WICHE FELLOWS’ WHITE PAPERS
COMPILATION

A collection of higher education-related policy research and analysis papers written by 2006-08 Policy Fellows

Part of
*Escalating Engagement: State Policies to Protect Access to Higher Education*,
a project funded with a grant from the Ford Foundation

**DISCLAIMER:**
As part of its project *Escalating Engagement: State Policy to Protect Access to Higher Education*, the Western Interstate Commission for Higher Education (WICHE) invited early and mid-career professionals to propose research studies. Selected individuals became Policy Fellows who received small stipends made possible through the Ford Foundation grant. Each Policy Fellow was expected to complete their proposed research study and to attend a meeting that took place in April 2008.

The Policy Fellows received limited feedback on their research projects, which are compiled in this document. These papers are ultimately the work of each of the Policy Fellows, and their inclusion in this document should not be construed as WICHE’s endorsement of the conclusions drawn or of any policy positions taken.
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ESCALATING ENGAGEMENT:
STATE POLICIES TO PROTECT ACCESS TO HIGHER EDUCATION

*Escalating Engagement: State Policy to Protect Access to Higher Education* is a three-year project of the Western Interstate Commission for Higher Education (WICHE) supported by a grant from the Ford Foundation. Initiated in July 2005, *Escalating Engagement* builds on WICHE’s work in the Western states to increase access to higher education for all students, but most particularly those from low-income families and underrepresented groups, reinforce accountability related to access, and expand our workforce initiatives. The project focuses on two issue areas to strengthen state policy making in higher education:

**First dollar for access.** As economies recover, it is essential that we invest new monies in protecting financial access for underrepresented and low-income students. WICHE’s report *Knocking at the College Door: Projections of High School Graduates by State, Income, and Race/Ethnicity* indicates that the need for strong, well-supported state financial aid programs will be critical in protecting access. Nationally and in the West, one-half of our public high school graduates come from families that earn less than $50,000 a year, and that percentage will only grow in our region. Absent a concerted, intense effort to dedicate new dollars, access to higher education for the neediest students could subtly erode over the next decade of challenging growth in demand but limited public resources.

**Preparing our own talent.** The “jobless recovery” and disconnect between skills desired by states and skills being developed, particularly given the limited resources, create a quite different policy environment than states have faced in the past. Not only must states now assess in quite different ways how to attract and retain the high-skill/high-wage jobs they need to sustain a high quality of life for their citizens, now the states must also find a way in which their citizens, particularly those who come from disadvantaged backgrounds can be educated well so that they can secure these high-skill high-wage jobs. Low-skill occupations are disappearing, and economic viability in the future will require bringing a much greater share of the population into greater successful participation in the high-skill sectors of employment. In collaboration with the National Center for Higher Education Management Systems (NCHEMS), the Council on Adult and Experiential Learning (CAEL), and other groups, *Escalating Engagement* will work closely with selected states to examine the nexus between higher education and the state’s needs for the right kind of individuals to support workforce and economic development goals.

The project’s major activities will include:

- **Regional and sub-regional forums** to bring together policymakers from different sectors of the policy community with experts for in-depth discussions of critical issues facing higher education.
- **Roundtables** involving key high-level players needed to make progress on transformation in higher education policy in the West.
- **Technical assistance** to support an assessment of a state’s existing capacity to capitalize on its postsecondary education sector to support its current economic development and workforce development needs and discussion of new strategies to more closely link postsecondary education to future near-term state economic development and workforce development goals.
- **Commissioned papers** to support state and regional discussions on our major issue areas and to inform policymaking.
- **Ford/WICHE Fellows** to conduct research and develop papers on the project’s topics.
- **Annual meetings of WICHE’s Legislative Advisory Committee** to engage members in the project’s activities and discussion of its core issues.

**WICHE Contact:** Dr. Cheryl D. Blanco, Project Director and Director of Policy Analysis & Research, Western Interstate Commission for Higher Education, PO Box 9752, Boulder, CO 80301; phone 303.541.0221; cblanco@wiche.edu.
Western Interstate Commission for Higher Education (WICHE)
Policy Fellowship Opportunities

The Western Interstate Commission for Higher Education (WICHE) headquartered in Boulder, Colorado, has received a grant from the Ford Foundation to support a project initiated to strengthen legislative engagement in higher education policymaking. One component of the project is a fellowship program designed to improve the linkages between research and public policy in higher education. The program targets four categories of professionals within the WICHE region: 1.) policy staff in state higher education system or association offices; 2) faculty, especially junior faculty members in a related field; 3.) legislative / executive staff members assigned to higher education or finance committees, and 4.) doctoral students nearing the defense of their dissertations in graduate programs in higher education, economics, or public policy.

The Fellows will conduct independent research and analysis on higher education policy issues of particular relevance to the WICHE / Ford project, namely:

- The collision between demand, access, and financial constraints
- Higher education quality and accountability in a time of stable or declining enrollments
- Financing of information technology
- Workforce issues and higher education

The work of the WICHE Policy Fellows will be largely self-directed, but will tie into the activities of the project under a plan to be jointly determine with the project director. Fellows will work from their existing locations, have the opportunity to join new or ongoing WICHE projects whenever possible, and have access to WICHE data and resources. In most cases, Fellows will produce a product for use by the project, such as a policy brief, journal article, written report, survey analysis, data inventory, or similar field.

Fellowship Timeline: October 1, 2003 – September 30, 2004

Number of Fellowships: Three (3) to Five (5)

Compensation: Each award will include an honorarium of $2,000.

Application/Nomination Process: For additional information, or to apply or nominate someone for participation, please contact Sharon Bailey, Policy Associate at (303) 541-0220 / fax: (303) 541-0291 OR sbailey@wiche.edu
Applications are now being received and reviewed. Positions will remain open until filled. For full consideration, applications should be received by the end of business on September 15, 2003. To expedite the application process applicants may complete the form provided below and submit by fax or e-mail.

For More Information About WICHE: Go to http://www.wiche.edu
WICHE Policy Fellowships
2003 Application

PART ONE

Name: ________________________________________________________________

Title: _______________________________________________________________________

Home Address: _______________________________________________________________________

Business Name/ Address: _______________________________________________________________________

Home Phone: ______________________ Business Phone: ______________________

Fax: ___________________________________________ E-mail: ____________________________

Please include the contact information for two references.

Applicants must fit into one of the following categories. Please check the appropriate category and describe your affiliation and status below:

☐ (1) Policy staff in state higher education agency or association office. What is your main area of responsibility?

☐ (2) Faculty, especially junior faculty in the fields of higher education, economics, or public policy. What is your academic research focus?

☐ (3) Legislative/executive staff member assigned to higher education or finance committees. What is your main area of research or responsibility?

☐ (4) Doctoral student at the dissertation stage in graduate programs in higher education, economics, or public policy. Dissertation topic and advisor?
PART TWO

Please answer the following questions in one paragraph or less.

1. Why are you interested in this fellowship? How does the opportunity directly relate to your work/research?

2. From a policy perspective, which of the project's focus issues most interest you and why?
   - The collision between demand, access, and financial constraints
   - Higher education quality and accountability in a time of stable or declining enrollments
   - Financing of information technology
   - Workforce issues and higher education
About the Authors

CAROL ALEXANDER, Oklahoma’s Promise (Oklahoma Higher Learning Access Program) Scholarship Coordinator, has worked with the Oklahoma State Regents for Higher Education since 1993. Current responsibilities for OKPromise include managing the daily activities, research and data collection, coordination of certifying student eligibility and payment of scholarships. Carol also serves on the Okcollegestart.org portal. She holds a Bachelor of Science degree in Business Administration from Kansas State University.

ALICIA HARRIS is Scholarship Coordinator for the Oklahoma State Regents for Higher Education. She has worked for the State Regents since 1996. Her responsibilities include data management, policy development, and administration of state funded merit-based and need-based financial aid programs. She also serves as the Recording Secretary for the Oklahoma College Savings Plan. She holds a Bachelor of Science degree from the University of Oklahoma, Master of Education from the University of Central Oklahoma, and Doctorate of Education from Oklahoma State University.

HEIDI HIEMSTRA has been working as Senior Associate for Research and Analysis at the Kentucky Council on Postsecondary Education for three years, where she has conducted policy studies of developmental education, the dual enrollment of high school students, student financial aid, and 2020 enrollment and degree projections, among other smaller projects. Hiemstra received a Doctorate in Sociology from the University of Pennsylvania in 2004 with a dissertation on the cultural construction of family, a Masters’ in Sociology from the American University, and a Bachelor’s in Government from Hamilton College. A native of Albany, New York, Hiemstra is enjoying her adopted state of Kentucky. She and her husband are expecting their first child this September.

JASON E. LANE is an Assistant Professor at the University at Albany, SUNY with appointments in the Department of Educational Administration and Policy Studies, Comparative International Education Policy Program and the Rockefeller College’s Public Policy program. His scholarly agenda works toward developing organizational capacity, effective governance and accountability structures, and knowledgeable leaders. Dr. Lane is author of several journal articles and book chapters, has co-edited two monographs on institutional accountability (Examining Unique Campus Settings and Studying Diverse Students and Institutions) and is an associate editor of the forthcoming sixth edition of the ASHE reader: Organization and Governance in Higher Education.

MARK MISUKANIS holds a Ph. D. from the University of Minnesota and has completed graduate work in economics from the University of Wisconsin. He has nearly 30 years of experience in Minnesota state government in both the legislature and several state agencies. He teaches public finance at Hamline University in St. Paul and has done consulting work in K-12 finance and economic forecasting.

BRAD MORTENSEN is Vice President for University Advancement at Weber State University in Ogden, Utah. Previously Brad worked as Associate Vice President of Support and Government Relations at WSU, Assistant Commissioner for Finance and Facilities at the Utah System of Higher Education, and as an analyst for the Utah Governor's Office of Planning and Budget and the Arizona Joint Legislative Budget Committee. Brad is completing his Ph.D. in Educational Leadership and Policy at the University of Utah. He earned a Masters in Public Administration from the Syracuse University Maxwell School of
Citizenship and Public Affairs and a Bachelor of Arts in Political Science at Utah State University.

**EDUARDO R. SERVIN** serves as Director of Upward Bound at El Paso Community College and is an adjunct faculty at the institution. Additionally, he will begin teaching as an adjunct at NMSU in the summer of 2008. He holds a Ph.D. in Educational Management and Development from New Mexico State University. Servin also holds a M.A. in International Relations from the University of San Diego and a B.A. in Political Science from Oregon State University. He has worked for the federal government in two different departments and also worked for an American manufacturer in Mexico. His research interests include access issues and he recently presented at Governor Richardson’s Higher Education Summit where the title of his presentation was, “The Legislative Lottery Scholarship and Latino Enrollment: A Single-Institution Study.”

**RANDY SPAULDING** is Director of Academic Affairs with the Washington Higher Education Coordinating Board. In that role he works with his staff on a variety of research and program areas designed to support the delivery of programs that meet the needs of students, communities and the state's economy. Randy's work at the Higher Education Coordinating Board (HECB) has focused on assessment of higher education needs, including development of the *State and Regional Needs Assessment*; analysis of the degree goals in the Strategic Master Plan for Higher Education; and participation in workgroups making recommendations on the growth of the higher education system including expansion of the branch campuses in Washington, the addition of a new branch campus, and expansion of selected community and technical colleges to offer baccalaureate degrees. Randy's professional background is in student services and financial aid and his academic work has been primarily related to role of higher education in the economy and in particular the improvements of higher education systems to provide for social mobility and economic opportunity of individuals.

**BRENDA VALLES** bridges research, policy and practice through her background working for the 17th California Congressional District and in the 28th California State Assembly District and most recently with the Utah Governor's Director of Education during the Utah legislative cycle, where she focused on issues of PK-20 education and related legislation. Currently, Valles works for the Utah Education Policy Center as a Research and Policy Analyst where her work focuses on underrepresented students and the college-pipeline. Valles is also currently a Doctoral Candidate in Educational Leadership & Policy at the University of Utah where her research is on exclusionary discipline policies and the effects on college-readiness for Chicano/Latino students.
Executive Summary

Oklahoma’s Promise—Oklahoma Higher Learning Access Program serves as Oklahoma’s foundation for removing barriers to college degrees. The program has grown tremendously since its inception in 1992. However as the program grows, two key questions begin to emerge. First, how is the state of Oklahoma dealing with the escalating cost of the program? Secondly, how is the program serving one of the most disadvantaged populations, foster care youth? This program analysis addresses the funding challenges of the program and efforts to increase the number of foster care youth participating in the program.

The findings related to foster care youth participation in Oklahoma’s Promise include the following:

- Available data on foster care youth participation is limited due to youth not being identified in Oklahoma’s Promise database until 2003.
- Oklahoma’s Promise partnership with Oklahoma Department of Human Services is a vital link to foster care youth participation in the program.
- Hispanic and Native American foster care youth are enrolling in the program disproportionately.
- Completion rates (qualifying for the scholarship) of foster care youth lag behind other program participants.

Also, the findings suggested that many foster care youth who enroll in Oklahoma’s Promise are lost between the enrollment process and high school graduation. Therefore, one of the top policy implications included implementing a more comprehensive tracking method for collecting data on foster care youth throughout their tenure in the system and upon aging out.

While information and potential effects on foster care youth participating in the program is limited, the overall success of the program is documented. Demonstrating the success of scholarship programs, like Oklahoma’s Promise, is vital when justifying the cost. The year-end reports for the program show key indicators of success (OSRHE, 2007). In fact, early successes of the program increased support during crucial economic times and ultimately lead to a permanent funding source. This analysis discusses the performance of participants and provides information about the possible influence participants have on workforce development for the state.

- OKPromise college juniors and seniors, as well as degreed students, are selecting fields of study in identified high-demand areas in Oklahoma.
- OKPromise students are remaining in Oklahoma following graduation at a higher rate than their peers.

These students are entering high-demand areas of the workforce and are proving to be a valuable resource to our state and the economy.
Introduction

In recent decades, several states developed early awareness programs to increase the college going rate and degree completion rate of students from limited income families. Such programs ranged from introducing a pre-college curriculum in high school, promising scholarships to state colleges, or a blended program including a pre-college curriculum and college scholarships. As the popularity of these programs flourish, policy makers, government officials, and concerned citizens questioned the impact of state scholarship programs on workforce development as well as increasing college access.

Due to the novelty of these programs, many states lack information about the long-term effects on workforce development and college access, especially for foster care youth. This analysis focused on Oklahoma’s state scholarship program designed to increase college access and ultimately the number of residents with college degrees. The report examined foster care youth involvement and investigated links between overall participation and workforce development.

Oklahoma’s Promise Background

In 2004-05, Oklahoma spent over $45 million dollars on state financial aid programs. The majority of the expenditures were on three programs, Oklahoma Tuition Aid Grant (OTAG), Oklahoma’s Promise-Oklahoma Higher Learning Access Program, and the Academic Scholars Program. Each of these programs has different objectives yet shares a common goal of meeting the educational needs of Oklahomans.

Oklahoma’s Promise-Oklahoma Higher Learning Access Program (OKPromise), which was initiated in 1992, is an early commitment scholarship program administered by the Oklahoma State Regents for Higher Education. The purpose of Oklahoma’s Promise is to encourage more students from families with limited income to aspire for college, prepare for college academically and financially, and earn college degrees. In turn, this aligns with the State Regents’ mission of increasing the number of college graduates in Oklahoma. The focus of OKPromise is to start parents and students thinking about postsecondary education during middle school and early high school. Students must be Oklahoma residents and are required to sign up for the program in the eighth, ninth, or 10th grade. During high school, students must complete a 17-unit core curriculum. These core curriculum classes are based on college admission requirements and are designed to provide students with the academic foundation needed to be successful in postsecondary education.

At the time student enrolls in the program the family income must be $50,000 or less, making the program a primary financial aid source for low-to-middle income families in Oklahoma. The program was modified during
the 2007 Oklahoma Legislative session when a second income limit was added. For students receiving the award for the first time in 2009-10, the income of the student's parents may not exceed $100,000 at the time the student begins college and prior to receiving the scholarship. Financial qualification will be based on the income of the student, not the income of the parent(s), if a student is determined to be independent for federal financial aid purposes; was in the permanent custody of the Department of Human Services at the time the student enrolled in the program; or was in the court-ordered custody of a federally recognized Indian tribe, as defined by the federal Indian Child Welfare Act, at the time the student enrolled in the program.

To earn the scholarship, students must graduate from high school and achieve at least a 2.5 cumulative grade point average for all course work attempted in grades 9 through 12 and achieve at least a 2.5 cumulative grade point average in the 17-unit core curriculum.

For students who successfully complete the program requirements upon high school graduation, OKPromise will provide a scholarship award that is equivalent to resident tuition at any public institution in Oklahoma. If students choose to attend a private institution in Oklahoma, the scholarship award is equivalent to the amount of resident tuition at a comparable public institution. The average scholarship awards for 2006-07 were $3,032 at four-year research universities, $2,447 at four-year regional universities, and $1,382 at two-year community colleges (OSRHE, 2007). Once in college, students are eligible to receive the scholarship for up to five years or the completion of a bachelor’s degree, whichever comes first. There are no minimum or maximum enrollment limitations associated with the scholarship. More than 14,500 students benefited from the scholarship in 2006-07 who received a total of more than $34 million in awards (OSRHE, 2007).

New requirements, as a result of a law passed during the 2007 legislative session, include a conduct requirement and specific grade point average requirements. Effective January 1, 2008, an Oklahoma’s Promise college student that is suspended for more than one semester for conduct reasons will lose the scholarship permanently. Also effective for students receiving the award for the first time in 2009-10, a minimum college GPA of 2.0 will be required for courses taken during the sophomore year and a minimum 2.5 GPA required for courses taken during the junior year and thereafter.

**Funding**

Since the program started disbursing awards in 1996, funding for the program has come from annual appropriations from the Oklahoma Legislature. However, the 2007 legislative session marked a significant milestone for the funding of Oklahoma’s Promise. In addition to providing $48 million for the costs of Oklahoma’s Promise scholarships during the 2007-08 year, the legislature and Governor Brad Henry approved a
permanent, dedicated funding source for the program. Beginning in 2008-09, Oklahoma’s Promise will be automatically funded “off the top” from the state’s General Revenue Fund. This change will ensure that the program is fully funded each year from a stable source of revenue (OSRHE, 2007). A history of appropriations, disbursements, and budget projections are detailed in Appendix A.

**OKPromise Students Meeting the Needs of Oklahoma**

According to the 2006 Oklahoma Employer Survey, over 50 percent of surveyed companies indicated that they have difficulty in finding quality applicants and skills needed in the work environment. Because of this, 39 percent of employers who had trouble finding qualified talent did not expand their business as planned (ODC, 2007). Finding a remedy to this issue is vital to Oklahoma’s economic development. A path for Oklahoma to enhance the quality and skills of potential applicants is to invest in a financial aid program designed to increase the number of college graduates which would result in a more competitive workforce. The program leading the way for Oklahoma is Oklahoma’s Promise.

Over the past decade, OKPromise gained popularity with residents as well as government officials and experienced considerable growth in scholarship recipients. This trend shows no indication of diminishing with the number of scholarship recipients projected to expand by 29% in the next 2 years. However as Oklahoma’s Promise enrollment continues to grow, so do the expenditures. Several questions arise with the increasing program costs. Are OKPromise students choosing majors or earning degrees in subject areas that reflect the needs of the state? Are OKPromise recipients staying in Oklahoma after college graduation and meeting the occupational needs of the state? Is the state benefiting from the taxpayer funds that are being spent on these students?

One way to address these questions is to examine how many OKPromise recipients remain in state after graduation in order to enter occupations identified as being in high demand and offering high wages in the state. In 2008, the Oklahoma State Regents for Higher Education conducted a study to determine the top ten occupational needs for Oklahoma through 2014. The findings showed the highest need for graduates in the fields of nursing, education, accounting, computer technology and business. Table 1 represents the number of current junior and senior OKPromise college students who have selected majors in these high-demand areas.

Almost 30 percent of the 2007-08 college juniors and seniors are majoring specifically in the high-demand areas identified in this recent study. Education and business majors are the most common for both classes. Despite Oklahoma’s inability to keep up with the national average for teacher salaries, this does not appear to deter students from majoring in the education field. Oklahoma has had success in recruiting large companies in
recent years. The business majors may be a direct result of these new industries. The [Oklahoma] Governor’s Council for Workforce and Economic Development projects a shortage of 3,135 registered nurses statewide by 2012 (ODC, 2007). There has been a concerted effort in Oklahoma attempting to increase the number of nurses due to this statewide shortage. Although one might expect these numbers to be higher, it is likely these numbers will increase over the next five years.

<table>
<thead>
<tr>
<th>Major</th>
<th>2007-08 College Seniors (2004 HS Grads)</th>
<th>% of Total</th>
<th>2007-08 College Juniors (2005 HS Grads)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing</td>
<td>260</td>
<td>5.8%</td>
<td>212</td>
<td>4.5%</td>
</tr>
<tr>
<td>Education</td>
<td>375</td>
<td>8.4%</td>
<td>477</td>
<td>10.2%</td>
</tr>
<tr>
<td>Accounting</td>
<td>70</td>
<td>1.6%</td>
<td>57</td>
<td>1.2%</td>
</tr>
<tr>
<td>Computers</td>
<td>150</td>
<td>3.3%</td>
<td>153</td>
<td>3.3%</td>
</tr>
<tr>
<td>Business</td>
<td>362</td>
<td>8.1%</td>
<td>386</td>
<td>8.3%</td>
</tr>
<tr>
<td><strong>Total Students/%</strong></td>
<td><strong>4480</strong></td>
<td><strong>27.2%</strong></td>
<td><strong>4667</strong></td>
<td><strong>27.5%</strong></td>
</tr>
</tbody>
</table>

Table 2

<table>
<thead>
<tr>
<th>Major</th>
<th>2003 HS Grads*</th>
<th>% of Total</th>
<th>2002 HS Grads*</th>
<th>% of Total</th>
<th>2001 HS Grads*</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing</td>
<td>34</td>
<td>4.2%</td>
<td>31</td>
<td>5.5%</td>
<td>15</td>
<td>2.6%</td>
</tr>
<tr>
<td>Education</td>
<td>95</td>
<td>11.8%</td>
<td>60</td>
<td>10.6%</td>
<td>40</td>
<td>7.1%</td>
</tr>
<tr>
<td>Accounting</td>
<td>11</td>
<td>1.4%</td>
<td>8</td>
<td>1.4%</td>
<td>12</td>
<td>2.1%</td>
</tr>
<tr>
<td>Computers</td>
<td>18</td>
<td>2.2%</td>
<td>10</td>
<td>1.8%</td>
<td>13</td>
<td>2.3%</td>
</tr>
<tr>
<td>Business</td>
<td>95</td>
<td>11.8%</td>
<td>56</td>
<td>9.9%</td>
<td>39</td>
<td>6.9%</td>
</tr>
<tr>
<td><strong>Total Students/%</strong></td>
<td><strong>807</strong></td>
<td><strong>31.4%</strong></td>
<td><strong>567</strong></td>
<td><strong>29.1%</strong></td>
<td><strong>385</strong></td>
<td><strong>21.0%</strong></td>
</tr>
</tbody>
</table>

*Note: Due to the difference in the number of years it takes to complete a college degree, the students listed above are separated based on the high school graduation year for tracking purposes.

The percentage of students in high-demand areas earning degrees (Table 2) is comparable to the college juniors and seniors in Table 1. Further research might indicate that many students in other majors (such as liberal arts) actually move into these high-demand areas. An example might be students
majoring in Mathematics. Students could use a Mathematics degree in just about any of the high-demand areas listed.

Although preliminary data shows that OKPromise students appear to be meeting the high-demand areas of occupational needs for the state, a more in-depth analysis should be done that would break down the majors and high-demand areas into more specific categories. For example, computer majors could be further divided into categories related to programming, cyber security, web design, and software development. This would provide a more thorough analysis of which specific high-demand areas are needed and which are being met.

Even though this study provides some evidence of OKPromise participants entering into high demand areas, there are limitations to the study. The data used for this report was gathered on a statewide basis. Perhaps a more accurate and helpful analysis could be done on a community or regional basis to identify and compare the needs of a particular community or region. Such an analysis would be beneficial to community representatives in determining if any regions of the state are experiencing “brain drain” due to individuals gaining higher levels of education and relocating for better career opportunities. “Brain drain” could lead to dwindling populations in some areas and be distressing in rural communities if efforts are not made to develop a plan for the particular needs of their individual community.

Although some of Oklahoma’s rural communities are losing some of their students, our research indicates that Oklahoma students are not only majoring and completing degrees in high-demand areas; they are also staying in Oklahoma following graduation and entering the workforce. As indicated in Table 3, about 94% of OKPromise’s graduates remain in Oklahoma one year after graduation. This compares to about 93% of all Oklahoma resident bachelor-degree recipients based on the latest statewide data. After five years, about 83% of the OKPromise graduates are still in Oklahoma, compared to 75% of all Oklahoma resident bachelor-degree recipients. When comparing OKPromise participants to Oklahoma’s merit-based financial aid program, Academic Scholars, the numbers are even more distinct. Approximately 79% of Academic Scholars participants remain in Oklahoma one year after graduation and only 47% remain five years after graduation.

