North Dakota Higher Education Enrollment

Projections: Making Sense of the Data

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Abstract

Higher education is a domain that is dependent upon the enrollment of students. As student supply ebbs and flows, institutions are faced with making decisions that are ultimately financial in nature. From building or closing dormitories, to adding or closing programs of study, student enrollment prescribes what is sustainable on a college campus.

Current media cites studies that predict a significant drop in post-secondary enrollment over the next decade and a half, and in many cases, these commentaries present an upcoming doom and gloom scenario for higher education. Articles written are based on census data of current K-12 student enrollment, changing demographics of these populations and the assumptions of college attendance patterns for these demographic groups. Conclusions are generalized.

North Dakota often doesn’t follow generalities, as its small, highly educated population, rural nature, homogenous demographics, and agriculture and energy-based economy create outcomes not typically seen by the rest of the United States. With this backdrop, it is important to view the predictive college attendance data through the North Dakota lens.

Enrollment in North Dakota colleges primarily consists of students originating from North Dakota and Minnesota. As such, it is important to look at these groups when predicting future enrollment. Based on current K-12 enrollment in these states, the population of college age students in 2030 will be higher than current, although it will see ebbs and flows as it arrives there. Additionally, based on current K-12 enrollment characteristics, the ethnic diversity of college age individuals will steadily increase. Current assumptions hold that as diversity increases, the percentage of individuals opting to attend college will decrease. This assumption is based on research conducted in the early 2000s on a national sample of students.

This document does not attempt to support or dispel the scenario proffered of decreasing college enrollment. It does attempt to provide data and context that poses a critical lens for examining the particular trends and details affecting the state of North Dakota. With that, it also provides a conclusion that suggests how various factors could affect the outcome of college enrollment into the next decades.
Problem Statement

In recent years, there has been increasingly more research into the predicted drop in U.S. college attendance over the next decade. Research has subsequently spawned media articles that promise doom and gloom as higher education institutions head into a crisis of decreasing supply of available college students (See examples: The Higher Education Apocalypse, College students predicted to fall by more than 15% after the year 2025, The Coming College Enrollment Bust, and Higher education is headed for a supply and demand crisis). Media coverage of predicted decreases in college attendance affect the perspectives and beliefs of North Dakotans and create assumptions that North Dakota colleges and universities will see dramatic drops in postsecondary enrollment through the next decade. For those who can politically influence the future path of higher education in North Dakota – i.e., elected officials, State Board of Higher Education members, University System leaders, and college presidents – it is critical that there is an understanding of data pointing to higher education enrollment trends in North Dakota.

Primary among the studies often cited are the Western Interstate Commission for Higher Education (WICHE) Knocking at the College Door and Nathan Grawe’s text Demographics and the Demand for Higher Education. These studies, like others, use data from the U.S. Census Bureau to determine the population and demographic makeup of high school graduates in addition to studies conducted in the early 2000s by the National Center for Education Statistics (NCES) to predict college attending behaviors. While statistically sound from a mathematical standpoint, criticisms arise in the assumptions of behaviors of future high school graduates and the reasoning from the general to specific used to apply predictions to U.S. regions and states.

North Dakota stands as an example to support this criticism. According to the Chronicle for Higher Education Almanac, 19,687,946 students were enrolled in postsecondary education
during 2018. Of those, a very small number - one quarter of one percent (0.25%) - attended North Dakota University System (NDUS) institutions. Additionally, when considered as an individual state, North Dakota does not generally take on the same characteristics and trends as the rest of the nation. Less populous and rural, small changes in population demographics are reflected as larger percentages when compared to the rest of the nation (that is, 1% of North Dakota’s population comprises a much smaller number of people as when compared to a larger state). Economically supported by energy and agriculture, North Dakota was left relatively unscathed during the 2008 Great Recession, only to be hit hard economically in the mid-teens when both oil and agriculture prices dipped as the rest of the nation was experiencing economic recovery. And according to 2019 U.S. Census Bureau data, North Dakota was the only state in the nation that is growing younger, with a current median age of 35.2 years.

