growth (11.3 percent) has "dramatically" outpaced that of the nation (3.2 percent) since the year 2000.² This success owes to two key trends: 1) a stable number of jobs in the state's goods-producing sector and 2) rapid growth in the state's service-producing sector.³ Between January 2001 and November 2013, South Dakota experienced 0.5 and 13.4 percent growth in its goods-producing and service-producing sectors, respectively. Over the same span, the nation posted a 23.5 percent *loss* of goods-producing jobs and only a 9.3 percent gain in service-producing jobs. South Dakota's relative success in both of these areas distinguishes the state as the 10th fastest growing state in the nation with respect to overall job creation since 2000.

These and other data lead the authors of the Drexel study to make a crucial assertion: that South Dakota is experiencing a major shift in its overarching industrial landscape. Despite the state's proficiency in retaining manufacturing jobs at a time when most other states could not, job growth trends nonetheless suggest that "the industrial structure of employment in South Dakota has shifted from goods-producing to service-producing industries between 2001 and today," (p. 63). Importantly, this transition has led to greater demand for skilled labor in the state. Whereas goods-producing industries typically rely on unskilled blue-collar labor, service-producing industries tend to require workers with extensive knowledge, skills, and abilities. The state's growing need for a highly skilled workforce speaks directly to the importance of postsecondary training, particularly at the university level:

"The long-term shift of the state's industrial structure toward service-producing firms, that on average are considerably more likely to employ professional and managerial workers, has meant that the bulk of new employment gains have been concentrated in these occupations. Large absolute and relative job gains in these occupations have been accompanied by strong job growth in employment among college graduates with a bachelor's degree or higher over the long term." (p. 67)

² These growth rates refer to increases in non-farm payroll employment.

³ The *goods-producing* industrial sector includes agriculture, forestry, fishing, and hunting; mining, quarrying, and oil and gas extraction, construction, and manufacturing. The *service-producing* sector includes wholesale trade; retail trade; transportation and warehousing; utilities; information; finance and insurance; real estate and rental and leasing; professional, scientific, and technical services; management of companies and enterprises; administrative and support and waste management and remediation services; educational services; health care and social assistance; arts, entertainment, and recreation; accommodation and food services; and other services (except public administration).

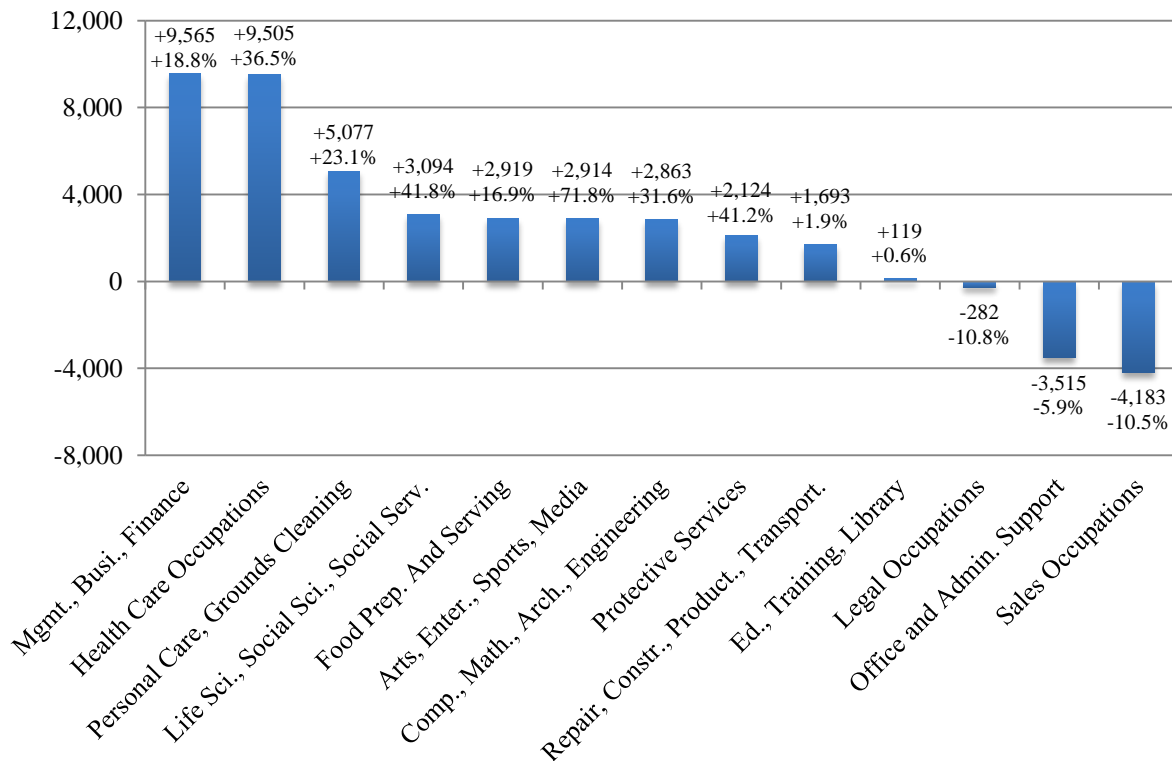
This transition toward a service-based economy has already begun to reshape the complexion of the state's workforce. As depicted in Table 2, South Dakota has added more than 24,000 workers with a bachelor's degree or higher over the last decade (a gain of 28.4 percent), compared with smaller gains among workers with a high school diploma or less (+11,292, +7.6 percent) and a net loss of workers with an associate's degree (-3,440, -2.8 percent).