The trend seen with OKPromise graduates remaining in the state at a higher rate may be attributed to the characteristics of students in the program. Typically, OKPromise participants are from families from low-to-middle socioeconomic backgrounds, attend public institutions, and are in some cases first-generation college students. Students with these characteristics are less likely to migrate after college graduation than students from high socioeconomic families, have highly educated parents and attend private institutions (Heuer, 2004).
Table 3
All OKPromise Graduates¹
Employed in Oklahoma (between April 1, 2005 and June 30, 2006)
Or Who Were Enrolled in the Oklahoma State System

<table>
<thead>
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<tbody>
<tr>
<td>Employed²</td>
<td>110</td>
<td>118</td>
<td>165</td>
<td>263</td>
<td>566</td>
</tr>
<tr>
<td>Enrolled, not employed³</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>Total Retained in OK</td>
<td>110</td>
<td>119</td>
<td>166</td>
<td>268</td>
<td>584</td>
</tr>
<tr>
<td>Total Graduates</td>
<td>133</td>
<td>158</td>
<td>221</td>
<td>318</td>
<td>623</td>
</tr>
<tr>
<td>Percent Retained</td>
<td>83%</td>
<td>75%</td>
<td>75%</td>
<td>84%</td>
<td>94%</td>
</tr>
</tbody>
</table>

All Oklahoma Resident Graduates¹ (excluding OKPromise students)
Employed in Oklahoma (between April 1, 2005 and June 30, 2006)
Or Who Were Enrolled in the Oklahoma State System

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Employed²</td>
<td>11,315</td>
<td>12,112</td>
<td>13,410</td>
<td>15,803</td>
<td>19,173</td>
</tr>
<tr>
<td>Enrolled, not employed³</td>
<td>34</td>
<td>49</td>
<td>65</td>
<td>210</td>
<td>370</td>
</tr>
<tr>
<td>Total Retained in OK</td>
<td>11,349</td>
<td>12,161</td>
<td>13,475</td>
<td>16,130</td>
<td>19,543</td>
</tr>
<tr>
<td>Total Graduates</td>
<td>15,121</td>
<td>15,781</td>
<td>17,371</td>
<td>19,437</td>
<td>20,997</td>
</tr>
<tr>
<td>Percent Retained</td>
<td>75%</td>
<td>77%</td>
<td>78%</td>
<td>83%</td>
<td>93%</td>
</tr>
</tbody>
</table>

All Oklahoma Public Institution Graduates¹
Employed in Oklahoma (between April 1, 2005 and June 30, 2006)
Or Who Were Enrolled in the Oklahoma State System

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed²</td>
<td>12,683</td>
<td>13,643</td>
<td>15,067</td>
<td>17,936</td>
<td>22,681</td>
</tr>
<tr>
<td>Enrolled, not employed³</td>
<td>44</td>
<td>73</td>
<td>89</td>
<td>262</td>
<td>488</td>
</tr>
<tr>
<td>Total Retained in OK</td>
<td>12,727</td>
<td>13,716</td>
<td>15,156</td>
<td>18,198</td>
<td>23,169</td>
</tr>
<tr>
<td>Total Graduates</td>
<td>18,794</td>
<td>19,524</td>
<td>21,441</td>
<td>24,175</td>
<td>26,537</td>
</tr>
<tr>
<td>Percent Retained</td>
<td>68%</td>
<td>70%</td>
<td>71%</td>
<td>75%</td>
<td>87%</td>
</tr>
</tbody>
</table>

1 Unduplicated; shown by year of most recent degree earned from an Oklahoma public higher education institution.
3 Enrolled in an Oklahoma public higher education institution any semester during 2005-06.
Oklahoma’s Promise Participants

In recent years, outreach efforts were implemented to raise awareness of Oklahoma’s Promise and increase enrollment especially in disadvantaged, underrepresented groups. Even though participation in the program is somewhat diverse, participation rates are lower in urban schools and among males from minority groups. Tables 4, 5, and 6 represent an overview of the 2007 high school graduates.

### Table 4
**Gender of Participants**

<table>
<thead>
<tr>
<th></th>
<th>2007 OK Promise Graduates</th>
<th>All 2006-07 Oklahoma High School Seniors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>60.9%</td>
<td>49.9%</td>
</tr>
<tr>
<td>Male</td>
<td>39.1%</td>
<td>50.1%</td>
</tr>
</tbody>
</table>

### Table 5
**Ethnicity of Participants**

<table>
<thead>
<tr>
<th></th>
<th>2007 OK Promise Graduates</th>
<th>All 2006-07 Oklahoma High School Seniors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black/African American</td>
<td>7.8%</td>
<td>9.1%</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>12.2%</td>
<td>18.7%</td>
</tr>
<tr>
<td>Asian</td>
<td>2.6%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>5.9%</td>
<td>6.1%</td>
</tr>
<tr>
<td>White</td>
<td>65.2%</td>
<td>63.7%</td>
</tr>
<tr>
<td>Not Specified</td>
<td>6.3%</td>
<td>na</td>
</tr>
</tbody>
</table>

### Table 6
**Geographic Distribution**

<table>
<thead>
<tr>
<th></th>
<th>2007 OK Promise Graduates</th>
<th>2007 Oklahoma High School Seniors</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Most Populous Counties*</td>
<td>35.9%</td>
<td>46.9%</td>
</tr>
<tr>
<td>72 Remaining Counties</td>
<td>64.1%</td>
<td>53.1%</td>
</tr>
</tbody>
</table>

*Oklahoma, Tulsa, Cleveland, Canadian, and Comanche counties.

As shown in the previous tables, participants of OKPromise represent all segments of the population. The program is providing higher education access to many Oklahoma residents. However, one group of residents faces extraordinary barriers in obtaining college degrees; Oklahoma’s foster care youth who require special efforts to make sure these students are adequately represented in the program: Oklahoma’s foster care youth.
Reaching Out to Foster Care Youth

Enrollment into Oklahoma’s Promise is open to all students, including foster care youth, as long as they meet the eligibility guidelines. Although the Oklahoma’s Promise application requirements are relatively simple, providing documentation of a family’s income can sometimes be difficult for foster youth. Prior to the fall of 2003, students in the foster care system were required to complete the application and provide a copy of a court document as proof of their foster care status. For many students it was difficult to obtain this information especially if they didn’t know where to go for help. Many students at this age lack the desire or even the knowledge of how to go about obtaining information about financial aid for college. When added factors, including frequent transfers from home to home and the lack of a role model to show them that college is even a possibility, it is no surprise that many foster care youth fall through the cracks. There are some students who have unusual fortitude and are able to find the documents necessary to complete the application, but these are few and far between. Others are fortunate enough to have a foster parent or a social worker to help them through the process. However, the lucky few represent just a small segment of the population in foster care.

In fall 2003, the OKPromise office entered into a partnership with the Oklahoma Department of Human Services Children and Family Services Division (OKDHS) and created a unique application specifically for students in state custody (Appendix B). The application is very similar to the OKPromise application in many respects, but it is limited to one page that must be completed and submitted and does not require income information of any kind. Students, foster parents or social workers contact OKDHS for the application, complete it and mail it back to the state OKDHS office. Once received, OKDHS officials verify that the student is in the state’s custody and forward it to the OKPromise office.

![Chart 1: Foster Care Youth Enrollment](image)

**Chart 1**
Foster Care Youth Enrollment

<table>
<thead>
<tr>
<th>Enrollment Years</th>
<th>8th grade</th>
<th>9th grade</th>
<th>10th grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003-04</td>
<td>394</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004-05</td>
<td>417</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005-06</td>
<td>380</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006-07</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Enrollment

With the creation of this new application, the OKPromise office began tracking these applications in 2003-04. In the two years prior, only ten foster care students were enrolled. Chart 1 illustrates the effectiveness of the partnership and shows a steady trend in enrollment. In 2003-04 when the high school graduating class of 2008 was in the eighth grade, which is the first grade level a student can enroll in the program, 394 applications were received for these youth. This is most likely due in part to it being the first year of the new application and a mailing that was done by the state OKDHS office to promote it. Enrollment increased to 417 applications the following year in 2004-05, and although there was a slight decline in 2005-06, for the most part the trend has remained steady. Promotion of the application to the local county and state OKDHS offices has declined due to increased costs, which might ultimately have a negative impact on the enrollment.

Thus far, the partnership between OKPromise and OKDHS has yielded positive results.

Chart 2
Ethnicity of OKDHS and Oklahoma’s Promise Students

According to the Oklahoma Department of Human Services, during fiscal year 2007, there were a total of 8,279 students in the foster care system. Among those students, 963 were between the ages of 13 and 16 which is the target age for OKPromise enrollment. During the same fiscal year, 405 of these students (42%) enrolled in the OKPromise program. Chart 2 reflects that
when focusing on the racial/ethnic differences of the students, the percentages of African-American, Asian and Caucasian students are relatively close when considering the total students in the foster care system and the number of students also enrolled in the OKPromise program. However, Hispanics make up 13.4% and American Indians make up 18.1% of the total of students in the foster care system. Yet, Hispanics only make up 3.2% and American Indians make up 13.3% of the foster care students enrolled in the OKPromise program. Possible reasons for the low enrollment from these two groups range from the negative stereotypes of being labeled as foster care students, the cultural challenges of Hispanic and American Indian foster care youth and finding mentors to guide these students towards college matriculation. In both of these cultures, the role of family is critical in the decision-making process and the void of a traditional family environment caused by extended stays in the foster care system may impose even higher barriers to program participation. Without a strong family figure championing for these students, many of them will remain at risk of being absent from the program.

Chart 3
Urban vs. Rural Enrollment of OKDHS and Oklahoma’s Promise Students

When considering the percentage of students in urban areas as compared to those in rural areas, the percentages are quite similar (Chart 3). It is very close to a half and half split amongst the two areas. Enrollment of foster care youth into the program is not greatly disproportionate to geographical location. This is in contrast to the overall enrollment in OKPromise where urban areas lag behind rural areas in enrollment. The centralization of OKDHS staff in urban areas could be a reason for minimizing this disparity.
Completion Rates

It is encouraging to see the enrollment numbers grow but as shown in Table 7, only 17% of the students are completing the program requirements. Just over 25% of those enrolled are not completing the requirements of the program and tracking these students has become more of a challenge due to their mobility. In the 2006 and 2007 graduating high school classes, approximately 58% of the foster care youth enrolled were “lost” due to various reasons which might include an unknown move, dropping out of school or not completing high school graduation requirements. In general, youth in foster care graduate from high school at disproportionately lower rates than their peers who are not in care (Casey, 2006).

Table 7
Program Completion Numbers of Foster Care Youth

<table>
<thead>
<tr>
<th>Year of High School Graduation</th>
<th># Students Eligible</th>
<th># Students Not Eligible</th>
<th>Unknown Status</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>27</td>
<td>34</td>
<td>81</td>
<td>142</td>
</tr>
<tr>
<td>2007</td>
<td>41</td>
<td>68</td>
<td>149</td>
<td>258</td>
</tr>
<tr>
<td>Total</td>
<td>68</td>
<td>102</td>
<td>230</td>
<td>400</td>
</tr>
</tbody>
</table>

Percent of Total: 17% 25.5% 57.5% 100.0%

The possibility of affording college for foster care youth who complete the program is encouraging. Since OKPromise is considered a “cash” scholarship, students, including foster care youth, are eligible to receive other financial aid benefits. Although foster care youth may be eligible for a tuition waiver through the Independent Living Act program, OKPromise eligible students can also receive a cash award equivalent to the cost of tuition and would very likely be eligible for OTAG. The Oklahoma based financial aid programs are in addition to any federal aid and education vouchers the student may be eligible to receive making the cost of college manageable for former foster care youth.

Other states have developed programs to assist foster care youth with the rising cost of college. Texas has a similar program to Oklahoma’s Independent Living Act program. Foster care youth in Texas may be eligible for a tuition and fee waiver from state-supported vocational schools and colleges. Foster care youth in Iowa can apply for the Iowa Opportunity Foster Care Grant Program. Students eligible for this award will receive enough funding to cover the cost of attendance after applying for other state, federal, and institutional funding.

In fact, many states offer some form of support for post-secondary education to foster care youth (NRCYS, n.d.). In addition, many colleges are providing
supplementary financial support and specialized college transition programs. However, little is known about the success of these programs which is primarily due to the novelty of such programs and states not tracking foster care youth after aging out of the system. Such factors limit the amount of research currently available. Hopefully, this practice will change in the near future as the struggles of former foster care youth are brought to the attention of policy makers. For example, Washington State Institute for Public Policy is conducting a study to evaluate the success of the Foster Care to College Partnership program which is projected to be completed in 2009 (Burley, 2007). National trends show that approximately 50% of foster care youth graduate from high school and only 20% attend college (Wolanin, 2005).

Policy Analysis

Even though OKPromise developed a partnership with OKDHS to increase the number of foster care youth participating in the program, the number of students completing the requirements of the program remains low and many are listed as having incomplete records for program verification purposes. These incomplete records may result from the national trends observed in foster care youth. For example, foster care youth are subject to multiple placements throughout their tenure in the system. Such multiple placements could lead to numerous school changes. These school changes increase the chances of students having incomplete records because counselors may not be aware the student has enrolled in OKPromise and the OKPromise office is not automatically notified of the school change.

Another struggle facing foster care youth is the lack of family structure and support. The ultimate responsibility of completing the course work lies with the student and parent/legal guardian. If the student does not have the guidance of a parent/legal guardian to ensure the core curriculum is completed, the burden is placed solely on the student who may not understand the program rules or a social worker who may not be aware of the student’s eligibility. Policy changes need to be made to create a process that would identify foster care youth participating in OKPromise and work with social workers in notifying foster care families and counselors when a new placement and/or school change occurs.

Other recommendations include creating a unique outreach communication effort for foster care youth. Traditionally, letters are sent to students upon enrollment into the program and after their senior year of high school. Multiple mail and e-mail campaigns should be conducted to provide a yearly road map for foster care youth to complete the program. This process will serve two purposes. First, it will keep foster care youth connected with the program and remind students of their eligibility and program requirements. Secondly, it will alert the OKPromise staff to possible address and school changes, allowing the staff to follow up with OKDHS to locate the student.
In a July 2006 NASFAA (National Association of Student Financial Aid Administrators) study of foster care children, there is a recommendation to require federally funded outreach services to target youth in foster care. Two programs mentioned were TRIO and Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP). The support services offered in these programs are designed to help disadvantaged students progress through the academic pipeline from middle school to postsecondary education (NASFAA, July 2006). Oklahoma has a successful state GEAR UP program as well as several partner programs across the state. There are also multiple TRIO programs available through many public colleges and universities as well as several tribal programs. These programs have been successful in reaching disadvantaged students in Oklahoma and have increased their awareness of college. Both programs could be a positive influence on students in foster care as well. Yet these federal programs have been targeted for cuts over the last several years based on a negative federal assessment of impact.

Increasing college access is the primary goal of OKPromise. Another important goal is to develop a more educated workforce for Oklahoma by increasing the number of bachelor degree holders. In 2005, Oklahoma ranked 42nd in the percentage of adults with a baccalaureate degree (U.S. Census Bureau, 2005). This goal requires a significant financial commitment. Research shows that such a commitment will pay off for the state in various ways. For example, college degree holders are more likely to own homes and participate in volunteer activities. They are less likely to be unemployed, incarcerated, and participating in government assistance programs. Therefore, when examining the increasing cost of OKPromise, lawmakers, citizens, and policy analysts must consider the long-term benefits of providing an avenue for Oklahoma to increase the number of residents holding at least a baccalaureate degree.

Additionally, one of the purposes of OKPromise is to positively affect the development of Oklahoma’s workforce. This study does suggest that students participating in the program are selecting majors in high-need areas, are remaining in Oklahoma, and are entering the workforce in high-demand fields. However as larger cohorts of students move through OKPromise, additional studies are needed to determine what type of long-term influence these students are having on the development of Oklahoma’s workforce. If a longitudinal study can provide data that suggests OKPromise is having a significant outcome on the workforce development for the state, then the increasing cost of the program can be readily justified.

The cost of OKPromise is substantial largely due to one of the distinctive features of the program. The value of the scholarship is directly associated with cost of tuition. In recent years, Oklahoma, like many other states, experienced significant tuition hikes. Rising cost of tuition and increased awareness of the program resulted in substantial annual cost increases. As the program grew, Oklahoma was forced to reconsider how the program was
funded. It became necessary to secure a stable, permanent funding source. The political willingness to support funding the program was in part due to the academic performance of participants. The overall success of the program is illustrated through some key indicators. Charts 4 and 5 show freshmen retention rates and college grade point averages of Oklahoma high school graduates and OKPromise participants.

**Chart 4**

**Persistence Rate to Second Year of College**

<table>
<thead>
<tr>
<th></th>
<th>2005 OKPromise Graduates</th>
<th>All Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>87%</td>
<td>87%</td>
<td>77%</td>
</tr>
</tbody>
</table>

**Chart 5**

**Percentage of Freshmen Students with College GPA of 2.0 or Better**

<table>
<thead>
<tr>
<th></th>
<th>2006 OKPromise Freshmen</th>
<th>All Freshmen</th>
</tr>
</thead>
<tbody>
<tr>
<td>89%</td>
<td>89%</td>
<td>70%</td>
</tr>
</tbody>
</table>

Of the students participating in OKPromise, the college course remediation rate is only 29.8% compared to 36.7% of all first-time Oklahoma freshmen in
2006 (OSRHE, 2007). Another indicator of the program’s success is that 82% of students qualifying for the OKPromise award go to college upon high school graduation, compared to 58% of all Oklahoma high school graduates (OSRHE, 2007). Also, Oklahoma’s Promise students are enrolling full-time at Oklahoma colleges at a higher rate than non-Oklahoma’s Promise students. In 2006-07, a 24.8% difference was observed between full-time enrollment of Oklahoma’s Promise students and full-time enrollment of all undergraduate students (OSRHE, 2007).

Conclusions

OKPromise combined with other state and federal financial programs have laid the foundation for college degree obtainment. The programs work together to ease the financial burdens of obtaining a college education for some of the most disadvantaged students, like foster care youth. The programs to assist foster care students in Oklahoma are in place. A student could potentially qualify for:

• Oklahoma’s Promise
• Independent Living Assistance
• Pell Grant
• Oklahoma Tuition Aid Grant
• Tribal money
• Academic Scholars
• Regional Baccalaureate scholarship
• Institutional scholarships and grants

Clearly the majority of foster care students are not benefiting from all of the opportunities available to them. However, is it really their fault? Is the system failing them? Many students at this age only see what is in front of them, and they live in a society where most opportunities are provided to us by our families. Students in foster care are forced to grow up much more quickly than other students their age, yet they lack the support of family guidance.

The number of youth in foster care in Oklahoma is on the rise. Even though the OKDHS has been able to find homes for many of these children as the numbers of authorized adoptions has also increased over the last five years, (OKDHS, 2007) the numbers are still significant. These youth need mentoring programs that will guide them and set expectations for them. According to data for fiscal year 2007, 42% of foster care youth between the ages of 13 and 16 enrolled in Oklahoma’s Promise (OKDHS, 2007). There is opportunity to increase that percentage by building awareness among the school districts as well as the local child welfare offices across the state. There should be a focus on the enrollment of Hispanic and American Indian foster care students in OKPromise. There are a number of these students who have not benefited from the outreach efforts. There are avenues available through local tribes and community programs which are currently being tested through local outreach efforts.
A blended tracking system in the common education (K-12) and higher education systems would provide easier access to follow foster care students through high school graduation as well as identifying the specific mentoring needs of students. In order to improve OKPromise program completion rates, there is a need for the tracking to begin in the common education system. Without an identification process, the OKPromise program is not able to provide information to these students that might be able to assist them in the application as well as the completion process.

Students can self-report their foster care status on the FAFSA. The tracking of this information would be beneficial at the higher education level in tracking these students through college and into the workforce.

Less than three percent of foster care alumni receive a bachelor’s degree (Casey, 2006). For this reason, it is imperative that foster care alumni who are college graduates be identified and included in the mentoring equation. They will be able to provide the support to the students as the person who “has walked in their shoes.” Not only could they provide the emotional encouragement but possibly even academic assistance. Those alumni who have gone through the system of higher education and have entered the workforce could be an integral source of support to these foster care youth.

OKPromise, like many government programs, is not providing a simple road map for foster care youth to matriculate to college. The challenges facing foster care youth are complex and additional support is needed for these students. Various government agencies and private organizations must work together to develop a comprehensive plan to provide emotional, financial, and academic support not only through high school but throughout the student’s college career. OKPromise has made an effort to reach out to one of the most disadvantaged populations. It is imperative to continue to focus on this group by creating new options and expanding on these efforts to bridge the college access gap.

The education and skill levels of the workforce are critical elements to a state’s competitiveness (ODC, 2007). States must prepare future generations to enter into the workforce by establishing programs that prepare students academically and providing financial assistance for post-secondary education opportunities. Blended financial aid programs, like Oklahoma’s Promise, provide an avenue for the state to boost the education attainment levels of residents. OKPromise participants boast higher college graduation rates, lower college remediation rates, and higher college persistence rates when compared to all Oklahoma college students. Additionally, OKPromise participants are majoring and graduating in high demand career fields and remaining in the state after graduating from college. OKPromise is becoming Oklahoma’s leading resource for establishing a more educated workforce and leading the way for ensuring college access.
References


Oklahoma State Regents for Higher Education. (2007, August). *A guide to the history, organization and operation of the state system*. Oklahoma City, OK.


## Appendix A

### Oklahoma’s Promise

#### Funding History and Projections

<table>
<thead>
<tr>
<th>Year</th>
<th>Deposits (1)</th>
<th>Management Earnings</th>
<th>Scholarship Payments</th>
<th>Scholarship Recipients</th>
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</thead>
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<tr>
<td>FY'96 actual</td>
<td>$200,000</td>
<td>$6,902</td>
<td>$564</td>
<td>1</td>
</tr>
<tr>
<td>FY'97 actual</td>
<td>$1,400,000</td>
<td>$60,120</td>
<td>$523,516</td>
<td>465</td>
</tr>
<tr>
<td>FY'98 actual</td>
<td>$1,402,225</td>
<td>$110,079</td>
<td>$753,636</td>
<td>612</td>
</tr>
<tr>
<td>FY'99 actual</td>
<td>$1,400,000</td>
<td>$134,906</td>
<td>$1,063,996</td>
<td>840</td>
</tr>
<tr>
<td>FY'2000 actual</td>
<td>$1,400,000</td>
<td>$156,566</td>
<td>$1,665,009</td>
<td>1,245</td>
</tr>
<tr>
<td>FY'2001 actual</td>
<td>$1,400,000</td>
<td>$154,104</td>
<td>$2,267,759</td>
<td>1,717</td>
</tr>
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<td>FY'2002 actual</td>
<td>$1,900,000</td>
<td>$49,799</td>
<td>$2,901,912</td>
<td>1,997</td>
</tr>
<tr>
<td>FY'2003 actual</td>
<td>$4,700,000</td>
<td>$30,139</td>
<td>$4,592,004</td>
<td>2,956</td>
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<tr>
<td>FY'2004 actual</td>
<td>$11,000,000</td>
<td>$43,425</td>
<td>$10,274,304</td>
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</tr>
<tr>
<td>FY'2005 actual</td>
<td>$19,273,259</td>
<td>$138,718</td>
<td>$17,493,365</td>
<td>9,155</td>
</tr>
<tr>
<td>FY'2006 actual</td>
<td>$26,434,583</td>
<td>$229,190</td>
<td>$25,552,754</td>
<td>12,101</td>
</tr>
<tr>
<td>FY'2007 actual</td>
<td>$30,918,470</td>
<td>$444,441</td>
<td>$34,338,258</td>
<td>14,665</td>
</tr>
<tr>
<td>FY'2008 estimated</td>
<td>$48,100,000</td>
<td>$150,000 *</td>
<td>$45,100,000 *</td>
<td>17,400 *</td>
</tr>
<tr>
<td>FY'2009 estimated</td>
<td>$54,000,000</td>
<td>$400,000 *</td>
<td>$54,000,000 *(2)</td>
<td>18,900 *</td>
</tr>
</tbody>
</table>

Totals through FY'2007 $101,426,537 $101,427,077 51,642

*estimated/projected

(1) Deposits include funding from legislative appropriations and gaming/lottery revenue
(2) Assumes a 10% increase in tuition.
OKPromise’s Effects on Foster Care Youth and Workforce Development

Appendix B

OK Promise/OKDHS

2007-08 Application/Agreement Form

The application must be postmarked on or before June 30, 2008.
Applications for homeschool students must be postmarked before their 16th birthday.