A second possible criticism of these studies surrounds the issue of the complex nature of population prediction as a statistical science, and the compounding issue of predicting to what extent future populations will behave. Thus, while we may know current population counts and where they are located, forecasting into the future how this population will change and whether students will attend college is based on current assumptions of these populations and their behaviors. Unforeseen political, economic, and social events – locally, nationally, and worldwide - can override scientific assumptions and change the future trajectory of population behavior. Additionally, it is well accepted among demographers that the further out in time predictions are made, the less reliable they become. In short, it is likelier to be accurate in predicting into the next year or two rather than into the next decade or more.

With the published studies in hand and understanding possible credit and criticisms to the research, the NDUS undertook a study to analyze the findings presented in studies predicting
future college enrollments specific to North Dakota. What is presented here is the result of that study. It is not the intention of NDUS to convince readers that predicted college enrollment patterns are or aren’t accurate, but rather to present facts and let the readers reach their own conclusion. We hope to show that prediction of future college enrollment is a complex equation, with many variables that can affect enrollment outcomes into the next decade.

**Background**

Predictions of future college attendance are based primarily on the projections of high school graduates. Generally speaking, prediction of high school graduates is quite accurate as it is based on a known set of numbers; that is, next year’s high school graduates are this year’s high school seniors and so on down through the subsequent grade levels. Small variations may occur in this population due to in-migration as well as students dropping out, but overall these variations are small. Additionally, every state has mandatory school attendance laws, allowing for a relatively simple count of K-12 students.

However, counts are not quite as easy when predicting college enrollment as postsecondary attendance is non-mandatory and an individual choice. College attendance is based on a multitude of factors: parental college attendance; socioeconomic status; support of family and friends; rural/urban location; workforce opportunities; cost of attendance; accessibility to scholarships, grants, and loans; college readiness; personal relationships and life events; as well as desire to attend. Many of these factors are variable and subject to change over the course of a young person’s lifetime. Therefore, while population counts of K-12 students are an extremely important factor in determining future college attendance counts, variables that affect college attendance patterns must also be considered.
“...while the number of college-aged children is an important component of higher education demand, who is in the prospective student pool is at least as important”

-Nathan Grawe, Demographics and the Demand for Higher Education

US Census Data

It is well known that as the U.S. has become an increasingly developed nation, the population profile has changed. Generations of individuals within the overall population – Baby Boomers, Gen X-ers, Millennials, Generation Z – vary in size and characteristics that set them apart from other generations. In the 1980s as the last of the Baby Boomers graduated from college leaving Gen X-ers (and a lot of open seats) on college campuses, there was a realization among colleges for the need to increase enrollment in order to maintain the enrollment status quo. Recognizing that there were limited numbers of Gen X-ers, college campuses moved away from an emphasis on recruitment toward retainment of current college students, realizing that the greatest gains in college enrollment could be made by reducing drop-out rates. It was from this era that the current national focus on college graduation rates was born. Just as nearly 40 years ago the last of the large Baby Boomer generation was graduating from and making way for the less populous Generation X to enter college, we are seeing the same phenomenon as Millennials make way for Generation Z. These population shifts can be observed in U.S. Census data. Population pyramids for 2015, 2020, 2025, and 2030 reveal patterns of decreasing numbers of traditional college age students in the general U.S. population. Figures 1 through 4 below show the shifting by age group on the U.S. population pyramids. Note on these figures the age category 20-24 and how it consistently decreases in subsequent years. These U.S Census Bureau
figures do support a **national trend** of a continual decrease in college age students throughout 2030.