Table 2.
Employment in SD by Educational Attainment, 2000 to 2011-2012

<i>Attainment</i>	<i>2000</i>	<i>2011-2012</i>	<i>Change (n)</i>	<i>Change (%)</i>
<i>Less than high school</i>	38,862	27,598	-11,264	-29.0%
<i>High school diploma</i>	109,888	132,444	22,556	20.5%
<i>Some college or associate's degree</i>	121,812	118,372	-3,440	-2.8%
<i>Bachelor's degree</i>	63,169	79,840	16,671	26.4%
<i>Master's or higher</i>	21,470	28,841	7,371	34.3%
Total	355,201	387,095	31894	9.0%

Since 2000, job growth in South Dakota has been spearheaded by professional fields. Figure 5 below displays net job change in South Dakota from 2000 to 2011-2012 by industry group, and reveals that the largest gains have been concentrated in such fields as management and business, health care, computers and mathematics, architecture and engineering, and sciences and social services.

Figure 5.
Change in Employment in SD by Occupation, 2000 to 2012-2013



The Drexel report closes by profiling several industry clusters that are expected to offer strong growth potential in South Dakota in coming years. These areas are distinguished by strong rates of job creation during the ongoing economic recovery, in some cases despite strongly contrary national trends. These industry clusters are discussed below.⁴

➤ *Durable goods manufacturing*

Made up by such areas as fabricated metal product manufacturing, machinery manufacturing, and transportation equipment manufacturing, this group of industries grew by nearly 4,000 workers (or 20.9 percent) between 2010 and 2013 in South Dakota, and currently is experiencing a labor shortage. However, because of these industries' reliance on blue-collar workers, the Drexel authors advise that "while...the long-term revenue outlook for South Dakota durable producers appears bright, the need for labor in [the] future will not be as high because technological gains outpace the contributions of labor in production," (p. 90). The authors further note that because the manufacturing industry tends to be sensitive to the ebb and flow of the economic cycle, expectations about future growth should be made cautiously.

➤ *Hospitals and Health Labor*

Hospitals in South Dakota added roughly 3,000 workers to South Dakota's economy from 2010 to 2013, in addition to several hundred positions added by the state's ambulatory care providers. Due to expectations of continued robust growth in the state's population – thanks in part to favorable interstate migration patterns – the Drexel study suggests that demand for health care workers in South Dakota will remain strong for the foreseeable future. The authors surmise, however, that the exact occupational makeup of this growth is clouded somewhat by uncertainty about future staffing practices of the health care industry.

➤ *Professional, Scientific, and Technical Services*

Referred to by the authors as the "heart of the knowledge economy," this industrial category includes a range of specialized areas including accounting, law, architecture and engineering, computer systems, management, research and development, and other professional services (p. 97). This industrial sector has grown by nearly 1,200 workers during the economic recovery, amounting to growth rate of more than 10 percent since 2010. As in the broader national economy, future hiring in this industry is expected to be strong in South Dakota, and will gravitate toward workers with considerable training and expertise. To this point, the authors conclude that:

"With extraordinarily low unemployment in the PST industry, a strong long-term record of job growth with only modest cyclical swings in employment and very bright national outlook, we believe that the prospects for growth in this industry are quite bright in South Dakota. The basic constraint on this growth will be access to qualified professionals. Moreover, we suspect that increasingly advanced degrees in technical fields will become more an important part of the staffing structure in South Dakota. This may mean developing a set of efforts to bolster graduate enrollments within the state's engineering, computer science and physical science higher education system." (p. 102)

⁴ Appendix A provides a list of the NAICS codes (i.e., specific industries) that make up these clusters.

Appendix A

Tables A1-A3 show illustrative examples of the North American Industry Classification System (NAICS) detailed industries that are associated with each of the three industrial growth areas highlighted above.

Table A1.
Selected Industries in the “Durable Goods Manufacturing” Cluster

NAICS Code	Description
3321	Forging and stamping
3322	Cutlery and hand tool manufacturing
3323	Architectural and structural metals manufacturing
3324	Boiler, tank, and shipping container manufacturing
3325	Hardware manufacturing
3326	Spring and wire product manufacturing
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing
3328	Coating, engraving, heat treating, and allied activities
3331	Agriculture, construction, and mining machinery manufacturing
3332	Industrial machinery manufacturing
3333	Commercial and service industry machinery manufacturing
3334	Ventilation, heating, air conditioning, and commercial refrigeration equipment manufacturing
3335	Metalworking machinery manufacturing
3336	Engine, turbine, and power transmission equipment manufacturing
3361	Motor vehicle manufacturing
3362	Motor vehicle body and trailer manufacturing
3363	Motor vehicle parts manufacturing
3365	Railroad rolling stock manufacturing

Table A2.
Selected Industries in the “Hospitals and Health Labor” Cluster

NAICS Code	Description
6211	Offices of physicians
6212	Offices of dentists
6213	Offices of other health practitioners (e.g., chiropractors, optometrists)
6214	Outpatient care centers
6215	Medical and diagnostic laboratories
6216	Home health care services
6221	General medical and surgical hospitals
6222	Psychiatric and substance abuse hospitals
6223	Specialty hospitals
6231	Nursing care facilities
6232	Residential intellectual and developmental disability facilities
6233	Continuing care retirement communities and assistant living facilities

Table A3.
Selected Industries in the “Professional, Scientific, and Technical Services” Cluster

NAICS Code	Description
5411	Legal services
5412	Accounting, tax preparation, bookkeeping, and payroll services
5413	Architectural, engineering, and related services
5414	Specialized design services
5415	Computer systems design and related services
5416	Management, scientific, and technical consulting services
5417	Scientific research and development services
5418	Advertising, public relations, and related services