STUDENT INFORMATION (please print or type)

Student’s Name: ________________________________ (Last) ________________________________ (First) ________________________________ (Middle)

Social Security Number: ________________________________ (Not optional. The student’s social security number or the student’s identification number used by the school must be provided. The number will be kept confidential and used only for administrative purposes.)

Grade level for 2007-2008 (circle one): 8th 9th 10th Date of Birth: / /
(homeschool students must be age 13, 14 or 15)

Mailing Address: ________________________________ Home Phone: ( )

(Mailing Address) ________________________________ Work Phone: ( )

(City) (State) (Zip)

E-mail Address: ________________

Name of Current School: ________________________________ H.S. Graduation Year: _________
(If student is homeschooled, write “Homeschool” here.)

Name of High School (if different from above):

Optional Information

Gender [check one]: female male
Ethnicity [check appropriate category(ies)]: Black/African-American American Indian/Alaska Native
Asian Hispanic/Latino Native Hawaiian/Pacific Islander
White Multi-Racial/Other

STUDENT AND PLACEMENT PROVIDER SIGNATURES

Student: I have read, and I understand the requirements of the program. I agree to follow the program requirements and understand that if I do not fulfill the requirements, I will be disqualified from the program. I also understand that my name, mailing address and e-mail address may be released to eligible Oklahoma universities, colleges, and technology centers so they can send me information.

Student’s Signature: ________________________________ Date: ________________

Placement Provider: I have read, and understand the requirements of the program. I/we confirm the above student is currently in the custody of OKDHS and has been placed in my/our care*. I/we agree to help the student comply with the program requirements, talk with the school contact person or other program personnel, and provide information to the Oklahoma State Regents for Higher Education or the State Board of Education when requested.

Placement Provider: ________________________________ Date: ________________

*False information will result in the student’s disqualification from the program.

OK Promise OKDHS Application Page 1
2007-08 school year
Putting State Merit Aid Programs into Context: Lessons from Kentucky

Heidi Hiemstra, Ph.D.
The value of merit aid programs has come under question in recent years as state financial aid funds have increasingly been allocated to aid based on students’ academic performance rather than their demonstrated financial need. As the cost of college continues to grow, critics are primarily concerned that low-income students will face an ever-larger financial barrier, while significant portions of state aid dollars go to well-off students. This policy brief reviews these critiques of merit aid programs and presents evidence from Kentucky’s merit aid program that shows some of the possible benefits of these programs. The positive and negative aspects of merit aid programs argue for a balanced state financial aid policy which allocates funds to need and merit-based aid according to articulated, program-specific goals such as increased access or success.

The Rise of Merit Aid

The number and size of state merit aid programs has expanded greatly since Georgia instituted its HOPE Scholarship program in 1993. Twelve states currently give a large proportion of student financial aid through programs that award aid based on academic performance, such as high school grades, scores on standardized college-entrance exams, and/or college grades. These programs were instituted for a number of reasons – to increase access to college, to encourage students to work hard and succeed in high school, and to keep high-performing students from going out-of-state for college. The growing proportion of state aid dollars going to merit (non-need-based) and need-based grants is shown below.

**Total Need-Based and Non-Need-Based State Grants in Constant (2006) Dollars (in Billions), 1969-70 to 2005-06**

![Graph showing the growth of total need-based and non-need-based state grants from 1969-70 to 2005-06.]

Source: College Board, Trends in Student Aid 2007

As state merit-aid programs have grown, so has criticism of them. Critics of these programs have several concerns about the impact of these programs,
mostly based on research on Georgia’s HOPE program. These studies find that merit aid programs only marginally increase access, and do so primarily among higher-income students. Many states saw an increase in enrollment after the institution of merit aid programs, but most of these enrollment increases were due to students staying in-state rather than going out of state for college. For college access to truly expand, a financial aid program would have to encourage students to attend college who otherwise would not. Merit aid programs, however, tend to award money disproportionately to students who already have the financial resources needed to attend college, because high school performance is closely related to family income. In fact, research suggests that merit aid has widened the racial and economic gaps in college enrollment in Georgia and elsewhere.

The negative aspects of merit aid are particularly important because of the competitive nature of funding for financial aid programs. No state has unlimited funds to allocate to student financial aid, so merit aid programs tend to compete with needs-based programs for funding. There is some support for the idea that merit aid programs actually push up the cost of tuition in states that award the full cost of tuition, which sets up a troubling cycle. Need-based aid becomes increasingly important to low-income students as costs increase. Without the investment in need-based aid needed to ensure that needs-based awards keep pace with rising costs, the value of these awards declines as costs rise, undermining the effectiveness of need-based aid in helping low-income students attend college. The students who fare the worst are merit aid non-recipients, who bear increased cost without increased merit aid. Older, financially independent students are hit hard in this scenario, as under most merit programs’ guidelines these students have been out of high school too long to receive awards. Many of these students are part-time, but some have left the full-time labor market to go to college full-time and struggle to make ends meet at very low income levels while in college.

The research on merit aid programs is not entirely bleak. As an incentive to keep high-performing students in-state, these programs are clearly successful. Other research on Georgia’s HOPE program suggests that merit aid recipients took more credit hours, had higher college GPAs and were more likely to persist and graduate than non-recipients. These programs may encourage students to perform better in college and keep them from dropping out. To date, no credible research on merit aid’s impact on high school students’ motivation or success has been conducted.

**Merit and Needs-Based Financial Aid in Kentucky**

Merit aid came to Kentucky in 1998 with the institution of the Kentucky Educational Excellence Scholarship, or KEES. The KEES program has several goals: to make college more affordable for Kentucky students; to encourage students to consider postsecondary education; to motivate high school students to work harder and improve their grades by rewarding achievement; and to
encourage students, particularly high-achieving students, to remain in Kentucky to attend college.

This program provides an award for each year of high school in which a student has a GPA higher than 2.5, with a bonus award based on ACT score. Students must maintain a GPA of 2.5 in their first year of college to keep the award, and a 3.0 in their second and subsequent years. Students can use their KEES awards for eight semesters of full or part-time study, but must start college within five years of graduation from high school to use the award. The maximum KEES award for the 2005-06 academic year was $2,500, consisting of up to $500 earned in each year in high school, with a maximum bonus award of $500 for ACT score.

Kentucky also has two need-based student financial aid programs, and a number of smaller programs targeted at teachers and other groups of special policy concern. The need-based aid programs are the College Access Program (CAP), which provided awards of up to $1,700 to Pell eligible students in 2005-06, and the Kentucky Tuition Grant (KTG), which supplies additional money to students attending independent colleges and universities in the commonwealth.

Historical and comparative data on the funding of need and merit-based financial aid in Kentucky is presented in the two figures below. Funding for merit aid has not much surpassed need-based aid in Kentucky as it has in most other merit aid states, because of the legal designation of a majority of lottery funds to need-based aid. Despite this allocation formula, however, the CAP and KTG programs are substantially under funded, with 43,000 applicants denied awards in 2007-08 because they applied after the program ran out of funds. The KEES program has not yet hit this funding barrier, but is projected to do so soon.

**Disbursement of Merit and Need-Based Awards in Kentucky, 1997 - 2007**

Source: Kentucky Higher Education Assistance Authority
The impact of merit and need-based aid on students’ financial aid awards can be seen in the graphs below, which present the average amounts of aid awarded to students at different income levels in the public two and four-year sectors in the 2005-06 academic year. Average CAP awards echo Pell awards, as would be expected, but the average KEES award increases as household income rises. This is due in part to the concentration of independent students in the lower income categories who do not qualify for KEES awards. National research also suggests a correlation between family income and academic performance, which would lead to larger KEES awards among higher-income students. As critics of merit aid point out, the KEES program does appear to be regressive on the whole.
Financial Aid Awarded by Annual Income, 2005-06
Includes full-time, in-state dependent and independent undergraduates who filed the FAFSA

Merit Aid and Student Success in Kentucky

While merit aid programs have negative aspects, research on the KEES program shows that these programs also have significant strengths. A 2003 survey of teachers and guidance counselors in Kentucky suggested that KEES had been successful in achieving its high school level goals. KEES appeared to motivate students to work harder and get better grades in high school, especially in the senior year; to increase students’ interest in attending college; and to help keep more students in Kentucky for college. On a less positive note, this survey also suggested that some students took less rigorous courses in order to get better grades and increase their KEES awards. While this survey of teachers and guidance counselors is an imperfect measure of student behavior with mixed results, it does suggest some positive changes among high school students as a result the KEES program.

To examine the possible impact of state financial aid programs on student success in college, a study was conducted for this report on students’ retention to a second year of college. This study finds that the KEES program is a powerful factor in keeping students in college at four-year public universities in Kentucky. Using statistical modeling techniques, the impact of additional KEES and CAP awards was compared to demographic characteristics; academic factors such as university attended, ACT score and GPA at the end of the first year of
State Grant Aid and Student Success

college; and financial factors such as family income, unmet financial need and other types of financial aid received (see Technical Appendix for details).

The most powerful aid-related and other factors are presented below. To read this chart, think of two students who were identical in terms of demographic, enrollment, academic performance, income, aid and all other factors but the size of their KEES award. The model predicts that if one of these identical students had an additional $500 in KEES award, that student’s risk of dropping out of college after her first year would be 53% lower than the student without the additional $500 from KEES. An additional $1,000 in federal grants had a slightly smaller effect, and more institutional grant or loan dollars also decreased the odds of dropping out to lesser degrees. Family income, GPA at the end of the first year, and a few other academic factors not included here were also predicted to significantly reduce the odds of leaving college. The strongest effects were predicted when KEES was combined with some of these other factors. A student with a KEES award that is $500 higher and who also had a GPA one-half a letter grade higher, was predicted to be 77% less likely to drop out than an otherwise identical student. It is important to note that the needs-based CAP award did not have any statistically significant effect on students dropping out of school after their first year.

**Reduced Odds of Dropping Out of College, Selected Variables**
**Includes All Fall 2005 Entering Undergraduate Students at Kentucky’s Public Four-year Universities (FAFSA Filers only)**

-90% -80% -70% -60% -50% -40% -30% -20% -10% 0%

- KEES award up $500
- Federal grants up $1,000
- Institutional grants up $1,000
- Loans $1,000
- Family income up $10,000
- GPA at end of first year up 0.5
- KEES up $500, Family income up $10,000
- KEES up $500, Federal grant up $1,000
- KEES up $500, GPA up 0.5

Source: CPE Comprehensive Database

When interpreting these results, it is important to understand what the model tells us and what it can’t tell us. For instance, because an additional $500 in KEES award predicts that an individual student’s risk of dropping out of college is reduced by half does not mean that if all students had an additional $500 in KEES that the state’s dropout rate would drop by half or by any other particular amount. Students all have different levels of drop-out risk, so reducing drop-out
risk by half is very different for a student with a low versus high risk. What the model does do is compare students to each other and seek out the characteristics that seem to best predict actual drop-outs. The model weighs the impact of each characteristic on the risk of dropping out and suggests the relative importance of each of the characteristics. For instance, the fact that increased KEES reduced the odds of drop-out by 53%, while increased institutional aid reduced drop-out by only 12% suggests that, if the goal is to increase retention, money would be better spent on the KEES program than in increasing institutional aid, but only in a general sense. It should not be interpreted to mean that each dollar is necessarily four times more valuable in the KEES program, or that statewide rates would drop four times more if additional dollars are added to KEES rather than to institutional aid.

A further piece of evidence that supports the importance of KEES in keeping students in school is that a predictive model that includes KEES out-performs a model that does not include KEES to a statistically significant degree. This is not true of other aid programs, even federal financial aid which provides larger awards. Overall, this research supports the beneficial affects of KEES merit-based aid on student retention among students at four-year universities.

Why might this be? KEES has become the largest financial aid program in Kentucky, serving 64,000 students in 2006-07. As has been noted by other authors, merit aid becomes a general subsidy of most college-ready students, and as such can be expected to have a widespread impact. This is particularly the case in Kentucky, where the performance standard to qualify for KEES is so low: a 2.5 GPA for at least one year in high school. The KEES program functions as a general entitlement for most students who qualify for admission at four-year institutions, with the exception of older, independent students. Perhaps the fact that KEES is neither means-tested (which can change year-to-year), nor a gift from the institution, makes it a reliable form of aid for students, who can count on receiving a set amount each year if they maintain their college grades. Another possibility is that the size of a student’s KEES award may reflect the skills, abilities and attitudes learned before college that are represented in the KEES funding formula by students’ high school GPA, a set of skills, abilities and attitudes that serve them well in college. This possibility is somewhat mitigated by the inclusion of ACT in the model, a standardized test that attempts to measure the skills and knowledge needed for college. It is important to note that this study does not include students at two-year institutions, or four-year students who did not file the FAFSA form, so any similar effects among these students are unknown.

**The Need for Balanced, Articulated Financial Aid Policy**

The tendency of merit aid programs to widen economic and racial gaps among students argues against relying on merit aid programs as the sole or primary financial aid program in a state. However, the positive impact of merit aid on student retention in state and in college suggests that these programs retain significant value for specific public policy objectives. What is needed is a
financial aid policy that articulates and balances the varying goals of financial aid programs, such as expanding student access, retaining students in-state, and giving students incentive to perform well in high school and in college.

A balanced student aid policy would require that specific goals be articulated for the different types of financial aid programs, such as increasing student access or retaining students in-state, and that resources be allocated according to the relative value of each of these goals. Another way to accomplish this balance would be to collapse these programs together into a blended financial aid program and allocate award dollars based on both merit and need, requiring a decision about how many dollars should be awarded for need vs. merit. As shown by the research cited in this brief, many of the desired outcomes of financial aid programs can be measured and their attainment evaluated. Thus, the extent to which specific goals such as access and success are accomplished as a result of changes in policy could be broadly evaluated.

A primary goal of balanced, articulated financial aid policy would be the most efficient allocation of the limited funds available for student financial aid. Directly linking funding for need and merit-based aid to agreed-upon policy goals would maximize the use of each dollar and improve accountability and transparency for policy makers and the public. Given their political popularity, merit aid programs aren’t going anywhere, but their negative impact on low-income students could be ameliorated by a more goal-driven allocation of resources.

In Kentucky, this process could begin with a discussion among policy leaders of the relative importance of access and success. Despite the fact that Kentucky’s funding formula allocates the majority of lottery funds for need-based aid (currently a 55/45 split between need and merit aid), the current funding system undervalues access. This year, 43,000 students with financial need did not receive the need-based aid for which they qualified, while no KEES awardees went unfunded. Refocusing on need-based aid is particularly important in Kentucky, which is not only a relatively low-income state, but one which has set ambitious goals to double the number of bachelor’s degree holders by 2020. The kind of growth in degree production needed to accomplish this goal cannot happen without a dramatic expansion of access among both recent high school graduates and older students. If Kentucky hopes to expand access while preserving the positive elements of merit aid, the relative importance of these policy goals and the programs put in place to achieve them must be clearly articulated and balanced.

**Citations:**


Putting State Merit Aid Programs into Context: Lessons from Kentucky

Technical Appendix

The data in this study include all first-time degree-seeking students at Kentucky’s two research universities and six regional, comprehensive, masters universities in fall of 2006 who filed the FAFSA. Both Bachelor and Associate-seeking students were included, but all of the Associate-seeking students were at the comprehensive universities. The data are administrative data collected from the institutions through the Council on Postsecondary Education’s Comprehensive Database, with variables merged in from several different files. Student financial aid and cost data were from a special collection of student-level data on federal, state and institutional financial aid and related information (including income) for all undergraduates enrolled in the 2005-06 academic year at Kentucky’s two- and four-year public institutions. Academic information about entrance and placement exam results, first year GPA and hours earned in the first year come from the annual Entrance Exam file submitted for all first-time, degree-seeking students. Students’ enrollment and demographic data came from the enrollment files submitted for all students each semester.

As administrative data, the data used in this study are limited in significant ways. Most importantly, many factors shown in prior research to be important to student retention, such as integration, classroom-based learning experiences and intention to transfer are not included. Also, while the data in CPE’s Comprehensive Database are subject to thorough editing processes, administrative data is never as clean as data collected specifically for research purposes, as careful control over data entry is difficult to guarantee. These limitations are balanced by the ability to study the entire entering four-year cohort in the state rather than a sample. The large sample size which results gives considerable statistical power which is helpful in teasing out closely related factors.

The methodology employed in this study is nominal logistic regression modeling of the fall 2006 enrollment status of the 2005 entering cohort, comparing return to the same institution to both transfer to another public or independent Kentucky college and to dropouts or stopouts. CPE’s comprehensive database receives student-unit records from most of the private, non-profit institutions in the state, as well as the public institutions. This permits the study of dropout with some confidence, as most of the students who transfer to other institutions are included in the dataset in the second year. Only students transferring to proprietary institutions or out-of-state would be misclassified as dropouts using this dataset.

Frequency tables and logit plots were used to check for data sufficiency and to test for the strength of the bivariate, linear association between each response variable and the predictor variable. Cochran-Mantel-Haenszel statistics were used in stratified data analysis to test for data sufficiency among possible
interaction terms. Then, a backwards elimination using a conservative significance level was used to test all possible two-way interaction terms that were related to the aid variables.

To test the impact of state aid in particular on retention and transfer, log likelihood ratio tests of nested models were used to examine statistically significant improvements in model fit. First, a model was fit with only demographic, enrollment and academic variables, excluding any financial or aid variables. This model was then compared to a nested model which included all financial and aid variables except for state aid. This second model was tested against the full model including state aid variables to test the hypothesis that state aid has a significant impact on student retention. Results of these analyses are presented below.

**Variables**

The dependent variable measures students’ status in fall 2006, whether they returned to the same institution (were retained), enrolled in another public or reporting independent institution in Kentucky (transferred), or were not enrolled in another public or reporting independent institution in Kentucky (dropout/stopout).

The model has two kinds of independent variables, the demographic, enrollment and academic variables which serve as controls, and the aid variables that are of primary interest in this study. Descriptive statistics for these variables are given in Tables 1 and 2. The control variables are as follows:

1. **Gender**: Female is used as the reference category, as over 50% of both groups are female.
2. **Race**: This variable is coded into three categories, White, Black or African-American, and other. This breakout is necessitated by the population characteristics of Kentucky, which is a predominantly White state. Breaking out the “other” category into Asian, Latino, etc. would result in categories too small to be included in the model.
3. **Year of high school graduation**: Students who graduated from high school in the spring of 2005 are the treatment group, with all older students lumped together into the reference group. This approach was necessitated by the small proportion of older students in the cohort.
4. **Institution**: The student’s institution of enrollment. The University of Kentucky and the University of Louisville are the state’s research institutions, while the others are regional comprehensive master’s universities. As the largest single institution and the state’s flagship, the University of Kentucky is the reference school for analysis.
5. **Enrollment status in 2005-06**: This variable describes students’ enrollment status in the fall 2005 to summer 2006 semesters. Full-time, full-year includes students carrying a full-time course load for two or more semesters during the year. Students must be enrolled for at least 12 credit hours to be defined as full-time in any given semester. Part-time
or part-year includes all other enrollment patterns, including students enrolled full-time for one semester only, those who attend part-time for multiple semesters and those who change their enrollment status during the year.

6. Residency: Students’ in-state or out-of-state residency, with in-state as the reference category. Students changing residency during the year have been removed for simplicity of analysis. Students in reciprocity programs that charge out-of-state students in nearby counties in-state tuition are also removed because of their small numbers.

7. Dependency Status: Dependency status as used to determine federal financial aid, with dependent as the reference category.

8. Degree sought: Associate, Bachelor’s, or Undeclared. Kentucky’s regional comprehensive universities offer a limited number of associate programs. Many of the undeclared students were provisional admits who did not yet qualify for Bachelor’s degree study.

9. First developmental math course: Because of the importance of developmental math shown in some studies, this variable reflects whether or not a student was required to take a developmental math course, and how successful the student was in that first developmental math course. Students who did not successfully complete their first developmental math course may have withdrawn or not passed the course, and may have completed this requirement later in the year.

10. ACT Composite Score (Table 2): This measure of student preparation is a continuous variable ranging from 0 to 36.

11. GPA at the end of the first year (Table 2): Students’ grade point average (GPA) at the end of their first year is a powerful predictor of academic success.

The independent variables related to cost and financial aid listed below are all continuous variables with descriptive statistics presented in Table 2.

1. Family income: FAFSA family income computed from adjusted gross income. The square root of family income was used in the model to pull in the extreme tails of the distribution and make it more linear. The unmodified amounts are given in Table 2.

2. Unmet need: Unmet need is a students’ total cost of attendance minus the expected family contribution (EFC) and all grant aid. This is the amount that students must work, borrow, or find other sources of income to pay.

3. Kentucky Educational Excellence Scholarship (KEES) state merit-based grant: The maximum KEES award is $2,500 annually for students who maintained a GPA of 4.0 each year in high school and an ACT Composite score of 28 or higher.

4. College Access Program (CAP) state need-based grant: An additional grant for Pell-eligible students with an expected family contribution (EFC) of $3,850 or below. Maximum award was $1,700 in 2005-06.
5. **Federal grants**: Includes all need, merit and other types of federal grants. Most federal grants require a FAFSA for eligibility, however a few do not, such as ROTC or job training/vocational education grants.

6. **Institutional grants**: Includes all types of need and merit grants and tuition waivers granted by institutions. Some tuition waivers are legislative mandates.

7. **Total loans**: Total loans from all federal and private loan programs that were known to the institution.
### Table 1. Categorical Variables, First-Time, Degree-Seeking FAFSA Filers, Fall 2005

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### Table 2. Continuous Variables, First-Time, Degree-Seeking FAFSA Filers, Fall 2005

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<td>$377</td>
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<tr>
<td>75\textsuperscript{th} percentile</td>
<td>$0</td>
</tr>
<tr>
<td>Median</td>
<td>$0</td>
</tr>
<tr>
<td>25\textsuperscript{th} percentile</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Federal grants</strong></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>$1,145</td>
</tr>
<tr>
<td>75\textsuperscript{th} percentile</td>
<td>$2,025</td>
</tr>
<tr>
<td>Median</td>
<td>0</td>
</tr>
<tr>
<td>25\textsuperscript{th} percentile</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 2. Continuous Variables, First-Time, Degree-Seeking FAFSA Filers, Fall 2005, Continued

<table>
<thead>
<tr>
<th>Institutional grants</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>$1,680</td>
<td></td>
</tr>
<tr>
<td>75\text{th} percentile</td>
<td>$2,000</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>25\text{th} percentile</td>
<td>$0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Loans</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>$3,139</td>
<td></td>
</tr>
<tr>
<td>75\text{th} percentile</td>
<td>$4,607</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>$2,546</td>
<td></td>
</tr>
<tr>
<td>25\text{th} percentile</td>
<td>$0</td>
<td></td>
</tr>
</tbody>
</table>

The Role of State Aid in Student Retention

Nested likelihood ratio tests were conducted to test the null hypothesis that state grants have no significant, independent impact on retention, transfer and dropout/stopout. An intermediate nested model adding only non-state grant variables to the control variables was also tested. This test statistic takes the difference in the -2 log likelihood of two nested models and follows the chi-square distribution, with degrees of freedom equal to the number of additional variables in the larger model (SAS Institute 2005). These tests provide strong evidence for the importance of state grants compared to other aid factors.

Table 3. Likelihood Ratio Test Results

<table>
<thead>
<tr>
<th></th>
<th>Likelihood Ratio Test</th>
<th>Degrees of Freedom</th>
<th>p-value* &lt; .01</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAFSA Filers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Model with non-state aid (all aid but state grants) compared to control variables only</td>
<td>14.204</td>
<td>66</td>
<td>1.0</td>
</tr>
<tr>
<td>2. Full model compared to non-state aid model (with controls)</td>
<td>156.310</td>
<td>32</td>
<td>&lt;0.0000*</td>
</tr>
<tr>
<td>3. Full model compared to model with control variables only</td>
<td>170.515</td>
<td>98</td>
<td>&lt;0.0000*</td>
</tr>
</tbody>
</table>

The evidence is strong and consistent that state grants not only impact retention, transfer and dropout, but that they have a stronger impact than all other types of aid combined. When aid related variables including income, unmet need, federal and institutional grants and loans were added to the control model consisting of demographic, enrollment and academic variables (and their interaction terms), there is no statistically significant impact on the model outcome. Adding the state aid variables (and their interaction terms), however, creates a model that statistically significantly better predicts student outcomes.
than both the control-only model, and the model with control and non-state aid variables.

**How State and Other Financial Aid Effects Retention, Transfer and Dropout/Stopout**

Model fit statistics are presented in Table 4, with the maximum likelihood estimates and odds ratios presented in Table 5. This model appears to fit well, correctly predicting 82% of the observed responses and having a pseudo R-squared of 0.45.