![Figure 1: U.S. Population Pyramid - 2015](image1)

![Figure 2: U.S. Population Pyramid – 2020](image2)
Higher Education Demand Index (HEDI)

In 2018, Nathan Grawe, a social science professor at Carleton College in Northfield, Minnesota, published *Demographics and the Demand for Higher Education*. In this text Grawe put forward the notion of the Higher Education Demand Index (HEDI), a forecasting model for
college enrollment. Simply defined, HEDI states that the factors that determine the demand for college are the number of individuals of college going age multiplied by the probability that individuals will attend college:

\[ \text{Demand for College} = \text{<Number of Individuals>} \times \text{<Probability of College Attendance>} \]

The probability of attendance is based on multiple factors including individual sex, race, geographical location, urban/nonurban setting, parent education level, and family income. The determination of these factors is based on a linear regression model conducted on a 2002 nationally representative sample of high school sophomores and their subsequent college attendance patterns (NCES, 2007). The details of Grawe’s methodological approach are available in the appendix of his text and we can generalize here that the propensity of an individual to attend college is positively influenced by factors such as having a higher family income, having parents with college degrees, and being urban and white or Asian.

Further analysis of the NCES study reveals the total number of students participating in the longitudinal study used to determine propensity to attend college was 14,200 students from 750 high schools. The initial sample of 17,600 students was selected by stratified probability sampling of a nationally representative sample (based on metropolitan status of urbanicity) of students. The final sample represents less than one half of one percent (<0.5%) of the total 10th grade student population (n=3,584,412) in 2002 according to NCES (2004) data tables. While this sample does seem small, it falls within the 95% confidence level and 5% margin of error needed for an ideal sample size assuming it is a representative sample as indicated.

The Economic Effect

There is a direct relationship between the state of the economy and college attendance patterns. When the economy flounders, as it did in 2008, many people – especially older adults –
return to college. With unemployment rates high, many adults return to college to advance their job skills. Conversely, when unemployment rates are low, more people leave college, or postpone it, and head to work (Nadworny, 2019).

During the height of the 2008 recession, a record number of over 20.5 million students attended U.S. institutions of higher education. This economic storm created a college attendance pattern of year-over-year increases at rates never seen before in higher education. As the economy recovered, students returned to the workforce, creating a correction as college attendance returned to more historic levels of enrollment (Nadworny, 2019; Shapiro, 2019). Thus, it should be noted that during recession periods, the <probability of college attendance> variable in the HEDI formula carries more weight, and results in different enrollment outcomes had a recession not occurred.

Analysis of North Dakota

The North Dakota University System (NDUS) is a unified system of public higher education governed by a State Board of Higher Education (SBHE). Organized in 1990, the system includes two research universities, four regional universities and five community colleges. In the fall of 2019, there were over 44,000 students enrolled in the eleven NDUS institutions.
Predictions of the counts of students who will be attending NDUS universities and colleges in the years between 2018 and 2030 are made based on the predicted demographic makeup of regions during that period. Assumptions are twofold: (1) that current patterns of demographic change (i.e., observed changes in ethnic makeup of population) will continue, and (2) that current patterns in college attendance will hold true throughout the next decade. These assumptions within the context of North Dakota will be examined next.

**Current North Dakota University System Residency**

Analysis of projected enrollment for the North Dakota University System (NDUS) must start with an understanding of the current demographics of NDUS students. Figure 6 below presents the residency of NDUS students enrolled in Fall 2018 term. Residency is aggregated into five categories of North Dakota (ND), Minnesota (MN), other U.S. state (OtherUS), Canada, and Foreign. Institutions are arranged from left to right alphabetically by tier, showing first the five (5) two-year colleges, the four (4) four-year regionals, the two (2) research universities, and
a final column of NDUS. The students included in the NDUS category are also represented in their respective institutional category as well.

As a university system it can be observed that over half of the students enrolled are North Dakota residents. (It needs to be clarified that North Dakota residency in this situation does not mean that the student graduated from a North Dakota high school, but rather the student has established legal residency in the state.) The actual percentage of North Dakota residents attending NDUS is 55%. The second largest group comprising attendance in NDUS is Minnesota residents at 26%. This speaks to the regional nature of our university system, where 81% of students attending our colleges and universities are residents of either North Dakota or Minnesota.