**Table 4. Model Fit Statistics**

<table>
<thead>
<tr>
<th>Observed Response</th>
<th>Predicted Response</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dropout/Stopout</td>
<td>Transfer</td>
</tr>
<tr>
<td>Dropout/Stopout</td>
<td>695</td>
<td>72</td>
</tr>
<tr>
<td>Percent</td>
<td>7.24</td>
<td>0.75</td>
</tr>
<tr>
<td>Transfer</td>
<td>122</td>
<td>153</td>
</tr>
<tr>
<td>Percent</td>
<td>1.27</td>
<td>1.59</td>
</tr>
<tr>
<td>Retained</td>
<td>202</td>
<td>40</td>
</tr>
<tr>
<td>Percent</td>
<td>2.1</td>
<td>0.42</td>
</tr>
<tr>
<td>Total</td>
<td>1,019</td>
<td>265</td>
</tr>
<tr>
<td>Percent</td>
<td>10.62</td>
<td>2.76</td>
</tr>
</tbody>
</table>

Percent predicted correctly 82.0%

R-Square 0.3379 Max-rescaled R-Squared 0.4449

<table>
<thead>
<tr>
<th>Test</th>
<th>Chi-Square</th>
<th>DF</th>
<th>Pr &gt; Chi Sq</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likelihood Ratio</td>
<td>3953.1152</td>
<td>138</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Score</td>
<td>4102.0161</td>
<td>138</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Wald</td>
<td>2230.2666</td>
<td>138</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>

When examining the impact of particular independent variables on the dependent variables as in the discussion below, it is essential to keep in mind that the impact of each as discussed is controlling for the effects of all the other variables and interaction terms in the model.

**Main Effects of Student Demographics, Enrollment and Academic Performance**

Looking at Table 5, several control variables have a significant impact on students’ retention, transfer and dropout or stopout. The strongest single effect was dependency status, finding that dependent students are more than twice as likely to have dropped or stopped out than independent students, and nine
times more likely to transfer. This puzzling finding may be questionable because of the relatively small number of independent students in the sample, or perhaps financially independent students are taking more direct responsibility for their studies and are more likely to persevere. Students who graduated from high school in 2005 were only about half as likely to dropout/stopout as were older entrants. Full-time students were much less likely to transfer or dropout/stopout than their part-time peers, while out-of-state students were less likely to transfer to another institution in Kentucky. Students who did not complete a required developmental math course were more likely to drop-out than were students who were not required to take a course, although developmental math completion did not have any effect on either transfer or drop-out relative to students not required to take developmental math. Each additional half-point of GPA decreased the odds of drop-out by half.

Aid and Dropout/Stopout

KEES awards had a larger and more complex affect on dropout/stopout than any other cost or aid-related variable. Additional KEES funding of $500 reduced the odds of dropout/stopout by more than half. Several interaction terms decreased these odds further; including higher family income, increased federal grants, attending full-time and having a higher GPA. Each of these effects reduced the odds of dropout by 70 percent or more, dropping the relative odds 98 percent among full-time students. The only puzzling result is the small decrease in the odds of dropout/stopout with additional unmet need, which would be expected to increase the odds.

Four other aid-related variables were main effects in the model: federal grants, institutional grants, family income and loans. An additional $1,000 in federal grants also reduced the odds of dropout/stopout by half, and this effect was magnified among full-time students (dropping the odds 98 percent) and those with a higher GPA (dropping the odds three-quarters). An additional $1,000 in institutional grants reduces the odds of dropout by over 20 percent, and in combination with a higher GPA, the odds dropped to half. An additional $10,000 in family income dropped the odds of dropout/stopout by half, even after controlling for academic preparation and performance, suggesting that additional income has a positive financial effect even after controlling for aid. An additional $1,000 in loans also dropped the odds of dropout/stopout, and in combination with additional income, the odds dropped almost 60 percent. This suggests that loans are a helpful aid strategy for many students, especially among students from higher-income families. Loans also increased the positive effect of attending full-time, dropping the stopout odds slightly.

Two aid variables were not main effects, but modified the impact of GPA on dropout/stopout. Both are puzzling, as they act in the opposite of the expected direction. Increased unmet need, which would be expected to increase the odds of dropout, slightly decreased these odds. Also, CAP awards, which would be expected to decrease the odds of dropout as do other types of aid, actually slightly increased the odds of dropout when compared to raising GPA alone.
This may be because CAP awards do not cleanly represent a financial need that has been met. Students must not only demonstrate financial need to receive a CAP award, but must also submit their application before program funds run out, introducing a more random element into the equation.

### Table 5. Logit Estimates with Odds Ratios for Statistically Significant Effects

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Transfer</th>
<th>Dropout/Stopout</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>Pr &gt; ChiSq</td>
</tr>
<tr>
<td>Intercept</td>
<td>1.9027</td>
<td>0.0587</td>
</tr>
<tr>
<td>Male</td>
<td>0.1848</td>
<td>0.0321</td>
</tr>
<tr>
<td>Black</td>
<td>-0.2392</td>
<td>0.2145</td>
</tr>
<tr>
<td>Other race</td>
<td>-0.2469</td>
<td>0.2677</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduated high school in 2005</td>
<td>0.3771</td>
<td>0.0454</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institution 1</td>
<td>-1.7075</td>
<td>0.0100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institution 2</td>
<td>-1.4470</td>
<td>0.3519</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institution 3</td>
<td>-3.7729</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Institution 4</td>
<td>-1.8137</td>
<td>0.0110</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institution 5</td>
<td>-3.9125</td>
<td>0.0004</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institution 6</td>
<td>-1.9436</td>
<td>0.0102</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institution 7</td>
<td>-2.5355</td>
<td>0.0207</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>-4.9193</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Out-of-state resident</td>
<td>-2.4444</td>
<td>0.0030</td>
</tr>
<tr>
<td>Dependent student</td>
<td>2.2036</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Associate-seeking</td>
<td>-0.0038</td>
<td>0.9862</td>
</tr>
<tr>
<td>Undeclared degree level</td>
<td>-0.1711</td>
<td>0.3663</td>
</tr>
<tr>
<td>Completed first developmenta l math course</td>
<td>-0.0699</td>
<td>0.6026</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Did not Complete Developmental Math Course

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>Pr &gt; Chi Sq</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT Composite score</td>
<td>0.0087</td>
<td>0.5922</td>
<td></td>
</tr>
<tr>
<td>GPA at end of first year (0.5)</td>
<td>-0.4183</td>
<td>0.0014</td>
<td>0.811</td>
</tr>
<tr>
<td>Family income ($10,000)</td>
<td>-0.0018</td>
<td>0.3726</td>
<td>1.325</td>
</tr>
</tbody>
</table>

### Transfer and Dropout/Stopout

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>Pr &gt; Chi Sq</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unmet need ($1,000)</td>
<td>0.0000</td>
<td>0.3419</td>
<td>1.000</td>
</tr>
<tr>
<td>KEEES award ($500)</td>
<td>-0.0003</td>
<td>0.6957</td>
<td>0.0015</td>
</tr>
<tr>
<td>CAP award ($500)</td>
<td>0.0005</td>
<td>0.0247</td>
<td>1.285</td>
</tr>
<tr>
<td>Federal grants ($1,000)</td>
<td>-0.0004</td>
<td>0.0017</td>
<td>0.663</td>
</tr>
<tr>
<td>Institutional grants ($1,000)</td>
<td>0.0000</td>
<td>0.8190</td>
<td>0.0001</td>
</tr>
<tr>
<td>Loans ($1,000)</td>
<td>-0.0002</td>
<td>0.0026</td>
<td>0.837</td>
</tr>
<tr>
<td>KEEES * family income</td>
<td>0.0000</td>
<td>0.1981</td>
<td>0.0001</td>
</tr>
<tr>
<td>KEEES * unmet need</td>
<td>0.0000</td>
<td>0.5197</td>
<td>0.0000</td>
</tr>
<tr>
<td>KEEES * federal grants</td>
<td>0.0000</td>
<td>0.0701</td>
<td>0.0000</td>
</tr>
<tr>
<td>KEEES * institution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KEEES* full-time</td>
<td>0.0014</td>
<td>&lt;.0001</td>
<td>1.001</td>
</tr>
<tr>
<td>KEEES * independent student</td>
<td>-0.0006</td>
<td>0.2167</td>
<td>0.0008</td>
</tr>
<tr>
<td>KEEES * GPA at end of first year</td>
<td>-0.0002</td>
<td>0.0670</td>
<td>0.0002</td>
</tr>
<tr>
<td>Parameter</td>
<td>Estimate</td>
<td>Pr &gt; Chi Sq</td>
<td>Odds Ratio</td>
</tr>
<tr>
<td>-----------</td>
<td>----------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td>CAP * GPA at end of first year</td>
<td>-0.0002</td>
<td>0.0228</td>
<td>1.000</td>
</tr>
<tr>
<td>Family income * out-of-state</td>
<td>0.0007</td>
<td>0.8138</td>
<td></td>
</tr>
<tr>
<td>Family income * institution</td>
<td>Individual institutional effects not presented -- some were significant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family income * loans</td>
<td>0.0000</td>
<td>0.6661</td>
<td></td>
</tr>
<tr>
<td>Unmet need * institution</td>
<td>Individual institutional effects not presented -- some were significant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unmet need * GPA at end of first year</td>
<td>0.0000</td>
<td>0.5063</td>
<td></td>
</tr>
<tr>
<td>Federal grants * full-time</td>
<td>0.0003</td>
<td>0.0003</td>
<td>1.000</td>
</tr>
<tr>
<td>Parameter</td>
<td>Transfer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal grants * GPA at end of first year</td>
<td>0.0001</td>
<td>0.0137</td>
<td></td>
</tr>
<tr>
<td>Institutional grants * institution</td>
<td>Individual institutional effects not presented -- some were significant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institutional grants * GPA at end of first year</td>
<td>-</td>
<td>0.0273</td>
<td>1.000</td>
</tr>
<tr>
<td>Loans * full-time</td>
<td>0.0002</td>
<td>0.0003</td>
<td>1.000</td>
</tr>
</tbody>
</table>
Table 6. Odds Ratios for Aid Variable Interaction Terms

<table>
<thead>
<tr>
<th></th>
<th>Dropout/Stopout</th>
<th>Transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Odds Ratio</td>
<td>Pr &gt; Chi Sq</td>
</tr>
<tr>
<td>KEES +500, Family income +10,000</td>
<td>0.286</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>KEES +500, Unmet need +1,000</td>
<td>0.454</td>
<td>0.0005</td>
</tr>
<tr>
<td>KEES +500, Federal grant +1,000</td>
<td>0.240</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>KEES +500, Full-time</td>
<td>0.015</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>KEES +500, Dependent</td>
<td>0.2846</td>
<td>5.877</td>
</tr>
<tr>
<td>KEES +500, GPA +0.5</td>
<td>0.231</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>CAP +500, GPA +0.5</td>
<td>0.558</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Family income +10,000, Out-of-state</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family income +10,000 Total loan +1,000</td>
<td>0.424</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Unmet need +1,000, GPA +0.5</td>
<td>0.484</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Federal grant +1,000, Full-time</td>
<td>0.014</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Federal grant +1,000, GPA +0.5</td>
<td>0.249</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Institutional grant +1,000, GPA +0.5</td>
<td>0.449</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Loans +1000, Full-time</td>
<td>0.014</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>
Sustaining a Public Agenda for Higher Education:

A Case Study of the
North Dakota Higher Education Roundtable

Jason E. Lane, Ph.D.
Executive Summary

Many states are creating special forums (e.g., task forces, roundtables, and commissions) to assess and improve state policy related to higher education and workforce development. One of the more prominent, and arguably more successful, of these initiatives is the North Dakota Higher Education Roundtable. Legislatively initiated in 1999, the Roundtable brought together 61 representatives from state government, higher education, and business and industry to create a new vision for the state, determine how higher education could help achieve that vision, and align accountability and funding mechanisms to support the pursuit of the vision. Now, more than seven years after the Roundtable first met, the vision set forth in the original report continues to direct decision making in the university system and guides policy making and debate in the legislative and executive branches of North Dakota’s state government.

Based on document analysis and 40 interviews with Roundtable participants and other stakeholders across North Dakota (a description of the methods used can be found in Appendix A), this report assesses the factors that enabled the Roundtable vision to be sustained for more than seven years, identifies obstacles encountered during the sustainability process, and provides suggestions to help other states build and eventually sustain their own public agenda. Of note, while this study focuses on sustaining a public agenda for higher education, the lessons learned could be applicable to creating and sustaining public agendas for other policy arenas.

There were three primary components of the Roundtable initiative that led to a sustainable agenda. First, there was significant effort placed on defining the nature of the relationship (compact) between higher education, state government, and business and industry. Second, the Roundtable produced a written, detailed agenda to guide decision making in all areas related to higher education. Third, the Roundtable served as a “face and place” for the agenda to exist. While this report addresses all three issues, it focuses on the latter, as it is the component that has enabled the agenda to be sustained.

In fact, the agenda for higher education created by the Roundtable has proved remarkably enduring. The agenda proved so visionary that it required almost no alteration in its first seven years. Such success is particularly noteworthy given that there has been almost complete turnover in academic and political leadership. Had the Roundtable been disbanded immediately following the issuance of its original report in 2000, the significant changes that followed – in the operation of the higher education sector and in the political and business environment in which the university system functions – would likely not have been realized. Indeed, the sustainability efforts proved even more important, given that even with a record of proven success, there continue to be questions raised about the relevance and impact of the Roundtable.
Factors for Creating a Public Agenda
Several factors were identified in the study as being critical for initiating an effort to reform a state’s higher education system and the relationship between it and external stakeholders.

State-focused agenda. The Roundtable began by discussing the existing reality of the state and creating a state-focused vision for success in the 21st century. The discussion about higher education took place within this context, concentrating on how the North Dakota University System (NDUS) could help the state achieve that vision and the policy reforms and resources necessary to support the system in those efforts.

Strong leadership. Strong and dedicated leaders were needed to create an environment conducive to fostering change. The legislators who chaired the Roundtable, along with external consultants, worked to refocus the discussion of the Roundtable group from debating what was wrong with the university system to figuring out how the university system could help the state achieve future success.

The use of data (not anecdotes). From the outset, the Roundtable members were presented with state, national, and international data to help them understand the current realities facing the state. This data allowed the Roundtable members to base their discussions and decisions on facts, not individual anecdotes.

Private-sector engagement. Involvement from the private sector proved critical for altering the nature of the discussion and subsequent policy action. The private sector, as a third party, was able to validate concerns and needs raised by both higher education and government leaders.

Factors for Sustaining a Public Agenda
A number of actions were identified in the study as being critical to sustaining a public agenda focused on reforming a higher education system and its relationship with external stakeholders.

Diversify membership. The Roundtable included leaders that represented higher education, state government, business, and industry, as well as the needs of the diverse geographic regions across the state.

Simplify the message. The vision of the Roundtable was distilled into simple messages that could be easily communicated to audiences of diverse levels of knowledge, interest, and experience.

Engage the press. Engaging the press was initially critical for communicating the vision of the Roundtable to stakeholders across the state and later proved useful as the editorial boards of the four major newspapers defended the Roundtable process and its positive impact on the state.
Link the vision to planning. Linking the roundtable vision to institutional and system planning was a critical recommendation of the Roundtable report, as it forced the higher education sector to create tangible goals. The report serves as a constant reminder that policy and programmatic decisions at the system and institutional levels should be focused on the achievement of the vision.

Creating and sustaining a public agenda: suggestions for states. This report concludes with suggestions to help other states conceptualize a process that allows them to sustain a public agenda over many years and throughout academic and political turnover. These suggestions are derived from the analysis of the factors contributing to the success of North Dakota Higher Education Roundtable, as well as the obstacles encountered by it. The following five suggestions are the core elements of the recommended process.

Reviewing and defining the compact. The first step in creating a sustainable public agenda is defining the nature of the relationship between the sectors engaged in creating the agenda.

Engage stakeholders. Sustainability requires more than simply allowing people to testify to a committee or provide a general assessment of needs or concerns. It is about engaging them in the discussion and allowing them to participate in the evolution of that discussion – not just giving them the opportunity to inform that discussion.

Create clarity, assign responsibility. The agenda should have a clear set of goals and assign responsibility to respective members or sectors for achieving those goals. Achievement of the Roundtable vision required participation from the legislature, business and industry, and higher education. Because responsibility was assigned upfront and accountability measures were clearly defined, the various sectors (and the public) could hold responsible those not fulfilling their duties.

Make it relevant. The citizens of the state need to understand how the agenda (or plan or vision) impacts their lives and why it is important for the state to not just support, but actively pursue, the agenda.

Communicate the agenda and its successes. In order for an agenda to endure in spite of turnover in the political and academic realms, it is important to create and continue momentum. The agenda needs to be embraced by a multitude of people, ranging from faculty and press to the general citizenry. Efforts should be developed to communicate the agenda to as many different groups as possible, as well as to keep those groups informed about the successes resulting from the agenda.

Reinforce the agenda through integration. For real change to occur, planning and decision-making systems at the institutional, system, and state government levels need to be realigned to support the new agenda.
Introduction

Several policy-oriented groups, ranging from the National Collaborative for Higher Education Policy to the National Conference of State Legislators, have expressed the need for states to create a new public agenda for postsecondary education. These calls are reactions to significant changes in state environments, including the globalization and digitalization of the economy, increased competition for limited state resources, demographic shifts, and greater demand for a highly skilled workforce. Recognizing the critical role of higher education in this new era, a report from the National Governors Association calls for the creation of a new compact between states and higher education to "better align postsecondary education with...economic needs, which will position [the states] to compete in the global economy by producing a highly skilled workforce and by unleashing postsecondary education institutions’ power to innovate."  

Creating and sustaining a new public agenda is substantially more difficult than merely acknowledging that one is necessary. First, there exists a need to define the nature of the relationship (compact) between key sectors (e.g., higher education, state government, economic development, and business/industry). This is particularly critical if there is a history of a hostile or confrontational relationship between any of these sectors. Second, a public agenda needs to be clearly defined. Policy scholars generally describe an “agenda” as “the list of subjects or problems to which governmental officials, and people outside of the government closely associated with those officials, are paying some serious attention at any given time”. For the purposes of this report, the terms “public agenda” and “vision” are used interchangeably to describe a list of priority topics and directional goals within those topics. Third, the public agenda has to have a place and a face. The National Conference of State Legislatures’ (NCSL) Blue Ribbon Commission on Higher Education argued that identifying “a place or structure to sustain the public agenda” is a critical component to an agenda’s realization. Without a structure to sustain, evaluate, and adapt the agenda to the changing needs of the state, any agenda can fall prey to political maneuvering, special interests, and embedded power structures.

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1 The National Collaborative for Higher Education Policy is composed of the Education Commission of the States, the National Center for Higher Education Management Systems, and the National Center for Public Policy and Higher Education.
One method used by states to create a public agenda – or to amend an existing one – is through the convening of roundtables, commissions, task forces or other special working groups. These groups generally have a specific set of charges outlined by their creating entity, be it the legislature, the governor’s office, citizens groups, or others. Working groups like these take on a variety of different structures, involve individuals with different responsibilities from different sectors, and are given a variety of charges, depending on the state and the priorities for change. Some foster change; others do not. Some accidentally catalyze change, while others end up as proverbial window-dressing, so the creating entity can give the appearance of having “done something” about a specific set of problems.

However, there are some design and operational characteristics that can increase the chance of success in creating a state’s public agenda, particularly with respect to higher education. The North Dakota Higher Education Roundtable (hereinafter referred to as “the Roundtable”) is an example of a successful, adaptable state structure that helped foster and sustain change.

Begun in 2000, the Roundtable not only created a “new compact” among higher education, the state’s elected leaders, and taxpayers, it also created an agenda that sustained the changes fostered by that compact for more than seven years. In fact, the National Conference of State Legislatures cited the North Dakota Roundtable as a model for reform because it serves as “a place to ‘house’ ongoing, statewide discussions about how well the [higher education] system is performing,” a characteristic NCSL suggests is necessary for reform efforts to be sustained.

Using interviews with leaders in the state, media coverage, and state and institutional documents, this report examines how North Dakota’s use of a roundtable not only initiated but also sustained a revitalized public agenda for more than seven years. This agenda resulted in a significant shift in the relationship between the higher education, state government, and corporate/industry sectors. In fact, the Roundtable brought sweeping changes that permeated the entire state, ranging from a new public perception of the value of the higher education system to the revision of state policy hampering institutional effectiveness. The North Dakota Roundtable also steered the state toward policies and practices that enabled increased entrepreneurial activity on the campuses.

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7 Forty interviews were conducted in the past two years with legislators, previous chancellors associated with the roundtable, higher education board members, state and local government executive officials, campus presidents, economic development directors, and CEOs of businesses and industries located throughout the state. Documents included reports, correspondence, legislation, internal-planning documents, meeting minutes, and so forth.
The implementation of a new public agenda not only helped to revitalize the state’s higher education system but also altered the way in which the public viewed the system and its role in the state’s future (see the box on the following page for the six cornerstones guiding reform efforts). Now most initiatives related to higher education, from new university programs to proposed state legislation, are judged by the press according to the extent to which they achieve the goals of the agenda produced by the Roundtable. This is a significant change, given that before the Roundtable news coverage tended to focus on problems within the higher education system and conveyed a generally negative view of the system.

**Roundtable’s Six Cornerstones**

**Economic Development Connection.** Increase the direct connections and contributions of the university system to economic growth and social vitality of North Dakota.

**Education Excellence.** Provide high-quality education and skill development opportunities which prepare students to be personally and professionally successful, readily able to advance and change careers, be lifelong learners good citizens, leaders, and knowledgeable contributing members of an increasingly global and multicultural society.

**Flexible and Responsive System.** Create a university system environment which is responsive to the needs of its various clients and is flexible, empowering, competitive, entrepreneurial, and rewarding.

**Accessible System.** Create a system which is proactively accessible to all areas of North Dakota and seeks students and customers from outside the state.

**Funding and Rewards.** Develop a system of funding, resource allocation and rewards which assures quality and is linked to the expressed high-priority needs and expectations of the university system.

**Sustaining the Vision.** Develop a structure and process which assures the system remains connected, understood, relevant, and accountable to the needs of the state and its citizens.

*Source: A North Dakota University System for the 21st Century.*

This report focuses on why the Roundtable led to change when previous attempts did not (a brief discussion of previous attempts can be found in Appendix B). Part 1 of this report provides an overview of the Roundtable. Part 2 explores how the Roundtable revised the nature of the compact between higher education, the state legislature, and business and industry. Part 3 assesses the primary factors that allowed for the Roundtable to help implement and sustain the public agenda. Part 4 details obstacles that have threatened to or could derail the Roundtable initiatives. Part 5 provides suggestions to help other states create sustainable public agendas.
A number of different groups and constituencies may benefit from the lessons of the North Dakota experience in creating a new public agenda to guide the development of the state’s higher education system, including:

- Officials in other states interested in creating and sustaining a public agenda (groups dealing with issues other than higher education may also benefit from this study’s findings).
- Higher education officials and political leaders in North Dakota interested in understanding the Roundtable process.

**Basic Structure of the Roundtable**

- Legislatively supported (must be reauthorized each biennial session).
- There is a chair and co-chair; these individuals are typically selected from different chambers.
- The chair of interim legislative council appoints the leadership of the Roundtable.
- Members are selected by the chairs with input from the NDUS leaders.
  - 21 members mandated to be from the legislature.
  - 40 other members selected from higher education and the private sectors.
- The original membership was divided into subgroups (taskforces), designated to coordinate the six cornerstones of the Roundtable plan.
- Used a guided discussion to:
  - Examine national trends.
  - Review state and system data.
  - Create a vision.
  - Establish goals.
  - Develop indicators of success.
- Meetings are convened by the roundtable chair(s) as deemed necessary.

- Students, faculty, staff, administrators, government officials, and members of the public interested in knowing more about the North Dakota Higher Education Roundtable.

**Part 1**

**The Roundtable: An Overview**

North Dakota’s Roundtable evolved from an initial desire from members of the 1999 (56th) Legislative Assembly to conduct a study of higher education in the state. However, what began out of concern for limited funding and a desire by legislators to ensure educational quality turned into a process for creating a new public agenda to guide the development of the higher education system, including decisions related to policy making, funding and accountability. Rather than relying on the standard method used in previous legislatively-initiated studies, where a small group of officials took testimony about the challenges and opportunities facing the higher education system, legislators decided that the study “should focus on the future of ND and how the university system fits into developing a stronger future and
stronger economy for the state of ND, [as well as a] discussion of what are the appropriate things to be accountable for.\textsuperscript{8}

Without a new format, some legislators were concerned that the study would merely review the same issues that had been raised in the past two decades – concerns specific to higher education itself and not higher education’s relationship to the overall health of the state. In addition, legislators did not wish to rehash administrative minutia that had historically yielded little change. Instead, the legislative leadership of the Roundtable decided that the new study would focus on creating a shared vision for the state, defining the role of higher education in achieving that vision, and establishing methods to hold all stakeholders responsible for achieving that vision.

Leaders from the legislature and the North Dakota University System (hereinafter university system) collaborated to create a Roundtable that involved key stakeholders who could both envision a new future for the state and help achieve that vision. The Roundtable originated from a 1999 North Dakota Legislatively Assembly resolution calling for a study during the interim session of how the university system could help meet the “state’s needs in the twenty-first century.”\textsuperscript{9} In April 1999, shortly following the conclusion of the session, a special interim committee convened the North Dakota Roundtable on Higher Education to complete the study. The chair and co-chair were the Senate Appropriations Committee chair and the leader of the majority party in the House, respectively. Because it was initiated by the legislature, the legislature wanted one member from each chamber to form the leadership team.