81% of students attending NDUS are residents of North Dakota or Minnesota

Examining the individual institutions in the figure presented, it becomes apparent that some institutions are more reliant on North Dakota residents for enrollment. Lake Region State
College (83%), Bismarck State College (82%), and Dakota College at Bottineau (80%) all have student bodies comprised of over 80% North Dakotans, while Williston State College (79%), Dickinson State University (75%), Minot State University (72%), and North Dakota State College of Science (71%) are comprised of over 70% North Dakotans. A point that can be taken from the figure above is that when considering the geographical location of an institution within North Dakota, as one moves from west to east the institution becomes more reliant on Minnesota students. The two research universities (UND and NDSU) are most reliant on this demographic, where both have less than 50% of their student body comprised of North Dakota residents (NDSU-45%, UND-40%), and with North Dakota State University equal percentages of North Dakota and Minnesota students (~45%).

Thus, based on the HEDI presented above by Grawe, for all of the NDUS institutions the primary inputs for the equation factor <number of individuals> is the availability of college attending students from North Dakota and Minnesota, as these make up over 80% of students in the system. The table below summarizes each institutions’ total dependency on North Dakota and Minnesota for student enrollment.

<table>
<thead>
<tr>
<th>Institution</th>
<th>North Dakota</th>
<th>Minnesota</th>
<th>Total ND &amp; MN</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC</td>
<td>82%</td>
<td>1%</td>
<td>83%</td>
</tr>
<tr>
<td>DCB</td>
<td>80%</td>
<td>1%</td>
<td>81%</td>
</tr>
<tr>
<td>LRSC</td>
<td>83%</td>
<td>8%</td>
<td>91%</td>
</tr>
<tr>
<td>NDSCS</td>
<td>71%</td>
<td>23%</td>
<td>94%</td>
</tr>
<tr>
<td>WSC</td>
<td>79%</td>
<td>1%</td>
<td>80%</td>
</tr>
<tr>
<td>DSU</td>
<td>75%</td>
<td>1%</td>
<td>76%</td>
</tr>
<tr>
<td>MASU</td>
<td>62%</td>
<td>16%</td>
<td>78%</td>
</tr>
<tr>
<td>MISU</td>
<td>72%</td>
<td>3%</td>
<td>75%</td>
</tr>
<tr>
<td>VCSU</td>
<td>67%</td>
<td>10%</td>
<td>77%</td>
</tr>
<tr>
<td>NDSU</td>
<td>45%</td>
<td>45%</td>
<td>90%</td>
</tr>
<tr>
<td>UND</td>
<td>40%</td>
<td>32%</td>
<td>72%</td>
</tr>
</tbody>
</table>
Graphed in descending order by percentage of students with North Dakota residency, a pattern emerges that shows institutions located farther east in the state rely less heavily on North Dakota residents than the more western institutions. Eastern schools also have higher percentages of Minnesota residents in attendance, a logical pattern considering the proximity of these institutions to the Minnesota border.

![Figure 7: NDUS Institutions by percentage of students who are ND and MN residents](image)

With the high percentages of students from either North Dakota or Minnesota shown in this table, a look at what is predicted to happen to high school graduates in both states in the next decade is warranted.

**Predicted High School Graduates for North Dakota & Minnesota**

The primary evidence provided for predicted decreases in college attendance is the ebb of class cohorts that will be working its way through the K-12 system. Nationally this decrease appears as shown in Figure 8 below. Current graduation counts are expected to decrease through 2020, followed by a surge resulting in a record peak in 2025. The peak will then be followed by
a rapid decline which is predicted to continue until 2031, at which point it will bottom out at a point lower than observed in over twenty years.

Figure 8: Overall High School Graduate Trends

Predictions of high school graduates through the early 2030s are considered accurate, as those individuals who will be graduating through that time have already been born. However, this trend reflects a national perspective and as mentioned in the Background section, North Dakota does not always follow national trends. Furthermore, North Dakota and Minnesota high school graduates combined comprise less than 2% of the total annual U.S. high school graduate population.

Examining the North Dakota and Minnesota demographic more closely, cited research studies present a graphic like those in Figure 9 below:
These images present a dire picture for Minnesota, but a large increase for North Dakota. Note, however, that here - as in the figures presented in the published reports - the vertical y axes are not presented on the same scale. When normalizing these two datasets to the same y-axis the result is as follows:
Figure 10: MN and ND projected High School Graduates (Normalized)

Note that the Minnesota decrease and the North Dakota increase shown in the prior graphs are much less dramatic when compared on similar axes. However, while this normalization does flatten both population lines, the predicted outcome reported still holds true.

In the table below, current enrollment data from the Minnesota Department of Education and North Dakota K-12 Department of Public Instruction websites has been extrapolated out to the associated graduating class. The years for predicted maximum graduates for each state are highlighted in blue. Note that Minnesota does reflect national trends with maximum graduates in 2025, followed by a steady decrease. North Dakota on the other hand shows a steady increase throughout the same period. For Minnesota, 2025 through 2031 represents a decrease of approximately 4,500 students, or a 7% decrease. During this same period North Dakota is predicted to increase by nearly 500 students, or a 10% increase. Thus, while North Dakota will see increases over the timeframe that Minnesota will be experiencing decreases, the gain in
North Dakota graduates is not enough – nearly 4,000 less – than what is needed to compensate the loss of Minnesota high school graduates.

<table>
<thead>
<tr>
<th>Graduation Year</th>
<th>Predicted MN graduates</th>
<th>Predicted ND graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>61766</td>
<td>7336</td>
</tr>
<tr>
<td>2019</td>
<td>62303</td>
<td>7548</td>
</tr>
<tr>
<td>2020</td>
<td>61508</td>
<td>7500</td>
</tr>
<tr>
<td>2021</td>
<td>62751</td>
<td>7985</td>
</tr>
<tr>
<td>2022</td>
<td>64107</td>
<td>8397</td>
</tr>
<tr>
<td>2023</td>
<td>63982</td>
<td>8228</td>
</tr>
<tr>
<td>2024</td>
<td>65482</td>
<td>8617</td>
</tr>
<tr>
<td>2025</td>
<td>66921</td>
<td>8846</td>
</tr>
<tr>
<td>2026</td>
<td>65359</td>
<td>8850</td>
</tr>
<tr>
<td>2027</td>
<td>63737</td>
<td>8884</td>
</tr>
<tr>
<td>2028</td>
<td>61839</td>
<td>8740</td>
</tr>
<tr>
<td>2029</td>
<td>61634</td>
<td>8745</td>
</tr>
<tr>
<td>2030</td>
<td>62061</td>
<td>9178</td>
</tr>
<tr>
<td>2031</td>
<td>62382</td>
<td>9324</td>
</tr>
</tbody>
</table>

A second observation to make with regards to the table presented above is that the timeframe of the measures can change the context of the figure. For instance, Figure 9 data conveys a different perception if compared to current enrollment rather than a baseline enrollment of more than a decade ago when higher education was experiencing large increases in attendance due to the Great Recession. Figure 11 below shows data presented in this format, and as can been seen, the change in both North Dakota and Minnesota graduates is predicted to increase between 2019 and 2031. However, while the North Dakota trendline shows a steady increase, Minnesota will see an increase followed by a decrease before beginning to rise again. If anything, the pattern of graduates predicted to be produced by Minnesota high schools forebodes that higher education should plan for a temporary bulge in students in the 2020s as these high school graduates work their way through the higher education system.
A conclusion that can be drawn from the presented data is that NDUS institutions which rely heavily on North Dakota residents will likely be resilient to the national decreasing trend in high school graduates over the next decade, and may in fact see slight increases as North Dakota high school graduates increase an additional 2,000 above current count. Institutions relying more largely on students from Minnesota may be more likely affected, and therefore possibly see fluctuations in enrollment as Minnesota high school graduates ebb and flow.