This Roundtable was composed of 61 members: 21 members were appointed by the legislature from their membership, and 40 additional members representing different segments of the state were selected by the Roundtable chairs in consultation with the NDUS leadership.\textsuperscript{10} In selecting the members from the private sector, the chairs of the Roundtable requested various state and local business groups to submit names of leaders in the state who widely respected and would openly and candidly contribute to the Roundtable discussion.\textsuperscript{11} More than 150 names were recommended; in deciding whom to appoint, consideration was given to multiple recommendations and geographic and

\textsuperscript{8} Quote from an interview with a ND legislator and study participant.
\textsuperscript{10} While there has been some limited fluctuation in members, the actual membership has remained fairly stable over the years. Members are drawn from the state legislature, state government, North Dakota State Board of Higher Education, business and industry, and higher education institutions, including representation from students and private and tribal colleges.
\textsuperscript{11} For the purposes of this report and using the vocabulary of the Roundtable, the private sector includes those members who are neither representatives of the state government or the higher education sector; typically, the members come from business, industry, and nongovernmental organizations.
demographic representation. As for the higher education sector, all members of the North Dakota State Board of Higher Education were included, as well as presidents of four institutions representing the various institutional types.\textsuperscript{12} This collection of leaders from government, postsecondary education, and business and industry initially met during late 1999 and early 2000.

By the admission of 80 percent of the participants interviewed, the initial meeting began in a climate of skeptical optimism. As one participant stated, “It was clear that change was needed, and I know many of us were happy to participate, but we had all seen earlier attempts at reform fail to bring about change. I think we all were wondering if this process was going to be any different.” But it was different. And an overwhelming consensus from participants suggests four primary reasons why: 1) strong leadership; 2) meaningful use of data; 3) a focus on the needs of the state; and 4) participation from business and industry.

The Roundtable followed a basic change model of presenting the current reality, establishing a vision for the future, and developing strategies to achieve that new vision. The first meeting of the Roundtable focused on the current reality facing the state of North Dakota. Invited experts provided members with information about state and national demographic shifts, economic predictions, social realities, university system challenges and opportunities, and workforce development trends. Once the group distilled the information, they were charged with envisioning a new future for the state, and developing expectations for all of the stakeholders, including the university system, legislative and executive branches of the government, and the private sector.

The development of the vision began with the initial discussion following this presentation. Using the data from this discussion, the leaders of the Roundtable divided the expressed concerns and expectations into six groups, which eventually developed into “the cornerstones.” The Roundtable membership was divided into six task forces to further define and develop goals, action steps, and accountability measures for each cornerstone. The product from each of these task forces eventually became the foundation for the final report.

In June 2000 the Roundtable issued a report, \textit{A North Dakota University System for a 21st Century}, to guide reform efforts and the implementation of a new public agenda for the state.\textsuperscript{13} The report defined the role of higher education in achieving that public agenda, assigned responsibilities to the different stakeholders, and identified “a reasonable number of University System accountability measures to replace the extensive, and often conflicting, accountability measures currently being applied”.\textsuperscript{14}

\textsuperscript{12} They selected the two presidents from the major research universities and a representative from the two-year colleges and the four-year comprehensive universities.
\textsuperscript{13} The report can be accessed at http://www.ndus.nodak.edu/Upload/allfile.asp?id=332&tbl=MultiUse.
\textsuperscript{14} (Linking North Dakota and the University System, 2003).
During the first annual meeting of the Roundtable in 2001, the membership mostly divided into the original task forces to discuss progress and concerns. While this structure ensured that each cornerstone received appropriate review, there was no venue for the members of the Roundtable to engage in broader dialogue about the original vision or to solicit input from members of other taskforces. Following the suggestion of members of the private sector, subsequent annual meetings hosted panels of legislators and business and industry leaders to more broadly discuss the Roundtable vision and the progress being made toward its realization.

Part 2
Redefining the Compact

An important aspect of creating a sustainable agenda proved to be redefining the compact between state government and higher education and then expanding that compact to include business and industry. During the initial meeting of the Roundtable in 1999, the co-chairs requested that “all parties to the relationship... change their behaviors and methods of doing business in important ways.” From the outset, Senator David Nething, chair of the Interim Study Committee and the Roundtable, acknowledged that the members each represented different segments of the state but asked them to “discard any personal or special interest or agenda [they] may have had and come to [the Roundtable] with an open mind, uncluttered with any preconceived notions, examine the more important trends and forces, have meaningful discussions, and participate freely and openly as we set about to accomplish our mission”.15

Nething’s intent was to redefine the relationship among the sectors; to reorient the dialogue from what was wrong to what was possible. His was a deceptively simple request that fostered the mind shift necessary to create a truly new vision for the state. He further stressed that members of the Roundtable had a responsibility to consider and improve the future of the entire state and to help other leaders understand the value of the higher education sector in “promoting the expansion and diversification of the state’s economy, and enhancing the quality of life of the citizens of the state.”16 A year later, when reflecting upon the meeting, then University System Vice-Chancellor of Strategic Planning Eddie Dunn, reported that Nething’s charge to the members was, indeed, what actually happened: “The members of the group didn’t start by talking about higher education. They talked about the needs of the state, the needs of the

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students, and so on. And then the conversation went to what is the role of the university system in addressing these challenges and opportunities?\textsuperscript{17}

This truly collaborative, state-focused tone-setting was important for the success of the Roundtable, particularly given the history of previous interactions between the state and the higher education sector. In a 1985 white paper, John Richardson, the Commissioner of Higher Education, summarized the nature of the ongoing debate between higher education and the legislature through the time of his writing and into the future, until the time of the Roundtable:

We have come to recognize this very basic fact: North Dakota’s past ways of tossing around higher education problems and solutions have not worked. For example, what typically happens when higher education complains, as we often do, about the problem of underfunding? Our critics cry, “Waste, inefficiency, too-high salaries,” and other charges. We shout back about overwork, national markets for faculty and staff, deteriorating facilities, rising costs of equipment and books, and so on. What progress have we made? [sic] The pattern of complaining, blaming, criticizing, denying, proposing, and defending have not made you, me, or our supporting publics much more comfortable with our higher education system.... It is time for a new kind of conversation and action.\textsuperscript{18}

Indeed, the Roundtable report called on the university system to “cease thinking of itself as a ward of the state and to take greater responsibility for its own future.” It suggested that the state government “free up and unleash the potential” of the system by giving the university greater flexibility in establishing budgets and allocating resources, including providing new financial support; and that the private sector create mutually beneficial partnerships to aid in the development of the “next generation of North Dakota’s entrepreneurs.”\textsuperscript{19}

Resulting from this repositioning of the higher education-legislature relationship, one of the driving concepts of the Roundtable agenda was termed “flexibility with accountability.” This phrase captured the state government’s willingness to grant the university more flexibility in how they managed their funds, and in return the system agreed to monitor and report regularly on 23 key performance indicators meant to measure progress in achieving the new agenda.

Roger Rierson, CEO of one of the state’s major marketing firms (Flint Communications) and a member of the Roundtable, summarized the sentiments expressed by most of the participants interviewed as part of this study: “The


\textsuperscript{19} Roundtable for the North Dakota Legislative Council Interim Committee on Higher Education, p.6
Roundtable is more than the words in a report, it represents a shift in mindset in how the public views the role of the university system in the state’s future and how the university system views its role in supporting the state’s future.\textsuperscript{20}

The Roundtable process was more than just another government exercise to design new accountability measures; the Roundtable altered the nature of the relationship between the higher education system, its institutions and the state government. The 2000 Roundtable report triggered a major shift in the state that affected many individuals, from faculty to private-sector leaders to the governor. The state agreed to give the higher education system more flexibility in how it dealt with its budget, including more control over tuition setting and carry-forward funds. The institutions began realigning their planning initiatives with the new goals of the Roundtable which resulted in enhanced educational excellence, as well as growth in the state economy.\textsuperscript{21} Moreover, private-sector members increased their partnerships with the colleges and universities and many times came to the defense of higher education when state politicians questioned the value of the Roundtable agenda or the university system’s contribution to the state.\textsuperscript{22}

\textbf{Part 3}

\textbf{Factors for Creating and Sustaining the Vision}

Merely creating and convening special meetings does not guarantee change. Numerous examples exist among state governments of special meetings, consultations, studies, and reports that exert very little influence on the higher education system, public policy, or governmental operations. In part, influence of such efforts is limited as many of these endeavors tend to provide an unsustainable call for change or are merely meant to present the allusion of “doing something” without any consideration for inducing real change. A problem is identified, a group convened, a report written, and there the momentum dies.

This is no less true in North Dakota’s history, which over the two decades prior to the

\begin{itemize}
  \item Use data, not anecdotes
  \item State-focused agenda
  \item Strong leadership
  \item Business-Industry engagement
  \item Diversify membership
  \item Simplify the message
  \item Engage the press
  \item Link the vision to planning
    \begin{itemize}
      \item System
      \item Institutional
      \item Regional
    \end{itemize}
\end{itemize}

\textsuperscript{20} Presentation given to the Higher Learning Commission on April 3, 2006.
\textsuperscript{21} For an analysis of the economic impact of the NDUS system and the Roundtable initiatives on the ND economy see Leistriz, F.L. and Coon, R.C. (2007). \textit{Economic Impact of the North Dakota University System}. North Dakota State University: Fargo, ND.
\textsuperscript{22} In many ways, this critical role of the private sector is only now being recognized by other states. During a 2007 gathering of business leaders convened by the Conference Board, a nonprofit group that conducts research about the business sector, participants were told that if they wanted education to provide better workers they need to stop blaming institutions and use their bully pulpit to lobby state and national lawmakers for reform on issues important to educators, not just those policies that directly impact business.
Roundtable had at least three special reports written by the Legislative Studies Council and two special studies funded by the Bush Foundation. Yet as many of the interview participants indicated, while some change had occurred in the past (such as the creation of the university system itself, a structural change that is less difficult than the change in mindset aimed for by the Roundtable), the relationship with the legislature remained antagonistic and the value of the higher education system continued to be questioned by legislators and the members of the general public.\(^2\)

In the Roundtable process, once the collaborative, results-oriented tone was set, charge given, and data presented, participants engaged in a discussion about what a positive vision for the state would look like and what could be done to support the higher education system's ability to provide a substantial contribution to that vision. Out of this discussion evolved the six cornerstones that would end up guiding the rest of the process and become the foundation of the vision. The Roundtable membership was divided into six taskforces to develop implementation plans.

Recognizing the difficulty that generally confronts any reform movement, the original Roundtable members made “sustainability” one of the six cornerstones – moving it from a support function to a measurable, primary objective. If true change was to occur, then not only would the members of the Roundtable need to embrace the change, but so would other elected officials, institutional administrators, faculty, staff, students, and members of the general public. The sustainability planning included such initiatives as having the cornerstones guide institutional and system planning; working with the media to keep them informed of the process and responding to their questions; and coordinating institutional efforts to inform the public about successes realized from the foundation laid by the Roundtable.

**Factors Fostering a Successful Reform Effort**

The following factors were identified as helping to initiate change.

**Use of data (not anecdotes).** As part of the process, two external consultants were hired to assist with the organization of the group and to facilitate the ensuing dialogue.\(^2\) In addition, the consultants provided the members with an overview of national and state-level economic, educational, and demographic trends and predictions. The use of credible data helped move general beliefs and speculation about the state’s possible future into a solid understanding of current trends and likely future reality and served as a “wake-up call” for many of the Roundtable’s members. The presentation of this information helped create


\(^{24}\) The consultants were Dennis Jones, President, National Center for Higher Education Management Systems, Boulder, Colorado, and Charles Schwahn, Schwahn Leadership Associates, Custer, South Dakota.
a policy agenda that responded to the state’s needs as determined by data, not anecdotes.

**State-focused agenda.** From the outset, the co-chairs and the external consultants worked to focus the attention of the Roundtable on the needs and future of the state rather than the needs of the university system. In fact, the first meeting of the Roundtable barely discussed higher education. The Roundtable members were presented with state and national economic and demographic trends and then were asked to create a new vision for the state. Only after the group created a vision for the state did they begin to discuss the role of the higher education – and then the discussion focused on how the higher education sector could help achieve the vision for the state.

**Strong leadership.** From the outset, the leadership of the group made it clear that the Roundtable would be different from past legislatively mandated studies. The individuals selected to lead the Roundtable held great influence within the legislative chambers and throughout the state. Because of this influence, not only were Roundtable leaders able to solicit assistance from a wide range of individuals representing varied interests throughout the state, but they also set the overall focus and tenor of the group. The Roundtable leadership was action-oriented. Whereas previous studies on higher education focused on identifying and trying to fix those things that were perceived as wrong or “broken” (such as funding), it was apparent from the outset that these issues would not be a part of the Roundtable’s discussions. The Roundtable was literally creating a new public agenda for the state and gave higher education the flexibility it needed to aid in achieving that vision.

**Business-Industry engagement.** Participation by business and industry representatives was critical for success, particularly in the early days of the Roundtable, as it altered the very nature of the discussion and subsequent policy action. Business and industry, as a third party, was able to validate concerns and needs raised by both higher education and government leaders. For example, the business and industry members promoted the value of a high-quality higher education system – not just in terms of workforce development but also for making the state an attractive place for companies to locate and for people to live. Further, business-industry sector pushed the legislature to allow the system more flexibility in order to unleash its creative power and was able to cite the importance of such flexibility from their own experiences. However, the private sector also argued that, in return for the enhanced flexibility, the university system should be expected to account for their efforts in achieving the agenda laid out by the Roundtable. Had the conversation simply been between government and higher education officials, it is likely that the concerns and requests of the higher education officials would have been dismissed as self-interested. It is also likely that higher education would have continued to rebuke calls for accountability as an intrusion on institutional autonomy. Having a third

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25 As mentioned above, the cochairs were the Senate Appropriations Committee chair and the leader of the majority party in the House.
sector involved allowed for a different type of conversation and balanced the concerns and expectations of the other two sectors. The involvement of the business and industry, which represented several segments of the general public, also aided in the acceptance of the Roundtable report as a “public” agenda, rather than an agenda driven principally by the state government and/or the university system.

Factors for Sustaining a Public Agenda

This study revealed a number of sustainability strategies that contributed to the fact that the Roundtable movement and its new public agenda continued to be embraced by individuals and institutions throughout the state. Sustainability strategies included the following.

Diversify membership. From the beginning, the organizers of the Roundtable recognized that having key decision makers from different sectors and public opinion leaders engaged in the process would impact the long-term viability of the initiative. As discussed above, membership included leaders in the government, business, industry, and postsecondary education sectors (including students). Three important nuances are worthy of note.

- **Commitment.** The people asked to participate in the Roundtable were viewed as credible leaders in their specific sectors and as individuals who would be interested in creating a vision for the state and would engage in the execution of the plan and not just in its creation.
- **Conflict.** The chairs of the Roundtable invited both critics and proponents of the higher education sector to be involved. Since this process was to be about defining a vision for the state, not just the higher education sector, it was important to solicit input and eventually buy-in even from those most critical of the higher education sector. This engagement of varied viewpoints was successful because the leaders of the Roundtable were diligent in keeping members focused on creating a vision. At the same time, they provided an environment that was conducive to critical discussion and accepted disagreement as part of the process.
- **Widespread collaboration.** Broad representation of individuals from all areas of the state provided a wide variety of ideas and lent to the sense of local input into state goals. This inclusion of local input provided something that had been missing from previous attempts at improving higher education – broad support from all areas of the state. For example, the private-sector leaders remained active in educating government officials, the media, fellow business leaders, and the general public about the importance of the Roundtable. They could also “take it home,” meaning that private-sector leaders, who are respected in their cities and towns, were able to translate the cornerstones and state goals into something meaningful back home. Many private-sector members also provided testimony during the legislative session and were not afraid to openly express concern about decisions made by state leaders when they
believed those decisions ran contrary to the agreements put forth in the Roundtable plan.

**Simplify the message.** Several key messages and catch phrases were developed to summarize the essential nature of the new agenda. The Roundtable members were instructed to simplify their message so that it could be shared with neighbors “across the back fence.” The most prominent of these simplified messages, “flexibility with accountability,” became synonymous with the Roundtable and is often used by the media, faculty, staff, and legislators. In fact, some of the legislation related to the new public agenda is entitled “Flexibility with Accountability” legislation. While such a point may appear to be of little note in the wider discussion of creating a new public agenda, this particular activity (and it is not even clear that it was initially purposeful) was critical for helping a wide range of stakeholders understand the nature of the plan, its impact on the state, and the benefit for its continuation.

**Engage the press.** From the outset, it was important to work with the media to keep them informed about the process, solicit feedback (through representation on the Roundtable), and address their questions and concerns about the report. To be most effective, members of the Roundtable with media experience had to consider their involvement (or role) not simply as an opportunity to obtain intimate details for reporting purposes; rather, the press’s role was similar to that of other roundtable participants – to lend ideas and influence to the process for the betterment of the state, its citizens, and future prosperity. Simply put, Senator Nething’s request to cast away preconceived ideas applied to Roundtable members from the press as much as it did any other members. But even members of the press who were not on the roundtable were willing to accept the premise.

In North Dakota, four major newspapers in the state wield great influence over public opinion, and their interest in the process turned out to be important for communicating the Roundtable’s proposed initiatives to the wider public. In particular, the university system’s Public Affairs Council took responsibility for this cornerstone and developed an action plan, naming specific stakeholders who should be informed of the Roundtable’s agenda and creating the key messages to communicate to those stakeholders. Some of the more significant aspects of this plan included meeting with the editorial boards of the four major newspapers in the state; having key members of the Roundtable (e.g., chancellor, board president, and private-sector leaders) write op-ed pieces to be published in the papers; and coordinating the messages being sent by the 11 campuses in the system.

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27 The Public Affairs Council is comprised of the public relations officers from each of the NDUS institutions and representatives from the NDUS office.
This work proved important for garnering support, not just from the media but from the broader public. In fact, a review of media coverage revealed that while the press was quick to criticize the North Dakota State Board of Higher Education – which serves as both the governing and coordinating board for the state’s public colleges and universities – as well as the higher education system prior to the Roundtable, the post-Roundtable press tends to defend the Roundtable and the higher education system. Prior to the Roundtable, it was not uncommon to see editorials with titles like “Basic Governance of Higher Education Needs an Overhaul,” “Don’t look for malice [in SBHE members] when stupidity will do,” “Arrest the State Board of Higher Education,” “[Governor] Schaefer to board: Change,” or “State’s higher ed climate part [of decision to leave], NDSU president says.” According to most of the individuals interviewed, since the Roundtable began, the media, while at times still critical about certain issues, has become much more positive and supportive of the Roundtable’s efforts. Following the Roundtable, articles with titles like “Higher Ed Roundtable Got It Right,” “Add ‘College’ to Basket of N.D. Goods,” and “Town and University Connections Complement Each Other” have become more common. As one long-time member of the North Dakota press corps stated, “Following the Roundtable, there was a clear shift in how the universities related to the state, and the successes of the new flexible environment was clear – we saw it every week in our reporting.”

In fact, when legislators began criticizing the Roundtable initiatives during the 2005 and 2007 legislative session, many opinion leaders in the state responded with written defenses of the Roundtable, labeling it one of the state’s great successes. For example, in a March 13, 2005, Grand Forks Herald editorial called, “Legislature Threatens Higher Ed,” the editorial board defended the Roundtable approach:

Bullying could destroy the “roundtable” approach in favor of a discredited way to fund the state’s colleges.... Leadership in the North Dakota House of Representatives has issued an ultimatum that threatens the state’s higher education system.... This is such a misguided and dangerous notion that it will require restraint to discuss it. At the outset, however, it must be clear that...this...is a threat...to the entire university system.30

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A year late, in defending criticism about the level of flexibility given the university system, a March 26, 2006, *Fargo Forum* editorial stated,

Higher education in North Dakota is at a crossroads because of the unprecedented progress made in the last few years at the two big research universities.... Decisions made today about the future of higher education will determine if that progress will continue at a pace to keep North Dakota campuses competitive on the national scene.31

**Link the vision to system and institutional planning.** To align the system and the institutions with the new agenda, higher education leaders recognized that the agenda needed to be integrated into system and institutional planning. The Roundtable report recommended that the university system should have “intellectual capacity and programs aligned with the needs of the state.”32 To achieve this goal, the Roundtable recommended that “each institution within the NDUS systematically review its mission and strategic initiatives and take steps to align them with the vision and expectations agreed upon by the Roundtable participants. The vision and expectations should serve as a ‘driving force’ at each level of the university system.”33 The State Board of Higher Education and university system leaders accepted this premise and worked to move the Roundtable vision from the state level to the institution and department level. Shortly after the issuance of the Roundtable report, the university system began to revise reporting, planning, and budgeting systems to align with the goals of the Roundtable. Now, reporting requirements, such as annual reports, and even requests for new academic programs, are required to align with the cornerstones: if the English Department, for example, desires to add a new academic program, it must justify how that program helps achieve the agenda set forth by the Roundtable.

The oil-and-gas-industry programs at Williston State College and the bachelor’s degree in entrepreneurship at the University of North Dakota are a direct response to the workforce development needs of the western part of the state, as well as an example of how the Roundtable conceived of the university system supporting the economic development efforts of the state – in these cases the development of workers for the oil industry and the enhancement of innovative business leaders, respectively.

In addition, the system office now requires each campus to maintain an alignment plan and submit annual updates for approval by the state board. According to the system office, “Campus alignment plans are intended to: 1)
document and demonstrate the direct connection between the campuses and the six cornerstones outlined in the Report of the Roundtable; 2) provide a mechanism to help drive the desired changes expressed by the members of the Roundtable and the North Dakota Legislative Assembly; and 3) provide a means for determining and measuring progress toward expectations of the Roundtable and developing a university system that has intellectual capacity and programs aligned with the needs of the state.” The purpose of these plans is to ensure that each institution’s priorities and planning connect with the direction of the Roundtable. Further, while not mandated, some of the institutions use the alignment plans to guide department-level planning. For example, at the University of North Dakota, all departments are now required to submit their annual reports in a format that justifies how the department’s achievements help fulfill the Roundtable cornerstones.

Link the vision to regional planning. While not mandated, one area of the state opted to create a regional roundtable after witnessing the success of the state-level roundtable. The creation of a regional roundtable allowed for the Valley City region to mirror the success of the Roundtable by uniting stakeholders from multiple sectors and tying their efforts to the specific needs of their region. According to its director, the Valley Development Group Roundtable was formed “to further grow [the region’s] strategic partnership with Valley City State University…. The Roundtable…addresses how [regional officials] and corporate leaders can capitalize on Valley City State University's strengths to forge exciting new business development strategies and services and work together for mutual benefit.” Creating a regional implementation of the broader state agenda helped to strengthen “the buy in of local city officials, business leaders, and state legislators,” according to one interview participant. It also provided opportunity to create new and strengthen existing linkages between Valley City State University and regional government and business leaders. This effort was not a formal extension of the state-level roundtable but rather an outgrowth of and eventually a contributor to regional progress toward implementing the vision of the Roundtable. This is not to argue that the state roundtable should be regionalized – the power of the North Dakota roundtable was that it created and pursues a statewide vision; however, regional roundtables can translate the state vision into regional imperatives and create broader buy-in for the state vision.

Part 4
Challenges to Sustaining the Agenda

The Roundtable and its agenda have continued for more than seven years. This is remarkable given that the Roundtable itself is a temporary creation that must be reauthorized each legislative session. In fact, the original Roundtable group was meant to be a study council designed to produce a report to advise future legislative action. As such, no provision was made in the chartering legislation

for any continued role, neither for the Roundtable following the issuance of the initial report nor for the replacement of members. However, the widespread acceptance of the report, including by both the university system and the private sector has led to subsequent legislative reauthorizations of the use of the Roundtable.

More recently, some legislators have begun to question whether the need for the Roundtable still exists or if the Roundtable process might be employed more effectively. For example, there was legislative pressure to exclude business and industry representatives and higher education leaders from Interim Higher Education Study Committee during the 2007 session. In general, interview participants expressed four overarching concerns about the Roundtable. First, there is some question about whether the reauthorized Roundtables have produced any substantive new products (e.g., legislation, policies, or reports). It is true that the most significant products came from the first Roundtable, namely the Roundtable Report and the original flexibility with accountability legislation; however, the Roundtable’s ongoing success seems to depend on perspective. As one interview participant stated, “Success depends on how you define the Roundtable. Has the Roundtable continued to produce new reports? Not really. But it helped foster a new environment that has allowed the university system to be more successful and productive than ever before. If success can be defined as working to sustain that new environment, then I would say it has been successful.” Thus, the ongoing existence of the Roundtable has helped to ensure that the public agenda for higher education that it helped to define, and which the state has embraced, has remained the guiding force behind decision making, rather than allowing decision making to devolve into the sum of competing interests.

Further, even though the membership has evolved, primarily due to job turnover, the membership has been stable over the course of its existence. While such static membership has provided some stability to the structure, many interview participants also expressed concern that the lack of new ideas and new blood could be detrimental to long-term usefulness of the Roundtable and that systematic methods for bringing new members with new ideas onto the Roundtable should be considered.

Many interview participants suggested that, had they the opportunity to start the process again, they would make the Roundtable a permanent entity with a review and monitoring function, as well as create a set of guidelines for determining membership and bringing new members onto the Roundtable. As of the writing of this report, the Roundtable’s original vision has continued to guide the higher education system and receive significant support from the private sector and the press. However, several structural and political obstacles may have diluted the influence of the Roundtable more recently, raising the question as to whether there is a need to revisit and revise the Roundtable’s vision. A discussion of obstacles follows.
Loss of a historical understanding. One of the primary objectives of the originators of the Roundtable was to create a group inclusive of a diversity of opinions, backgrounds, and networks. Further, the Roundtable report clearly indicated the need for sustaining the vision and several successful initiatives were created to communicate the need and importance of the new public agenda to stakeholders throughout the state. As discussed above, there has been great effort to influence key opinion leaders and press coverage about the various institutional initiatives has been distributed to legislators. While sustainability efforts have focused on chronicling the enhanced productivity and innovation of the university system, little effort has been put toward reminding or educating people that these successes are only possible in the environment of trust and common purpose fostered by the Roundtable vision.

As time has passed, there has been less and less of a focus on helping people understand the reason for the Roundtable and its role in creating change. What is it? Why was change needed? Why does it continue to be important? This leads new and some senior state leaders to question why the Roundtable and the agreements made as part of the Roundtable are needed to sustain the new results. Yet, every president who participated in the study and was working in the university system prior to the Roundtable indicated that the pre-Roundtable environment simply did not allow for innovation. As one university president stated, “It was a six-month process just to request moving money from the pen budget to the pencil budget. While we always had ideas for new projects, if the money was not allocated in the original biennium budget, the new ideas would die on the branch because it wasn’t worth the effort to request a reallocation in the budget.”

Structure. Being an annually reauthorized committee of the interim legislative council creates certain scenarios that can make it more difficult to sustain the agenda. For example, the Roundtable has tended to follow the prescribed legislative calendar and format. As noted by several of the interview participants in all sectors, regular meetings and ongoing involvement of Roundtable members is important to keep people energized and involved. In the current structure, meeting once a year may not produce the kind of regular contact and involvement that is needed.

Lack of membership guidelines. As the Roundtable was initially created for a one-time study of the higher education system, no provision was made for the selection, succession, or replacement of members. The leaders of the initial Roundtable selected the original 61 members to represent various educational, governmental, and business segments within North Dakota. As successive legislatures continued the authorization of the Roundtable, the membership was sustained over time, with turnover being limited to people leaving and assuming new professional roles (e.g., chancellor, legislator, or CEO). Two issues arose through the interviews. First, many respondents indicated that they believed the opportunity to engage new members or rotate out old members would have further aided in sustaining the agenda by helping new leaders gain an appreciation of the process and introducing new ideas into the process. Second,
many people suggested that the size of the Roundtable presented the possibility of it becoming unwieldy. Yet the use of task forces within the Roundtable helped to focus the attention of the groups and provide opportunity for all members to contribute to the creation of the Roundtable report. Consideration should be given to balancing the need to involve a wide array of stakeholders against the desire to have a group small enough to be functional.

**Control vs. accountability debate.** One of the substantive issues of continuing debate is the amount of accountability that should be required of the university system and its institutions. As part of the Roundtable process, the legislature agreed to end a decades-old policy of strict financial control over institutional budgets. In return, the system was required to monitor and report on a series of accountability measures. The interview participants divided into three groups.

- **Accountability is adequate.** All higher education representatives expressed a general happiness with the flexibility-accountability balance. University presidents, in particular those who had been in office prior to the Roundtable, greatly valued the financial flexibility received after the Roundtable and cited it as a fundamental reason for institutional successes achieved in the past seven years. In return, they had little concern about accounting for institutional efforts. There were also a number of legislators that believed the current system contained significant measures to ensure accountability.

- **Accountability is excessive.** The entire private sector expressed concern over the “excessive” reporting requirements that were a part of the Roundtable. They understood the value of the flexibility given institutions and acknowledged the need for accountability systems. Based on their experience in business, they believed it more effective to track a “handful of key indicators,” rather than requiring institutions to exert time tracking a range of indicators that do not necessarily contribute to long-term performance.

- **Accountability is insufficient.** The elected state leaders were divided between those who believed the system to be an effective balance of flexibility and accountability and those that believed that too much flexibility had been given to the institutions. This latter group of individuals seemed concerned about the loss of control once held by the legislature and desired increased levels of accountability, even though it is the strategic realignment of accountability that has been cited by members of the Roundtable and others as the source of the Roundtable’s success in achieving its vision of and the systems’ ability to better respond to needs of the state.

35 An example of the system’s accountability report can be found at http://www.ndus.edu/reports/default.asp?ID=355.
Dealing with political and academic turnover. The nature of both the political and academic environments is one of continual change in leadership. Politicians retire or fail to gain re-election. A new governor causes a significant turnover in the leadership of the bureaucracy. State board members change based on term of office and interest of the governor. Institutional presidents retire or take new jobs.

The issue of leadership turnover is less a stated concern than an observed reality. The Roundtable vision has been sustained through significant turnover in both the academic and political sectors. In part, the obstacles created by turnover were diminished because some key positions were filled by people who participated in and understood the Roundtable process. For example, six months after the writing of the initial Roundtable report, a new governor was elected. In this case, the new governor, John Hoeven, had been a member of the Roundtable and continued his support via his new office. Further, the immediate past system chancellor, Eddie Dunn, was charged with administrative responsibility for the Roundtable during its first five years of existence, while he served as vice chancellor for strategic planning. A list of other significant transitions can be found in the box on the left.

The turnover within the university system has not been as problematic as that outside of the system. As one senior system leader recalled, “Coming into the system, I was very excited about the Roundtable and the role it played in creating a new public agenda. It would have been hard not to embrace it. The system staff, institution heads, the board [of higher education], and the public all embraced the initiative, and it was clear that it was what was guiding system planning.”

Part 5
Suggestions for Sustaining a Public Agenda

While not all states face the same demographic and economic conditions as North Dakota, the creation of structures and processes similar to the Roundtable could benefit other states in engaging and sustaining reform efforts that create a public agenda for the state. Such structures can serve to protect reform initiatives from the forces associated with the turnover that is often prevalent in political and academic settings. The findings from this study suggest six key actions are foundational to sustaining reform efforts:
Review and define the compact. Engage key stakeholders. Create clarity and assign responsibility. Make the plan relevant. Communicate the agenda and its successes. Reinforce the agenda through integration.

These six actions and related implementation strategies are distilled from the wide range of documentary data and interviews collected as part of this study and are intended as general guidelines to aid states in creating structures to sustain reform efforts.

**Review and define the compact.** Understanding the current and historic relationship between the state government and higher education, as well as assessing how the general public regards the state’s higher education sector is crucial for creating a report that is sustainable over time. In the case of North Dakota, the redefined compact between the state legislature, higher education, and business and industry served as the foundation on which the report was based and served to create positive forward momentum for implementing the public agenda.

**Engage stakeholders.** The second component for creating a sustainable agenda is engaging stakeholders—not merely listening to them. Creation of the Roundtable provided the forum for stakeholders to inform and participate in the reform dialogue, which allowed them to “own” the vision and individually want to work to support it. Previous efforts allowed for stakeholders to provide testimony but not engage in discussion or form recommendations. As such, there was little support by external stakeholders. The forum used to initiate and derive the reform agenda should allow stakeholders to engage in discussion and be free to air disagreements and address concerns.

**Create clarity and assign responsibility.** The third component for sustaining reform is clearly defining the components of the plan, assigning responsibility for completion of those components, and defining appropriate accountability measures. Actors should be held accountable for achieving the vision but allowed the flexibility to determine how best to reach that achievement. In addition, the directives described in the plan can be used to demonstrate to the public the extent to which different sectors are fulfilling their assigned areas of responsibility.

*Define the components of the agenda.* To guide the development of the reform effort, a document articulating its goals and required action steps should be produced.

*Assign responsibility for completing the components.* In addition to defining the goals, the document should assign the responsibility for their...
completion to the appropriate individuals, associations, organizations, or sectors.

**Hold multiple stakeholders responsible.** Responsibility for implementing and overseeing the reform efforts should be assigned to all sectors. Successful reform requires a partnership of government, business and industry, and higher education. Each partner needs to be aware that they are part of a larger effort and that they will benefit from and need to support the work of the other.

**Allow flexibility, expect accountability.** The public expects its elected representatives to hold its public bureaucracies, including colleges and universities, accountable for helping to achieve state goals. The creation of a coherent public agenda makes this easier as it provides a definition of what the public should expect from its higher education institutions; however, accountability should not be viewed as synonymous with control. One of the crucial arguments made by the private sector during the Roundtable planning meetings was that organizations (whether they be public bureaucracies or private firms) hire professionals who have the requisite knowledge and skills to most effectively achieve organizational goals. Thus, the state government should allow the higher education system and its institutions appropriate flexibility to allow them to determine how best to achieve the goals put forth in the agenda, all the while requiring the system to measure key performance indicators to insure that the goals are being met.

**Meet regularly.** Regular meetings (twice a year or more) keep members focused on the plan and can ensure that individuals are held accountable for its execution. Further, continuing the involvement of stakeholders allows for them to ensure that the reform efforts remain relevant to various sectors. These meetings can be composed of the entire group or subgroups organized by region, sector, or task. Indeed, many members of the private sector believed that regular meetings were important for demonstrating the state’s commitment to the plan and expressed concern that as the Roundtable aged, meetings became more irregular and attention began to wane.

**Make the plan relevant.** The fourth component needed to sustain a reform effort is to ensure that the plan is relevant not only to the members of the Roundtable but also to higher education institutions and their faculty and staff, as well as to local communities and families. In order to garner widespread buy-in (and support), the people of the state need to believe the reform efforts affect them, their families, and their communities in positive ways.

Creating relevancy takes more than simply writing proposals focused on citizens. People need to understand how the agenda affects their lives. The following are suggestions for creating and communicating a relevant plan.
Focus on the future. Attempts to confront the past can often impede planning for the future. Efforts should be taken to identify and remove from the table topics of major debate that dominated past discussions but did not result in progress. Instead, the focus of the planning should be to determine future needs, steps for addressing those needs, resources to achieve those steps, and methods for holding partners accountable.

Create a state agenda, not a higher education agenda. The reform effort should start by considering the future of the postsecondary sector in the context of state needs and trends. Relevancy can come from focusing on creating policies and structures that foster and sustain economic prosperity and improved quality of life for the citizens of the state. Focusing on the state level shifted the discussion from how the state could support higher education, to how higher education could support the state. This helped legislators recognize the importance of the higher education sector to the state and made it easier for them to talk about funding because they could more readily see how an investment in higher education benefited the state.

Communicate the plan and its successes. The fifth component for sustaining the reform effort is to communicate to the public and the legislature the plan and the successes that emanate from its implementation. The importance of this step is often overlooked; but any statewide reform effort needs the buy-in and support of leaders from across the state and from a wide range of sectors. Merely producing a report will not achieve such support. It is important to note that the development of a communications plan is important for delivering the agenda defined by the leaders, not for “spinning” or political maneuvering. Sustaining any change, regardless of the size of the organization or system, requires a well-defined and well-executed communications plan.

While it is true that creating and sustaining change throughout an entire state can be more challenging than doing so within a single office or an institution of higher education, the three basic rules for effective organizational communication remain the same: create a simple message; repeat that message; and use multiple forms of communication.

Create simple messages. The core of the plan needs to be distilled into three to five key messages that can be easily consumed by the public and incorporated into written and oral communications. For example, the Roundtable report was summarized with several simple messages, such as “flexibility with accountability,” “unleashing the entrepreneurial spirit of the university system,” and “contributing to the economic vitality of the state.”

Repeat the messages. Communicating these messages through a report, in testimony at a committee hearing, or in an open letter to the editor of a major newspaper may receive some attention, but it is not likely to elicit the widespread support to sustain the messages. The messages need to
be repeated to the public, to legislators, and to members of the higher education community at every opportunity. Not only do these stakeholders need to understand the existence of the reform effort, but they must be able to summarize and talk about the primary components of that new agenda. And while the constant repetition may seem awkward, people need to hear messages multiple times before they fully embrace them.

*Use multiple media forms to communicate.* When considering an entity as large, complex, and diffuse as an entire state, there is no way to reach all stakeholders without using multiple forms of communication. The report serves as a foundation for the entire agenda and may be of interest to individuals looking for more information; however, not many people are going to read the report without first recognizing its importance. The many ways to communicate the messages include but are not limited to: testimony at legislative hearings, writing letters to the editor, institutional or system press releases, institutional or system reports, speeches given by members of the roundtable to various internal and external groups, and so forth.

*Engage the press.* One of the most important components to success, and one often overlooked and therefore worthy of further mention, is the engagement of the print media. Such outlets often hold a great deal of sway over public opinion and can be very helpful in garnering widespread buy-in for any reform effort. Members of the initiative should consider meeting with editorial boards and other opinion leaders to discuss with them the purpose of the group and importance of the reform.

*Communicate results.* Once the reforms are implemented and successes begin to occur, it is important to communicate those results to the stakeholders so that they know the worth of the reform. It cannot simply be assumed that stakeholders will take for granted that the new agenda will yield success. Without reinforcement, it is very possible that individuals will desire to return to the previous way of doing business. For example, while the North Dakota University System produced an annual accountability report that chronicled the progress made in the agreed-upon key performance indicators, great effort was also put into using media reports and other public information to tell the story of the Roundtable. Even with all of this effort, some legislators indicated they were not sure of what successes had materialized from the efforts of the Roundtable. Stakeholders want to see not just how well the system is performing, but also how the new initiative affects their region and its citizens.

*Reinforce the agenda through integration.* The sixth component, and the one that best ensures sustainability, is to integrate the plan into the academic and political systems. Each state will have its own set of systems in which the
agenda will need to be integrated; however, such integration is paramount to ensure sustainability through political and academic leadership transitions.

*Create a structure that can guide and monitor the agenda.* Sustainability requires the existence of a structure that can guide and monitor the reform efforts.\(^36\) This entity should be a continuing group that is not attached to a particular governor or other political entity. The Roundtable has been fortunate to be reauthorized during each legislative session; however, there is no guarantee that this will continue. While the Roundtable’s agenda has been integrated throughout several planning and organizational systems in the state, this integration would not have been possible had the Roundtable not had a continuous presence for at least four to five years. It should be noted that such a structure may not have to be exclusively focused on the higher education sector’s role in achieving the public agenda. While it is beyond the scope of the data collected in this project, it is possible that pre-K-16 councils or economic development councils could also serve this structural role.

*Engage and educate new leaders.* The strength of the Roundtable is that it is a formal structure that transcends the governor, legislators, political parties, and university presidents and can sustain itself over several years. This has proven true by the initiative’s resilience, despite significant turnover in leadership positions. However, criticism continues to arise from individuals who were not a part of the Roundtable, particularly those who were not in leadership positions during its creation. While not all criticism can be calmed through discussion, it is important to keep the people informed about why the Roundtable was created and its role in creating the public agenda. This could include covering the topic during legislative and new employee orientation programs, creating easily digestible communications about the history and successes, and rotating roundtable membership to involve new and different perspectives.

*Link the new agenda to system and institutional planning.* Make the agenda part of the planning process at both the institutional and system level. For example, new program requests must demonstrate value using the components of the agenda. Further, linking annual reporting requirements with expectations of the agenda provides a regular forum for institutions to evaluate the extent to which organizational goals align with the new vision. This reinforces the importance of the agenda and demonstrates to both internal and external stakeholders how it guides organizational decision making.

*Link the agenda to regional planning.* One of the key components of creating a new public agenda is making it a statewide vision, not a higher education vision. As such, this allows for integrating the agenda into

\(^{36}\) The Blue Ribbon report on Higher Education from the NCSL recommends the need for structures such as this.
systems that are not directly part of the higher education sector. For example, one area of North Dakota created its own Roundtable to develop a regional plan. Those associated with both Roundtables attested to the regional Roundtable’s ability to create buy-in from local legislators, business leaders, and city government officials for the state Roundtable. Other states may consider the creation of regional roundtables to help implement the public agenda and foster wider support from stakeholders.

**Summary**

This report analyzes a case study of the North Dakota Higher Education Roundtable in order to understand the nature of its success and distill suggestions to guide other states seeking to implement a sustainable public agenda. The focus of the report centered on suggestions for sustainability; however, there are two other critical components that should also be mentioned. First, the Roundtable worked to redefine the public compact: that is, the nature of the relationship among higher education, the state legislature, and business and industry. Second, the Roundtable issued a written agenda to guide future decision-making processes that related to higher education.

The new compact and written agenda provided a solid foundation, but there were five other factors that states should consider when creating a sustainable agenda. First, the compact between the sectors (e.g., higher education, the legislature, and business and industry) should be reviewed, and the intended nature of the relationship between these sectors defined. Second, the stakeholders, particularly those from business and industry, need to be engaged in such a way that they feel ownership of the process and agenda. Third, the agenda needs to be clearly relevant to the lives of students, families, and other taxpayers. Fourth, the implementation plan should establish a clear set of goals and assign responsibility for their achievement to the appropriate stakeholders (and all stakeholders should be responsible for part of the agenda). Fifth, the agenda and its achievements need to be systematically communicated to everyone in the state. Sixth, the agenda should be integrated into planning and decision-making processes so that it is continually and systemically reinforced.

Due to the amount of effort required to create a state agenda, substantial consideration needs to be given also to how to sustain that agenda over time. The findings from this study provide states with suggestions to build their own sustainable public agenda in wide range of public policy arenas.
Appendix A

Study Methods

A two-stage small-n case study design assessed the implementation and possible impact of the North Dakota Roundtable. First, a comparative case analysis was conducted to study the impact of the Roundtable on North Dakota and its higher education system. Even though the focus is on the implementation of a single advisory body, cases are any spatially delimited phenomenon (unit) “bounded by space and time.” As such, I was able to divide the history of North Dakota higher education into two distinct temporal cases: 1) North Dakota higher education prior to the implementation of the Roundtable (1990-2000); and 2) North Dakota higher education following the implementation of the Roundtable (2000-2007).

Cases were constructed using data collected through in-depth interviews with key actors, observation of legislative meetings, and document analysis of such items as policy reports, memorandums, e-mails, legislation, media coverage, economic analysis, external reviews, consultant reports, and other relevant documents. Forty interviews were conducted with members of the Roundtable and other stakeholders, including CEOs of the largest companies in the state, a majority of public university and community college presidents, legislators, members of the North Dakota State Board of Higher Education, and university system officials.

Once the cases were constructed, comparative analysis was used to look at how the higher education system and the broader state environment had changed since the implementation of the Roundtable. The comparative case analysis is limited in that it only allows for the development of descriptive inferences – that is, the determination of how higher education changed following the implementation of the Roundtable. The descriptive inferences drawn from the comparative analysis were used in the second stage of the design to determine potential causation of the change (that is, did the implementation of the Roundtable cause the change, or was the observed change due to other conditions?). In the realm of social science, determination of causation is not absolute; however, through appropriate measures described below, probabilistic casual determination can be achieved.

The second stage of the design uses two process-tracing activities to investigate causation of the Roundtable’s creation; and the change in higher education after the Roundtable was implemented (the “change” variable was determined using the first stage of the analysis). Process tracing is “a procedure for identifying steps in a causal process leading to the outcome of a given dependent variable in a particular historical context.” It is necessary to use two different process-
tracing activities in order to not conflate causation. Even though the Roundtable was the pivotal point in the comparative analysis, it does not necessarily mean that it was the cause of any subsequent change. The use of the process-tracing step is critical, as this study is not simply interested in the impacts of the Roundtable as determined through descriptive inference but, more importantly, the causal mechanisms that allowed the Roundtable (or some other mechanisms) to create change in the state’s higher education system.

As Gerring notes, the “hallmark of process tracing...is that multiple types of evidences are employed for verification of a single inference – bits and pieces of this study that embody different units of analysis.” The advantage of process tracing in this study is that it allows for the development of long causal chains. It is unlikely that any one person or event will be the critical causal mechanism; rather, as with most social phenomena, the sequence of sufficient and necessary causal mechanisms must be determined.

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Appendix B

North Dakota Higher Education Prior to the Roundtable

Some might say the Roundtable is like the phoenix that arose out of its own ashes. To refer to the status of higher education in the state prior to the Roundtable as “ashes” is extreme and a bit misleading; but there was certainly a sense of urgency and a desire for change. In the decade prior, some significant governance reforms had transpired and the system had undertaken significant planning initiatives to transform the system’s 11 colleges and universities. Yet report after report and study after study from both external and internal stakeholders continued to paint a very similar and dire picture for both the state and the higher education system. These reports, while differing in some of their details, were very consistent in their findings:

- The state has a long commitment to education.
- The higher education institutions are important for state and regional economic, workforce, and human capital development.
- The system (and its institutions) is not structured to respond quickly enough to the changing needs of the knowledge economy, and too much duplication exists in current programs.
- The system is underfunded and the state has not sustained previous levels of funding.
- The infrastructure is deteriorating faster than it is being repaired.
- Existing funding formulas either are inadequate or are inadequately funded.

Moreover, the complaints and concerns raised by critics such as political pundits, legislators, and the general public were similar for at least the 20 years preceding the Roundtable.

- Tuition is becoming too expensive.
- Out-of-state and international students are a drain on state resources.
- There are too many institutions of higher education (or least too many academic programs) for the state to support.

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• The institutions are ill-managed, overpaying faculty and hoarding hidden pots of money.
• The higher education system is a drain on limited resources and needs to prove its worth to the state.

In a 1985 white paper, John Richardson laid out many of these issues in an attempt to leave behind the old ways and move the higher education sector forward in a positive direction:

We have come to recognize this very basic fact: North Dakota’s past ways of tossing around higher education problems and solutions have not worked. For example, what typically happens when higher education complains, as we often do, about the problem of underfunding? Our critics cry, “Waste, inefficiency, too-high salaries,” and other charges. We shout back about overwork, national markets for faculty and staff, deteriorating facilities, rising costs of equipment and books, and so on. What progress have we made??

The pattern of complaining, blaming, criticizing, denying, proposing, and defending have not made you, me, or our supporting publics much more comfortable with our higher education system.... It is time for a new kind of conversation and action.”

While Richardson’s call to action did not bring forth a change in the “relationship,” the white paper served as a call to arms. With financial assistance from the Bush Foundation, the first of the “Bush Reports” was issued. This report, Partners for Quality: Plans and Priorities for the State Board of Higher Education, initiated a significant planning process that continues to the current day. A second Bush-report, Partners for Progress was published in 1997.

Amidst the ongoing planning initiatives of the board, there remained a general level of discomfort with the system and the board, for which there appear to be three general reasons. First, in the early 1990s, the board transformed the higher education sector into a system of 11 institutions. The position of commissioner of higher education became chancellor. Under this new system, the presidents were to be no longer directly responsible to the board but to the chancellor; however, “the board still delegate[d] full authority to the institution presidents to administer their individual campuses.” Because the delegation of

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42 John Richardson served as commissioner of higher education in the 1980s and then as the first chancellor when the board created the North Dakota University System. Richardson, J.A. (1985). Preparing for the Next Century: A White Paper”. State Board of Higher Education: Bismarck, ND. p. 4.
power and the role of the chancellor were never clearly articulated, great public and private debate occurred about power and responsibility. In some cases people wondered why there was a need for both a board and a chancellor. In other cases debate occurred about the power of the presidents versus the power of the chancellor. Simply put, few were comfortable with how the system had been created.

Immediately prior to the Roundtable, the presidents of the two major research universities left under distressing circumstances. The board became unhappy with Kendall Baker, president of the University of North Dakota, over a disagreement about fiscal management decisions. The issue was not unknown to the public, yet four members of the board convened a meeting (possibly two) about the issue, which violated the open meeting laws of the state. The issue escalated to the point where Governor Ed Schaefer met with the board to express his general disappointment with their operations (columnists from across the state had been encouraging him to ask for the resignation of the entire board). About the same time, the president of North Dakota State University accepted a new presidency out of state. As he was leaving, he took the opportunity to publicly express his general disappointment with the system and his belief about the very poor future of the state of North Dakota.

Third, the existence of 11 public institutions of higher education (not including the private and tribal colleges) in a state with a modest population and limited financial resources often raised a question about the need or ability of the state to sustain all of the institutions. There existed a general consensus that at least one institution should be closed, but such a move was always politically unviable. Each institution was mentioned in the state’s constitution, and the only way to eliminate an institution would be a constitutional amendment; such a move could not gain political footing.