**North Dakota – Minnesota Reciprocity**

The second factor included in the HEDI formula is the propensity of a student to attend college. While many factors are included in Grawe’s formula, one that is not considered is the reciprocity agreement that currently exists between North Dakota and Minnesota. This agreement allows for out-of-state students to attend college in the adjacent reciprocating state at a reduced out-of-state tuition rate. The NDUS system office has data on counts of students from
each state participating in the reciprocity agreement since 1990. This data is presented in Figure 12 below.

Figure 12: ND-MN Reciprocity counts by Year

Figure 12 reveals that the discrepancy in the number of students being exchanged between states has been rapidly increasing since 2003, in both the decreasing number of North Dakota students going to Minnesota and the increasing number of Minnesota attending NDUS colleges. Reasons for this pattern of behavior are likely linked primarily to monetary factors. For example, Minnesota has seen increases in college tuition rates over the past decade whereas in North Dakota continued legislative support of higher education funding has kept tuition rates lower. Likewise, in the early 2000s the North Dakota legislature also begun funding significantly more academic scholarships for students who graduated from North Dakota high schools and subsequently attended North Dakota colleges. In other words, NDUS colleges and universities
have increasingly become a very reasonable financial choice for a college degree for both North Dakota and Minnesota students.

In 2018, the University of Minnesota established a task force to begin looking at ways to “…curb a decades-long trend of Minnesota losing more high school graduates to colleges in neighboring states…” (Pross, 2018). By fall 2019, NDUS Institutional Research observed the count of Minnesota students attending college in the NDUS to have dropped below the prior year’s count (NDUS, 2019). Thus, while the prior two decades have shown an increasing divergence in students exchanged between Minnesota and North Dakota, there is potential for reversal of this pattern as Minnesota focuses on retaining their high school graduates in-state for college.

Changes in Ethnic Makeup of North Dakota

When analyzing the WICHE and Grawe research on predicted college enrollment, it is the conclusion of the NDUS Institutional Research staff that the primary cause for predicted decreased enrollments can be attributed to the predicted future ethnic make-up of the state. The NCES Educational Longitudinal Study of 2002, which was used to build the likelihood of attending college factor, show that race is a large determinant of college attendance. From the 2002 study, Asians attended college at the highest rates (82%), followed by White (75%), Black (62%), Hispanic (59%), and American Indian (51%) (NCES, 2007).

Historically, North Dakota has been among the top states in the United State with an ethnic White population. As of 2017, North Dakota was tied for 7th with a White population rate of 85% (Kaiser Family Foundation, 2019). This rate has been steadily decreasing, as in 2008 Whites comprised 90% of the state population. This decreasing trend is predicted to continue as the state experiences population gains from out of state. These gains have contributed to the
“youngering” of the state as reported by the U.S. Census Bureau (2019). These younger adults also contribute to population growth as many are entering the state during childbearing years, and subsequently having and raising children in North Dakota.

WICHE predicts that by 2032 only 68% of North Dakotans will be White.

This in-migration of out-of-state individuals is seen as the factor contributing to the change in state racial makeup. This change is predicted to continue, and as the racial makeup of high school graduates continues to diversify, it is subsequently predicted (based on the 2002 NCES study) that less will be attending college. WICHE predicts that by 2032 only 68% of North Dakotans will be White, and while this seems anomalous to most North Dakotans, an analysis of K-12 enrollment by grade supports that this trend will continue throughout the next decade. Ethnicity data by grade level collected from the ND Insights dashboard show the following pattern:
Fall 2018 public school enrollment data for ethnicity of currently enrolled K-12 students (ND Insights, 2019) does show subsequent classes of student become more ethnically diverse, with the class of Kindergarteners being 74% White (as compared to 78% White for grade 12 students and 85% White for the general North Dakota population). The August 1, 2019 Data Highlight produced by North Dakota Compass (2019) provides another chart that displays the changing ethnic diversity of North Dakota. Shown below, this graphic displays the difference in ethnic diversity of North Dakotans by age groups, measured between 2010 and 2018. As shown in this figure, ethnic diversity is increasing overall, but is increasing at higher rates among younger age groups.