Given the variety of factors influencing the relationships among the public, the state government, and the higher education system, the plan originally put forth by John Richardson 15 years earlier became the foundation for the Roundtable: *Forget about the past, focus on the future.*

The Roundtable report covered a wide range of issues, from educational excellence to economic development. At the heart of the new public agenda, however, was a concept that came to be known as “flexibility with accountability.” Members from the private sector and higher education system argued that in order to “unleash the potential” of the university system, the state needed to allow the system and its institutions greater flexibility in financial and administrative decision making. Many members from the state government were concerned about how this impacted their responsibility to provide oversight of one of the state’s most significant public bureaucracies. In the end, agreement was reached that the state would relinquish its control over funding in return for the system tracking and reporting progress along a set of key performance indicators.
While the flexibility-with-accountability discussion moves beyond the focus on process, it is an important element, helping stakeholders to fully understand the central conflict underlying the Roundtable effort. Prior to the Roundtable, the state legislature provided line item appropriation, and any reallocation of funds required approval from the legislature or its interim committee. The allocation system was so strict that, as one president recalled, “We couldn’t use salary savings to buy extra pencils without an act of the state.” The consensus of higher education leaders was that it was easier to ignore maintenance concerns and stretch supplies than it was to seek permission to reallocate from the state government. Thus, many institutions returned money to the state at the end of the fiscal year, rather than address issues of deferred maintenance or investing in the development of new academic programs or other ventures.

Moving to block budgeting and allowing the system and institutions to allocate funds as they saw best enabled institutions to engage in new programs that responded to the economic and workforce development needs of the state. According to most members of the Roundtable, the new flexibility with accountability arrangement was what allowed for the institutions to work toward achieving the new agenda.
Appendix C

Media Relations Strategies

The sixth Roundtable cornerstone expressed the need for sustaining the new public agenda and called for:

A structure and process which assured the University System for the 21st Century, as described by these cornerstones, remains connected, understood, relevant and accountable to the present and future research, education and public service needs of the state and its citizens – sustaining the vision.

The report made clear that a variety of stakeholders need be included in the process in order for sustainability to be achieved and placed leadership for fulfilling this cornerstone in the system office. As those in charge of this cornerstone relate, it took a significant amount of work and time to communicate the plan to stakeholders. The following strategies are compiled from a review of the communications plan, various communications products, and discussions with communications professionals at the system and institutional levels.

- Identify the stakeholders to whom the message needs to be directed. Be specific and inclusive. A new public agenda requires widespread buy-in, but different groups will have different needs and will focus on different aspects of the plan.
- Create key performance indicators (KPIs) to help measure the success of a communications plan. Different stakeholder groups will have different KPIs.
- Draft four to six key messages that can be woven as appropriate into campus and institutional communications. For example, “Flexibility with accountability has unleashed the tremendous capacity of the university system; strategic investments will be needed to further realize the system’s full potential.”

The following are examples of specific action steps:

- Draft a PowerPoint presentation that each campus can customize to its own audience and its plans for aligning with the new public agenda.
- Create a “results” document that uses press clippings to evidence campus, regional, and state-level impacts of the new agenda.
- Make planning, accountability, and other documents related to the initiative easily available on the Internet.
- Include representatives from the private sector in legislative briefings and hearings.
- Meet with the editorial boards and other opinion leaders throughout the state to inform them about the initiative and answer their questions.
• Solicit inclusion of guest columns and articles about the initiative in trade and other publications to increase the state and national profile.
• Have key leaders write op-ed pieces for the major news outlets.
The Intersection of Demographics, Labor Markets and Postsecondary Education

A Report Submitted to the
Western Interstate Commission on Higher Education

Mark Misukanis, Ph. D.
July 2008
Preface

This study investigates the intersection of population changes, labor market dynamics and a state’s higher education infrastructure. The state of Minnesota is used as a case study to explore these relationships and inform policy discussions. This study was sponsored by the Ford Foundation under the auspices of the Western Interstate Commission on Higher Education.

Two individuals deserve a note of gratitude for their aid in this effort. Brian Prescott at WICHE has been very instrumental in the completion of this work. Neal Young with the Minnesota Department of Employment and Economic Development was very helpful in running simulations of the REMI model. I want to thank the department for its willingness to aid in this research.
Introduction
A number of respected commentators have expressed concerns over potential shortfalls in the number of highly educated people in the workforce over the next decade. These concerns have been expressed locally, in Minnesota for example, and at the national level. These comments often, though not always, seem to ignore important aspects of labor market behavior.

Regardless of one’s predictions about future labor dynamics, labor markets will continue to operate. When there are shortages, wages will tend to rise in response. Increasing wage rates send signals to students to make different choices about higher education. These choices drive significant impacts on an economy. The goal of this research is to provide a rigorous analytical loop that describes demographic changes, the demand and supply effects of labor market changes, potential issues for higher education policy and the impact on a state’s economy.

An important aspect of this research is the application of different data sources that purport to measure the same empirical phenomena. This occurs with employment and related occupational demand data and with high school graduation information. Public policy makers need to be able to respond to real situations and sorting through these data issues is a key part of that process.

The state of Minnesota is used as a case study although many states are facing similar issues. Minnesota is also used because a unique situation exists where two independent sources of occupational projections exist. Further, there is access to a regional model of the state’s economy that allows a test of a shortfall in the supply of highly educated entrants into the labor market and measures changes in output, income and employment.

The research is divided into seven sections. The first section describes the rhetorical environment surrounding labor issues. This environment is important since, like it or not, rhetoric influences public policy. The next section lays out the current public policy environment surrounding the issues. Following this is a part that identifies the central research questions addressed in the study. Sections five through nine contain the analytical research that addresses the research questions. Section five describes two occupational demand approaches and projections for Minnesota. Section six estimates educational demand requirements using methods employed by the Bureau of Labor Statistics at the national level. Section seven evaluates some supply questions given changes in demographics in the state. Section eight evaluates dynamic responses by use of a regional model of the demand and supply issues identified. This analytical work is followed by sections describing findings, conclusions and policy recommendations.

The Rhetorical Environment
This paper will focus on the intersection of labor dynamics and higher education policy. There exists a rhetorical environment around this intersection that has developed at the national level and is characterized by three framing groups- the business sector, higher education groups and alternative voices. Each group has
legitimate concerns and there is thoughtful analysis performed by their respective agents.

The category of business sector is represented by its major trade associations. It is not uncommon to read in business reports and web sites about the impending and dramatic shortfall in labor supply in the near future. For instance:

“U.S. Chamber calls worker shortage significant barrier to continued growth. The United States Chamber of Commerce called the shortage of workers across the board— from high skilled to low skilled— a significant threat to continued economic growth. ‘There can be no economic growth without the workers to drive the economy forward. Congress needs to examine and develop a course of action to overcome this barrier to continued American prosperity.’

The Chamber cited Census Bureau data that estimates the nation will need an additional 20 million workers to sustain economic growth between 2000 and 2026. Employment demand is projected to outstrip workforce growth, the Chamber noted. ‘The worker shortage is creating an urgent situation for the U.S. economy,” Johnson said. “It throws into question our ability to keep growth industries on our shores, retain the talent to stay competitive in the 21st century, and generate the taxes to support our national infrastructure. “

Business owners and managers are very concerned with the unavailability in the future of labor at current real cost levels. This response is not unexpected nor is it unreasonable for the business sector to react this way. Given current demographic trends of retiring baby boomers, lower influx of trained immigrants given post 9-11 restrictions, and an incoming generation of labor that historically does not have the education levels of its predecessor generation, there may well be a supply problem in the future. Business tends to respond to reduced supply levels of important inputs—whether labor, energy, raw materials or others— with the same alarm. Businessmen know that when inputs are in short supply they will need to pay higher prices for the same quantity to produce the same level of goods or services. If oil is in short supply, gasoline for the delivery trucks is higher. When copper is not readily available, plumbing costs rise. And when labor supply levels drop, wages tend to increase.

The second set, the higher education groups, are organizations typically connected more directly with the infrastructure of higher education. Examples are national groups such as the Midwest Higher Education Compact, National Center for Public Policy and Higher Education, State Higher Education Executive Officers (SHEEO) or the National Center for Higher Education Management Systems. Raising issues about the economy and the role of higher education is a central objective of these organizations. One recent article stated:

"If current trends continue, the proportion of workers with high school diplomas and college degrees will decrease and the personal income of Americans will decline over the next 15 years.

The projected declines in educational and income levels can be reversed, however, if states do a better job of increasing the education of all their residents... If the educational gaps remain as they are, then personal income per capita in the United States is projected to decline from $21,591 in 2000 to $21,196 in 2020—a drop of $395 or 2% (in inflation-adjusted dollars). In contrast, according to the Bureau of Economic Analysis, personal income per capita had grown 41% nationally during the two decades prior to 2000. One consequence of such a decline in personal income would be a decrease in the nation’s tax base. ...Over one-third of the states would experience a decline in personal income per capita, including many currently with the highest levels, such as California, Colorado, Connecticut, Massachusetts and New York. In these states, the decrease in income would be much more substantial than the U.S. average and could significantly affect their tax bases. For example, the projected decline in personal income per capita from 2000 to 2020 in Colorado would be $662, in New York $1,182, and in California $2,475. In contrast, if states are able to close the educational gaps between whites and racial/ethnic minorities, then personal income per capita is projected to increase in the United States”

Or

“The issue is not about higher education. It is about sustaining and economy. It is about ensuring and adequate supply and an appropriate talent level to sustain an economy in an age of global competitiveness.”

The empirical analysis underpinning these quotes is strong, but it often suffers from problems about labor supply and secondary impacts that are addressed in this research.

The third group takes quite an alternative view of these trends.

“The Truth about the Coming Labor Shortage: Confusing predictions and data are clouding the real picture of tomorrow's labor supply.

It’s a well-accepted fact that the population growth rate for the United States is slowing down. Between now and 2010, the U.S. population is projected to grow 1.1 percent annually, identical to the rate a decade earlier. After that, it will dip, eventually reaching 0.3 percent by 2030, even less by 2050. While these numbers are widely known and accepted, what’s far less certain is what they will mean for employers hoping to avoid an ultra-competitive labor

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3 Education and Economic Success, Larry Isaak, Presentation to the Kansas Education to Workforce Roundtable , 2007
market in the short term. Doomsayers rely on such demographic data, as well as employment projections from the U.S. Bureau of Labor Statistics (BLS), to determine that as early as 2010 there won’t be enough workers available to staff the nation’s jobs. But such predictions often are flawed or fail to take into account a full view of the facts.  

Or

“There’s a new glut on world markets. No, I’m not talking about the gluts of Chinese apparel or shares of Google stock bought at $475 each or of sub-prime U.S. lenders. I’m talking about the new glut of studies claiming that what really ails the U.S. economy is a shortage of skilled workers.

In fact, all these studies really show is that there’s still another glut that’s engulfed the economic policymaking world – of raw, unadulterated chutzpah. What else could explain the contention that, as American multinational companies continue off shoring even the nation’s most knowledge-intensive, best-paying jobs, the biggest problem these same companies face at home (along with smaller firms) is finding enough qualified workers to take advantage of all the extraordinary career opportunities they’re creating?”

Or

“The coming labor shortage. It’s a prediction frequently made by think tanks, consulting firms and corporate human-resources executives who expend a great deal of time and energy worrying about how companies and the U.S. economy are going to cope with a dearth of workers in the years to come. The problem, however, is that this piece of conventional wisdom, which holds a host of implications for both the private and public sectors, is false.

That is the conclusion of a study by Peter Cappelli, professor of management and director of Wharton’s Center for Human Resources. The study, titled “Will There Really Be a Labor Shortage?” and published in the August issue of Organizational Dynamics, notes that employers may well face difficult challenges in recruiting and hiring people in the future. But those challenges will stem from fundamental changes in the nature of the employer-employee relationship that contribute to the difficulty of retaining employees, not from a shortfall in the number of workers caused by demographic shifts. Cappelli suggests that employers work to improve their inadequate human-resources capabilities rather than fret over a non-existent shortage of workers.”

4 “The Truth About the Coming Labor Shortage Confusing predictions and data are clouding the real picture of tomorrow’s labor supply”, Robert J. Grossman, HRMagazine, March 2005, Vol 50
6 What Labor Shortage? Debunking a Popular Myth” Published: August 27, 2003, Knowledge@Wharton, http://knowledge.wharton.upenn.edu/article.cfm?articleid=837, see also the Capelli article
The Policy Environment
Job growth and economic vitality are central to the concerns of state public policy makers. Education obtains as a similar priority for elected officials. Policy is in the control of these officials; however demographic changes and labor market adjustments are not. This section briefly explains the general public policy environment surrounding the research questions.

The Demographics
Demographers have been telling policy makers for a decade that significant changes will occur in labor markets as current employees born post WWII reach retirement age. There is no uncertainty that a substantial portion of experienced, well educated and productive employees are likely to exit the labor markets over the next ten years.⁷ There may be substantial impacts on employment, output and income at the aggregate level. There is also likely to be a significant impact on state tax revenue and certain spending programs. At the other end of the age spectrum the number of high school graduates is expected to decline in a number of states; by nearly 10 percent in Minnesota. The feeder system of traditional age students will be producing less simply due to the demographics of that age cohort. Other surrounding states face the same demographic issue. This change will heighten competitive pressures between schools within the Minnesota system, both across and within public and private systems, and higher education institutions in other states. Policy makers cannot change this demographic fact. However, they must understand how these changes impact the state’s economy and attempt to craft some solutions.

Student Preparation
The sheer number of students graduating from high school will be declining. But a complicating factor for policy makers is the change in the ethnic and racial makeup of this group. Students will be more racially and ethnically diverse. They may come from families of lower average income. They are more likely to come from families that do not have a tradition of attending post secondary education. These factors compound the numerical issues.⁸ While these problems of preparation are recognized at the end of a K-12 career, more often policy is reflecting the need to solve these problems at early ages.⁹

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⁷ There is recent research that questions whether baby boomers will retire at the same rates as earlier generations as they approach standard retirement ages. See Smaller Than You Thought: Estimates of the Future Size and Growth Rate of the Retirement Market in the United States, The Coyne Partnership, May 2008

⁸ Preparation issues are not restricted to racially diverse children from low income families. For instance, in Minnesota in 2007 the ACT reported that only 28 percent of all children entering college were fully ready to undertake college level academic work.

⁹ Art Rolnick in Minnesota and Jim Heckman nationally are playing a significant role in this discussion. See the Minneapolis Federal Reserve Bank site http://www.minneapolisfed.org/research/studies/earlychild/
Infrastructure Capacity
Each state has in place a higher education infrastructure that has been built over a long period of time. The infrastructure consists of institutions that have been established under different legal authority (constitutional in some cases and public, private non-profit and private for-profit corporations statutorily in others), governance structures, geographic locations, facilities and personnel. This infrastructure is not strictly fixed at the margin— for profit schools can change program offerings very quickly and other institutions make continual program changes— but it many essential ways it is difficult to change. There is a capacity to produce a relatively fixed number of bachelors, associate and other degrees as well as certificates and other forms of post secondary credentials. A substantial portion of this capacity has been provided by taxpayers. Taxpayers fund building construction through state bonds or other tax exempt instruments. They provide operating resources directly for government operated institutions and indirectly though grants, tax exempt provisions or loans to the private run institutions.\textsuperscript{10} The policy maker must determine whether the current infrastructure fits the needs of future demography. These decision makers must be forward looking since adjustments to the system take time. The capacity must be adequate to produce the number of educated employees for the future. At the same time there is tremendous pressure from other state budget areas that requires an efficient system that is fully utilizing capacity.

Systematic Approaches and Setting Priorities
There has been an attempt over the last five to ten years to establish a more seamless approach to address problems across all education levels. About 38 states have some form of a P-16 (20) groups. Some of been established by legislation, others have evolved in ad hoc manners. They have operated for some time, but their effectiveness is open to question.\textsuperscript{11} While the notion of an education pipeline starting at an early age has been popularized by some and criticized by others, education in later years in life is clearly built on what comes earlier.

A systematic approach requires some tough decisions about priorities. There are simply not enough resources to meet the current systems costs and address systematically the problems throughout the system. At the same time policy makers produce results in a fractured way. It is difficult to make policy tradeoffs between early education and a post secondary issue when the decisions are made in separate rooms.

Measuring the Problem and Accountability
The benchmark of good policy is a strong empirical underpinning. This is not to say that politics is not a strong, often defining influence. More frequently decision makers are turning to policy experts to fully describe issues. It becomes incumbent on these experts to provide a complete picture. As a part of this shift more public

\textsuperscript{10} The University of Phoenix recently released an accountability report that contains an interesting analysis of taxpayers’ dollars in each sector.
\textsuperscript{11} See P-16 Councils Bring All Tiers of Education to the Table, Education Week, June 5, 2008
programs are being held to higher levels of accountability. Measurable results are now the norm.

**Research Questions, Data and Methodology**

*Research Questions*
An important motivation for this research is the fact that many of the statements voiced seem to ignore responses in the labor markets. If national commentators ignore the supply side in the labor market their concerns may remain valid. But this fact calls for more rigorous analysis to clarify potential public policy issues. A second factor is the need to measure the full impact on an economy of labor market imbalances. Rough estimates have been produced in other reports, but the economy is complicated and proper tools should be employed.

This paper will address two central questions. First, what is the specific numerical measure of aggregate labor market supply and demand, educational needs reflected by the labor market and higher education infrastructure capacity to meet those needs in Minnesota in the next decade? Second, how will labor markets respond and what are the broader effects on employment, income and output if demand is not met through increased supply?

Some of the empirical work projecting occupational labor has been produced by agencies like the Bureau of Labor Statistics (BLS) and the Minnesota Department of Employment and Economic Development (DEED). However, these results will be combined in a new ways that address the first question. The research needed to address the second goal has not been previously undertaken.

The following research questions are addressed:

- What are the occupational job changes in the Minnesota labor force between 2006 and 2016?
- How do these demands translate into educational requirements to provide the skills needed at different occupational levels?
- What is the capacity of the higher education system in Minnesota to meet these demands, i.e., is the infrastructure in the higher education system in place?
- How will population patterns and demographic characteristics bear on the state’s ability to meet supply needs?
- What is the impact on the economy of the state of supply constraints brought about either through infrastructure inadequacy or population shortfalls?

*Data and General Methodology Questions*
The Bureau of Labor Statistics and its related state agencies are viewed as important data sources for labor issues. BLS has been providing occupational demand projections for many years at the national level and state projections are produced as well. The Bureau of Economic Analysis also produces employment, income and output estimates for states. BEA is the official source for Gross Domestic Product estimates for the nation and the states. As described in more detail below, the employment estimates for Minnesota and all other states differ materially between these two federal agencies. This difference creates a significant
problem for the analyst attempting to measure differences between the supply and
demand of educated labor in a state.

Perhaps the most unique methodological aspect of this research is the utilization of
a regional economic model of a state to estimate occupational demand and simulate
the impact of a shortfall in the supply of labor by occupation. This model was
developed by Regional Economic Modeling, Inc. (REMI) and is operated locally by
the Minnesota Department of Employment and Economic Development. The model
is an explicit description of the Minnesota economy and takes into account
population changes through migration, wage dynamics and labor supply. The model
is conceptually sound and empirically rich. It is driven in part by national forecasts
of industry demand. The model uses BEA as the source for input data. While it
uses BLS output forecasts and industry occupation matrix, it measures specific
responses in Minnesota to cost and other structural differences in the state.

**Occupational Job Projections**
The most appropriate way to discuss the interaction between higher education and
labor market dynamics is at the occupational level. Often young people prepare for
specific occupations in college or older adults may enter into retraining efforts to
acquire new skills related to specific occupations. The focus of this research is
long-term supply and demand questions, not short-term cyclical issues. The period
of analysis is 2006 through 2016. There are two alternative sources of occupational
projections used in this study and the results differ materially. This difference has
important implications for higher education policy.¹²

**BLS/DEED Projections**
The first set of projections is from the Bureau of Labor Statistics (BLS) developed in
conjunction with the local labor office in Minnesota, the Department of Employment
and Economic Development (DEED). BLS has been producing national occupational
projections since the late 1940s.¹³ Currently state agencies and the national
bureau produce state occupational projections for 10 year periods; the most recent
is 2006 through 2016. The occupational employment figures for the state from
BLS/DEED are driven by national output estimates. These two agencies jointly
produce projections for 754 different occupations. The projections are put to many
using including workforce planning and occupational counseling. The local office
makes adjustments for known differences specific to the state. There are pitfalls in
these estimates that DEED has identified and offers a number of provisos.¹⁴

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¹² While the two approaches are independent both rely on BLS national economic forecasts
to drive the result. This is actually fortuitous since result differences are methodological
and not related to underlying economic forecast differences.
¹³ A more complete explanation of the methodology is included in the appendix. See also
the documents at [http://www.bls.gov/emp/home.htm#releases](http://www.bls.gov/emp/home.htm#releases).
¹⁴ These are listed on the DEED website. See
[http://www.deed.state.mn.us/lmi/tools/projections/methodology.htm](http://www.deed.state.mn.us/lmi/tools/projections/methodology.htm)
The National Research Council (NRC) has also identified general issues with occupational forecasting as
well as some specific concerns of the BLS approach. See *Forecasting Demand and Supply of*

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**BEA/REMI Projections**\(^{15}\)

The second source of projections of occupational demand is based on a regional economic model developed by Regional Economic Modeling, Inc. (REMI) and operated by DEED. The model is an explicit description of the Minnesota economy and takes into account population changes through migration, wage dynamics and labor supply. A very important difference is the base data used by REMI. REMI relies on income and employment data produced by the Bureau of Economic Analysis (BEA) at the U.S. Department of Commerce. Because REMI models economic activity it requires a data set that is internally consistent between employment and income, a requirement met by the BEA data. The BEA/REMI model produces projections for 445 occupations, a more aggregated level than BLS/DEED. Many of the same provisos mentioned for the BLS/DEED projections apply to the BEA/REMI estimates as well. The most remarkable difference is that the model contains labor supply components. The model also allows for certain substitution responses, notably between labor and capital as relative prices change.\(^{16}\)

**A Note on Replacement Jobs**

Since the concern of this report is educational and training needs for the work force there are two components of job change that need to be developed. The first component is the net increase between the 2006 and 2016 in occupational demand. This gives us net job growth due to economic factors. The second is a measure of attrition that takes place due to retirements, occupational change and other structural adjustments. BLS provides an estimate of replacement jobs by 2016 for each occupation.\(^{17}\) The BEA/REMI model only produces net job growth due to economic change. To estimate job replacement for the BEA/REMI projections, the BLS/DEED replacement rate is used to calculate job replacements.\(^{18}\)

**Summarizing the Two Approaches**

The result of this process is a measure of the demand for occupational employment from two independent sources. As indicated above there is an important difference in base data. This difference creates dramatic differences in the estimates and an important dilemma for the analysis and more importantly for policy makers. The table below shows total employment for 2006 and 2016 from both approaches.

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\(^{15}\) The term BEA/REMI is used to differentiate both the data source and analytical approach from BLS/DEED.

\(^{16}\) A brief description of the model is contained in an Appendix. This is available from the author.

\(^{17}\) See http://www.bls.gov/emp/home.htm#data

\(^{18}\) The formula is simply replacements/2006 BLS jobs times 2006 BEA/REMI jobs.
Table 1
A Comparison of Total Employment

<table>
<thead>
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<th></th>
<th>BLS/DEED Employment</th>
<th>BEA/REMI Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BLS/DEED Employment</strong></td>
<td>2,961,560</td>
<td>3,252,560</td>
</tr>
</tbody>
</table>

BEA in 2006 estimates total job count in Minnesota to be 575,323 jobs higher than BLS/DEED. This difference is carried forward in the 2016 projections and an estimate of replacement jobs. This material divergence reflects measurement differences, not a definitional difference. An explanation for these differences at the national level is described by BEA in a methodology paper explaining state and local income and employment. However, the differences at the national level described in that paper do not seem to fully explain the differences for the Minnesota data.

This poses a significant analytical dilemma at the state level. Two federal agencies produce employment figures for the state that are dramatically different. The BLS figures are used widely for planning purposes by many state and local agencies. Other groups use them widely. BEA has a long history and strong reputation in the measurement of output, income and employment and is very careful in identifying adjustments for undercounting across all of these areas.

A disparity of this magnitude produces drastically different estimates of occupational need. This in turn produces a dramatic difference of educational requirements. Table two shows a comparison of the results of the two methods for ten occupational categories. It is clear even in the first occupation, Chief executives, that the disparity is marked. For 2006 the BEA/REMI estimate at 10,774 is just under twice the BLS/DEED figure of 5,579. The growth rate expected over the next 10 years is also very different. BEA/REMI expects much stronger growth in this occupation.