![Percent of population of color, by age North Dakota, 2010-2018](image)

*Figure 14: North Dakota ethnic diversity measured by age group, 2010 to 2018. Source: North Dakota Compass*

Nationally, the largest changes in minority ethnicities has been occurring in the Latino/Hispanic group, accounting for over half of the national population growth since 2000. And while the growth rate of this population has leveled off, the overall population is predicted to continue to grow (Pew Research Center, 2017). Recent data on college attendance and completion indicates that Hispanics are attending and completing college at higher rates than in
the early 2000s. NCES data shows that the Hispanic college attendance rate has grown from 22 to 37 percent between 2000 and 2015 (U.S. Department of Education, 2017). For U.S. born Hispanics, 52% have attended college, an increase of 11% since 2000 (Pew Research Center, 2017). Additionally, completion rates for Hispanics have also increased, especially among older Hispanics and Hispanic women (National Student Clearinghouse Research Center, 2019). These data support that the college attending behaviors of Hispanics has changed since the early 2000s.

The ethnicity factor is a potential wild card in predicting college attendance. If upcoming non-white North Dakota high school graduates do behave in accordance to their peers surveyed in the national 2002 NCES study, then drops in the percentage of high school graduates who continue on to college are likely to be seen. If, however, changes in college attendance patterns similar to those indicated in the prior paragraph occur, or non-white ethnic groups take on college attendance behavior similar to current North Dakota residents who graduate from high school and continue on to college at the highest rate of any state in the country (Postsecondary.org, 2016), then college participation rates will remain steady.

**Conclusion**

While national predictions indicate decreases in college enrollment over the next decade, it remains to be seen what the affect will be on NDUS enrollment through 2030. Population projections are a complex statistical science, and predictions of how these future individuals will behave even more so.

To reiterate, an analysis of current NDUS enrollment characteristics as well as current K-12 enrollment in North Dakota and Minnesota produced the following:

- 81% of students in NDUS are residents of either North Dakota (55%) or Minnesota (26%).
- Each NDUS institution is comprised of between 72% and 94% North Dakota and Minnesota residents, but varies by institution.
• Institutions closer to the Minnesota border rely more heavily on Minnesota residents to attend their institutions.
• The ND-MN reciprocity agreement has contributed to keeping North Dakota students in state as well as bringing Minnesota students to North Dakota.
• The ethnic makeup of North Dakota is changing, becoming increasingly more diverse.
• The current propensity of North Dakota high school graduates to continue to college is the highest in the nation.

As a final summary, a bulleted list is provided below of additional considerations that have potential to affect the future college attendance patterns in NDUS. As noted early in this paper, the assumptions of researchers in all these studies is that the current demographic trend will continue, and that individuals will continue to behave in the same observed patterns.

Considerations presented below are additional factors that could alter the college attendance behavior patterns in possibly significant degrees:

• Global or national events that produce an economic impact of large scale (i.e., the Great Depression) resulting in unpredictable or unknowable effects.
• Regional economic impacts, such as job supply and wages that drive students either to the workforce or to postsecondary education or training.
• State legislative funding to higher education, which affect the tuition rates at NDUS institutions.
• Changes to incentives for North Dakota high school graduates to attend college in state, including state funded academic scholarships and loan forgiveness.
• Changes to ND-MN reciprocity, resulting in changes in tuition rates paid by Minnesota residents attending NDUS institutions and vice versa.
• Changes in North Dakota statue or NDUS policy that may limit the number of out-of-state residents allowed to attend NDUS institutions, or that restricts the number of students able to participate in any of the reciprocity agreements (MN, WICHE, MHEC).
• Programs or policy that enable or restrict enrollment of non-traditional college students, including online programs and/or programs designed to served working adults.
• Changes in federal or state legislation, including passage of some degree of “free college for all”.

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