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19 Actually DEED has a number of different estimates for job counts on its web site. None however close this difference.
20 State Personal Income and Employment Methodology
21 One reason may be that Minnesotans tend to be near the top in multiple jobs held Minnesota had the tenth-highest rate of multiple job-holding with 8.1 percent of jobholders working more than one job in 2004. This identifies a very important shortcoming in both sets of numbers. Education requirements for a multiple job holder need only occur once yet the data would duplicate this count.
22 BEA is constantly making revisions in methodology to address shortcomings. The Bureau is very attentive to shortcomings in data sources.
An appendix compares levels and growth rates for all of the occupational results between the two approaches. As one would expect, the levels are generally higher for the BEA/REMI job count by occupation. However, there are some occupations where the differences are minimal and other where the BLS/DEED numbers are larger.

Two independent approaches to projecting occupational job growth have been presented. Both are rigorously constructed and based on received data and methodology. But each produces estimates for Minnesota of total employment and changes at different occupational levels that are dramatically different and difficult to reconcile. For a policy maker the choice of the 'right number is important since that choice would lead to very different policies.

Educational Requirements to Meet Occupational Job Projections
Once occupational jobs are estimated the information can be translated into specific educational requirements. One reason a substantial number of different occupational categories have been projected is to maximize the alignment between needed skills and knowledge implied by educational attainment and occupational demand. Since we are concerned about education and training needs, both new and replacement jobs must be considered. Any education and training system in a state must prepare both entrants into an occupation for new jobs created by the economy as well as replacements for incumbents leaving an occupation.

23 Both approaches use the standard occupational coding. The numbers on the list simply reflect the BEA/REMI levels. An Appendix includes detailed projections for all 445 occupations and is available from the author.

24 DEED makes some adjustments to reflect specific Minnesota conditions. These are not contained in the BEA/REMI estimates since the industry/occupation matrix is mechanically applied to industry employment figures.
The method used here is the same used by BLS at the national level. This method has evolved over time to better identify the educational needs across occupations. It consists of two different approaches to better capture alternative paths a person may take into an occupation. BLS provided the results of these two approaches in tables contained in a 2004 study that reported the educational levels needed to meet those job counts. This report applies one of these approaches to the two sets of occupational demand for Minnesota. The results from this application are presented in Tables 3 and 4 below.

The first table indicates employment and change in employment for the BLS/DEED data. From the percent distribution columns for 2006 and 2016 it is clear that occupations requiring a high school diploma only are declining and those that require college or some college are increasing. The percent distribution of the change between 2006 and 2016 indicates that over 45 percent falls in these last two categories. When replacement jobs are added in the last two columns this is more significant. This is true for both the BLS/DEED and BEA/REMI data. This particular information is neither new nor surprising. The tables provide a measure of the actual job changes that can be used to inform policy discussions.

In 2006 occupations that require a high school education represent 40.9% of total occupations in the BLS/DEED data set and 41.1% in BEA/REMI. Of the change projected between 2006 and 2016, only 30.8% in BLS/DEED and 33.7% of REMI/DEED jobs can be met with that level of education. Occupations that need only some college stay fairly level. Jobs in occupations requiring a BA or above increase substantially.

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26 Research prepared for the report creates a second set of data that reflects the more detailed BLS approach. This is available from the author.
### Table 3
**BLS/DEED Data Projections**
**Employment and Total Job Openings by Three Education Clusters**
**2006 to 2016**

<table>
<thead>
<tr>
<th>Education Cluster</th>
<th>Employment Number</th>
<th>Change Number</th>
<th>Total Job Openings due to Growth and Net Replacements Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>2,908,210</td>
<td>3,197,671</td>
<td>100.0%</td>
</tr>
<tr>
<td>High School Graduate or Less</td>
<td>1,189,301</td>
<td>1,278,491</td>
<td>40.9%</td>
</tr>
<tr>
<td>Some college</td>
<td>897,076</td>
<td>988,836</td>
<td>30.9%</td>
</tr>
<tr>
<td>Bachelors degree or higher</td>
<td>821,834</td>
<td>930,343</td>
<td>28.3%</td>
</tr>
</tbody>
</table>

### Table 4
**BEA/REMI Data Projections**
**Employment and Total Job Openings by Three Education Clusters**
**2006 to 2016**

<table>
<thead>
<tr>
<th>Education Cluster</th>
<th>Employment Number</th>
<th>Change Number</th>
<th>Total Job Openings due to Growth and Net Replacements Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>3,530,342</td>
<td>3,939,418</td>
<td>100.0%</td>
</tr>
<tr>
<td>High School Graduate or Less</td>
<td>1,492,779</td>
<td>1,630,660</td>
<td>42.3%</td>
</tr>
<tr>
<td>Some college</td>
<td>1,087,081</td>
<td>1,211,578</td>
<td>30.8%</td>
</tr>
<tr>
<td>Bachelors degree or higher</td>
<td>950,481</td>
<td>1,097,180</td>
<td>26.9%</td>
</tr>
</tbody>
</table>
These figures may be understated because the assignment methods does not assume and training upgrades to jobs in the projection period. However, in each case jobs requiring only a high school education remain the largest group in 2016 (39.9% and 41.1% respectively). Looking at the sum of new and replacement jobs (the last column), nearly 60% will require some college experience.

We concentrate two numbers in tables 3 and 4 for the purpose of this research. These are the total job openings due to growth and net replacement for the two projections sets for jobs requiring a BA or above. This is not intended to disregard or diminish other levels of educational attainment such as an AA or certificates. It is much simpler to translate any shortfall of BA’s into input in the economic model to measure economic impact.

This number for BLS/DEED projections is 279,900, or about 28,000 new BA’s each year if one assumes a linear rate between 2006 and 2016. The BEA/REMI figure for that definition is 348,787, or about 35,000 BA’s each year. The difference is dramatic and very important. These needs can be met be either internal production or in-migration. Before proceeding to the implications of this difference it is important to review the current supply side of the equation in Minnesota to determine if a shortage will exist or not.

Supply Estimates for Institutional Capacity and Population

With estimates of occupational and educational demand addressed supply issues must be investigated. There are two main questions. First, is the capacity of the current higher education infrastructure sufficient to meet estimated educational requirements? Second, is the internal and external supply of population in appropriate demographic cohorts available to meet projected demand?

Minnesota, like many states, has a diverse higher education system composed of private and public institutions operated as government, for profit and non-profit managed entities. While the overall system has some hypothetical capacity to produce degrees, this capacity is elastic and for all practical purposes cannot be established with any absolute numerical precision. Institutions can easily make adjustments at the margin to respond to increased demand for seats or new programs. However, some rough estimate of capacity is needed to determine if limitations exist and a public policy response is warranted.

Some simple metrics are suggested to measure these capacity and supply questions. Institutional capacity is estimated through a simple trend analysis in the population of the state and the annual production of degrees. The internal population supply question is addressed by a projection of the number of high school graduates in the state. These graduates play an important role in providing the entering counts of traditional students into colleges and universities. The external supply question is addressed through a measure of immigration by level of education into the state.
**Degree Production by Certain Age Cohorts**

Data for degree production provide a rough measure of institutional capacity. This is based on the assumption that institutions are motivated to utilize exiting capacity at maximum levels. While this assumption is open to serious debate, there is certainly external financial and political pressure that suggests that degree production should suffice for these purposes. The National Center for Education Statistics (NCES) provides the number of degrees by state for five general areas—Associate, Bachelor, Masters, Graduate and First Professional. Table 5 shows two population cohorts and degree history in Minnesota since 1987. The first age cohort is population for 18 to 45 year olds. This cohort measures the age group that includes both traditional students and returning adults seeking to improve job skills. The second cohort measures 18 to 25 year olds, the group that represents traditional aged students.

<table>
<thead>
<tr>
<th>Year</th>
<th>Ages 18 TO 45</th>
<th>Ages 18 TO 25</th>
<th>Degrees</th>
<th>AA</th>
<th>BA</th>
<th>First</th>
<th>MA</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>1,887,071</td>
<td>549,786</td>
<td>7,654</td>
<td>20,667</td>
<td>1,529</td>
<td>3,607</td>
<td>529</td>
<td></td>
</tr>
<tr>
<td>1988</td>
<td>1,918,085</td>
<td>539,608</td>
<td>7,591</td>
<td>21,167</td>
<td>1,560</td>
<td>3,839</td>
<td>549</td>
<td></td>
</tr>
<tr>
<td>1989</td>
<td>1,929,747</td>
<td>526,910</td>
<td>6,947</td>
<td>21,901</td>
<td>1,486</td>
<td>4,114</td>
<td>568</td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td>1,939,621</td>
<td>511,569</td>
<td>7,674</td>
<td>22,881</td>
<td>1,561</td>
<td>4,366</td>
<td>750</td>
<td></td>
</tr>
<tr>
<td>1991</td>
<td>1,949,390</td>
<td>495,564</td>
<td>8,008</td>
<td>23,619</td>
<td>1,454</td>
<td>4,585</td>
<td>823</td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>1,958,464</td>
<td>484,941</td>
<td>9,183</td>
<td>24,453</td>
<td>1,829</td>
<td>4,853</td>
<td>684</td>
<td></td>
</tr>
<tr>
<td>1993</td>
<td>1,960,732</td>
<td>481,508</td>
<td>9,766</td>
<td>24,762</td>
<td>1,854</td>
<td>5,217</td>
<td>674</td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>1,964,386</td>
<td>479,793</td>
<td>9,708</td>
<td>24,746</td>
<td>1,536</td>
<td>5,678</td>
<td>917</td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>1,968,814</td>
<td>480,372</td>
<td>12,216</td>
<td>24,068</td>
<td>1,538</td>
<td>5,760</td>
<td>889</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>1,973,484</td>
<td>481,140</td>
<td>11,513</td>
<td>23,279</td>
<td>1,497</td>
<td>6,575</td>
<td>1,037</td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>1,973,483</td>
<td>483,820</td>
<td>10,644</td>
<td>22,618</td>
<td>1,585</td>
<td>6,507</td>
<td>932</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>1,968,865</td>
<td>494,199</td>
<td>11,052</td>
<td>23,044</td>
<td>1,666</td>
<td>7,226</td>
<td>943</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>1,971,205</td>
<td>508,541</td>
<td>10,477</td>
<td>23,165</td>
<td>1,524</td>
<td>7,358</td>
<td>891</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>2,048,636</td>
<td>536,107</td>
<td>11,030</td>
<td>23,175</td>
<td>1,535</td>
<td>7,797</td>
<td>867</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>2,056,616</td>
<td>549,471</td>
<td>10,898</td>
<td>23,355</td>
<td>1,568</td>
<td>8,096</td>
<td>975</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>2,059,126</td>
<td>561,913</td>
<td>11,842</td>
<td>24,706</td>
<td>1,521</td>
<td>8,377</td>
<td>873</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>2,058,165</td>
<td>574,652</td>
<td>13,302</td>
<td>25,783</td>
<td>1,596</td>
<td>9,185</td>
<td>941</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>2,053,188</td>
<td>584,746</td>
<td>14,189</td>
<td>27,324</td>
<td>1,659</td>
<td>11,433</td>
<td>1,032</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>2,045,478</td>
<td>590,029</td>
<td>15,469</td>
<td>28,275</td>
<td>1,759</td>
<td>13,952</td>
<td>1,239</td>
<td></td>
</tr>
</tbody>
</table>

Both total degree production and degrees relative to the appropriate age cohort are used to indicate supply capacity. In 2005 there were about 15,500 AA degrees and about 28,300 BA degrees produced in the state, or about 72 percent of the total degrees earned. The number of AA degrees has trended up the last four years, was somewhat flat the previous six years but is double the level in the late 1980’s. The level for BA degrees is higher than 10 years ago but generally is in the 25,000 range.
To project these figures forward to 2016, the year for which we have occupational demand estimates, we use a simple approach of applying the rate per population to a population projection. The rate is determined by dividing the degree data by an appropriate population supply. For AA degrees we use the 18 to 45 population cohort. For BA’s the age cohort is 18 to 25.

Chart 1 shows the share of AA and BA degrees divided by the relevant population measures for that last 20 years. It is clear that the rates of earned degrees have increased between 1987 and 2005. The AA rate shows more of an upward trend during this period. The BA rate has operated within a range between 4 and 5 percent over the period.

In order to project the availability of population supply forward to 2016 the rates from the last year of this history are used against Census Bureau age projections. The Bureau projects there will be 2,148,963 people in the state between ages 18 and 45 and 586,447 in the 18 to 25 year old age cohort in 2016.  

27 See www.census.gov
Although the AA rates have clearly trended up over the time period, we simply apply the 2005 rates of BA and AA production against these projections. This results in an estimate of 28,100 BA’s and 16,250 AA’s for 2016. Both of these figures are close to the 2005 levels. This implies that current production rates and capacity are in line with projected population levels. However, if the higher degree number from BEA/REMI hold than there could be capacity issues in the system.

*Traditional Age Population Demographics- High School Graduates*

The internal supply component is measured by high school graduation levels projected over a 10 year period. These graduates supply traditional age entrants into post secondary institutions. Even in open enrollment institutions students must possess a high school credential for admittance. There are two sources of projections of high school graduates for the Minnesota case study. The Western Interstate Commission on Higher Education has produced projections of high school graduates of each state. In 2006 in Minnesota the State Demographer’s Office provided the Minnesota Office of Higher education a set of projections of high school graduates in Minnesota through 2014-15. The existence of these two studies independently produced provides an opportunity to compare and contrast the results.

Both studies follow conventional cohort survival models in developing projections of high school graduates. However, each study uses a different data source to derive the results. WICHE uses enrollment data published by NCES. The Minnesota Demographer uses information published by the Minnesota Department of Education. It should be emphasized that these two studies were produced at different points in time so we should expect different results. However, since smoothed grade progression ratios are utilized in both cases timing differences should be mitigated as these change very slowly. Table 6 shows historical and projected graduation counts for Minnesota for public and non-public students from 1991-92 through 2014-15.

The table reveals some important observations:

- The total number of graduates by 2014-15 is substantially lower under the Minnesota Demographer’s projections. The 1,883 figure shown is about 2 percent below the WICHE estimate.
- The historical figures are materially different, especially for non public school graduates.
- This difference in non-public counts continues into the projection period and accounts for about one-third of the variation in total counts.
- The rates of decline between 2004-05 and 2014-15 are quite different. The Minnesota Demographers figure is a 9.6% drop while the WICHE figures indicate a 5.6% reduction.

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28 Knocking at the Door, WICHE, March 2008
29 The interested reader should review the WICHE report for a brief explanation of their approach. The Demographer’s methodology is available on request.
A decline between 2007-08 and 2014-15 in high school graduates suggests about 2,600 fewer students in Minnesota post-secondary institutions at current participation rates.

Table 6
High School Graduates - Two Approaches

<table>
<thead>
<tr>
<th>Year</th>
<th>Minnesota Demographer</th>
<th>WICHE March 2008</th>
<th>Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Public</td>
<td>Public</td>
<td>Total</td>
</tr>
<tr>
<td>1992-93</td>
<td>2,941</td>
<td>48,002</td>
<td>50,943</td>
</tr>
<tr>
<td>1993-94</td>
<td>3,061</td>
<td>47,463</td>
<td>50,524</td>
</tr>
<tr>
<td>1994-95</td>
<td>3,031</td>
<td>48,249</td>
<td>51,280</td>
</tr>
<tr>
<td>1995-96</td>
<td>3,056</td>
<td>50,330</td>
<td>53,386</td>
</tr>
<tr>
<td>1996-97</td>
<td>3,208</td>
<td>52,205</td>
<td>55,413</td>
</tr>
<tr>
<td>1997-98</td>
<td>3,446</td>
<td>54,628</td>
<td>58,074</td>
</tr>
<tr>
<td>1998-99</td>
<td>3,576</td>
<td>56,964</td>
<td>60,540</td>
</tr>
<tr>
<td>1999-00</td>
<td>3,648</td>
<td>57,369</td>
<td>61,017</td>
</tr>
<tr>
<td>2000-01</td>
<td>3,708</td>
<td>56,581</td>
<td>60,289</td>
</tr>
<tr>
<td>2001-02</td>
<td>3,785</td>
<td>57,440</td>
<td>61,225</td>
</tr>
<tr>
<td>2002-03</td>
<td>4,047</td>
<td>59,432</td>
<td>63,479</td>
</tr>
<tr>
<td>2003-04</td>
<td>4,309</td>
<td>60,018</td>
<td>64,327</td>
</tr>
<tr>
<td>2004-05</td>
<td>4,206</td>
<td>59,743</td>
<td>63,949</td>
</tr>
<tr>
<td>2005-06</td>
<td>4,098</td>
<td>58,144</td>
<td>62,242</td>
</tr>
<tr>
<td>2006-07</td>
<td>4,311</td>
<td>58,524</td>
<td>62,835</td>
</tr>
<tr>
<td>2007-08</td>
<td>4,347</td>
<td>58,943</td>
<td>63,290</td>
</tr>
<tr>
<td>2008-09</td>
<td>4,347</td>
<td>59,731</td>
<td>64,078</td>
</tr>
<tr>
<td>2009-10</td>
<td>4,248</td>
<td>57,994</td>
<td>62,242</td>
</tr>
<tr>
<td>2010-11</td>
<td>4,204</td>
<td>57,540</td>
<td>61,744</td>
</tr>
<tr>
<td>2011-12</td>
<td>4,108</td>
<td>56,860</td>
<td>60,968</td>
</tr>
</tbody>
</table>

These differences present a problem similar to the BLS/BEA issue described in the occupational demand. Different high school graduation levels suggest different degree production as students work through college. There are important timing, participation and degree completion rate issue as well. For the economic issues discussed here earlier years are more important since students take 4 to 6 years to move through the system. In 2011-2012 the two projections are similar. However, post secondary institutions must be aware of the figures for 2014-15 since these represent entering students.

A steady state participation rate for post secondary enrollment is an unlikely outcome. Given current demographic projections in Minnesota, participation rates will likely decline. These rates are historically lower for students of color, a group expected to become a larger share of the graduating class by 2014-15. There were 8,479, or about 13% of the total, graduating students of color in Minnesota in 2004-05. This is expected to increase to 11,836, or 20% of the total by 2014-15. Students of color enroll in post secondary education in Minnesota at about a 92% rate of white student enrollment. If this pattern does not change then the graduation level overstates the number of students likely to enter post secondary education.
education in the state. The current participation rate would decline from 65 percent to roughly 60 percent.  

*Migration Patterns in Minnesota*

A state can either produce its own human capital or import it from other places in order to supply the economy with educated labor. The empirical question is fairly straightforward - of the number of people in the state with college degrees, how many where educated in the state and how many migrated from elsewhere. The actual measurement is less straightforward. There is no single source of data that answers this question unambiguously. The ideal data would measure annual internal and external flows and make stock adjustments to a measure of human capital. The ideal data set does not exist although there are several measures from the Census Bureau that can inform the conversation.

The first measure is of net migration from the 2000 census. This is well known data and measures the in-migration and out migration of people by educational attainment between 1995 and 2000. This ignores flows within that five year window. This is a net numbers and gross flows in and out are much larger. The figures from the census indicate the state is a net importer of human capital as shown in Chart 2. There were about 17,000 people with bachelor’s degrees on net that migrated into the state. Annualized linearly over the five year period suggests a yearly figure of 3,400.

This figure can be updated using net flows into Minnesota from the American Community Survey (ACS). This is a one year flow estimate based on a much smaller sample than the 2000 census so caution is needed to interpret the numbers. These figures suggest a continued immigration of highly education people into the state. Based on population estimates for 22 to 64 year olds the net rate is about 1.8 percent for associate degreeed and graduate professional people and about 3.6 percent for bachelors.

The annual number from the ACS suggests a smaller in-migration of bachelor holders. The figure is closer to 2,200, somewhat lower than the census based figure of 3,400. This is important since it suggests that Minnesota is declining in term of positive net migration, a fact that only exacerbates the educated labor force question.

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30 Very roughly given out of state matriculation this suggests 3,800 fewer people will matriculate from Minnesota high schools into Minnesota post secondary institutions by 2014-15. A full analysis must include out of state changes as well.

31 This question is awkward. Clearly a person that grows up in Wisconsin is educated at Madison and moves to the Twin Cities for a job, constitutes an import of human capital. But does a person have to be born, raised and fully educated in Minnesota to be considered a native.
Summarizing Supply Issues

There are three important findings on the supply side that are identified in this section. First, the state has been producing about 28,000 new bachelor degrees annually. Growth in production the last few years has been strong and rates relative to population has been increasing. However, the 2005 rate is not much higher than the average for the last 20 years and if applied to projections for relevant population cohorts in 2016 suggests a production level of about 28,000. If the required level of BA’s is actually 35,000 then the population will simply not exist unless other policy changes are made to increase participation or college graduation rates.

Second, it is not likely that this level could be increased through improved high school graduation levels. The actual number of graduates will fall, perhaps by as much as 10 percent. Increasing the actual graduation rate is a possibility, but this may not prove fruitful since Minnesota already has one of the highest high school graduation rates in the country. Increasing the participation rate is another policy target, but difficult given changes in demographics and traditional participation rates by students of color.

Third, Minnesota continues to be an importer of highly educated people. New in-migrants of people holding bachelors degree ranges anywhere from 2,200 to 3,400 people annually. But the state already relies on this flow to meet current labor market needs. It would take substantial economic incentives relative to other states to improve this population flow.


**Labor Market Dynamics**

The goal of this research is to present a complete view of economic labor force needs and the relation of demographic changes with higher educational capacity. To this point occupational demand from two different sources has been presented. These have been translated into educational requirements. The supply side of high school graduates and in-migration of educated labor has been presented. The final step is to measure the impact on the Minnesota economy of potential labor-market supply limitations.

This research focuses on the production of bachelors degrees for analytical purposes. This does not imply that associate degrees or other certificates do not have an important influence on economic activity and an expanded research effort would include the analysis of these areas. This means that to the extent educational needs other that bachelor’s degrees (such as AA’s or certificates) are not met, the estimates below underestimate the economic impact. We found the two alternatives presented two dramatically different scenarios. For instance, in the BLS/DEED case the production of bachelor’s degrees apparently meets the economic needs in 2016. However, in the BEA/REMI measures there is a potential shortfall of nearly 7,000 by 2016.

The vehicle used to measure this impact is the REMI economic model of the state. The model is uniquely structured to develop these measures. It allows the introduction of a shortfall in education as employment measures in three direct ways. First, it uses pooled access measured by occupational employment to reflect labor productivity. Labor in a state can receive higher wages and not have negative influences on relative costs of production if it is more productive. The second way occupational employment used is in the calculation of wage rates themselves. Occupational employment demand and supply is an integral part of the model. When there is a shortfall in supply relative to demand wage rates increase. This induces economic in-migration. The third way is through differing wage rates on income. People with only some education will receive on average lower wages than those with a BA. Lower income leads to reduced consumption, investment and economic activity.

As a model of the state there are many indirect but important dynamics impacts as well. For instance, as wage rates increase economic migration to the state in induced, personal income increases, the demand for housing investment and other consumption goods increase, business may decide to substitute relatively cheaper capital for labor, labor intensity changes, the demand for government goods and services may go up, and so on. This is of course a very short list of the economic dynamics that occur with a change in occupational supply. But there are two important points to this list. First, these changes occur and should be considered in any complete analysis of the impact of educational shortages in an economy. Second, a discussion of these changes can help policy makers understand options they may have to intervene to mitigate economic dislocation.
The model has a shortcoming with respect to the analysis proposed here. Although the demographic module projects population by age and gender cohorts which reflect labor force participation rates, the model assumes a level of education reflected in the historical data. That is to say, it does not reflect the changing demographics of retiring baby boom generation by occupation nor does it reflect decreasing preparation rates of high school graduates from different ethnic and racial backgrounds. However, these shortcomings can be addressed by measuring the shortfall in trained people by occupation and to simulate the impact on the economy.32

As indicated there is a difference in the two estimates of potential shortfall in degree people by the year 2016. To address this uncertainty two different analyses are developed. The first analysis posits a 10 percent shortfall in bachelor’s degrees relative to the BLS/DEED estimate. This means 2,800 fewer BA degrees are produced than needed by the economy under a baseline forecast. This 10 percent figure is reflective of the reduction in high school graduates at the higher level projected by the Minnesota Demographer.33 The second simulation takes the full difference between the BLS/DEED and BEA/REMI estimates of approximately 7,000 BA’s.34 Since there is no way of knowing which occupation will experience the shortfall, in both simulations the shortfall is allocated over occupations at the same educational level reflected in the 2006 data.

The model produces estimates of a number of important economic aggregates. Five are chosen and presented in the simple table below to summarize the story of the impact. Included in Table 7 is employment, personal income, total wages, real gross product for the state and population. The employment and population numbers are in thousands of people and the state product, personal income and wage numbers are in billions of dollars. The first column in the table shows the baseline forecast for each of these variables. The second column is the change from the baseline indicated by simulating a shortfall of 2,800 BA degrees. The third column shows the impact of the larger shortfall figure.

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32 For simulation purposes the model allows us to enter changes in 94 different occupational levels. The educational needs have been determined for the 445 occupations indicated above but have been aggregated on a weighted basis into these 94 higher levels.
33 The timing of the demographer’s numbers with the 2016 date is not aligned. However, this will give us a sense of magnitude of the 10 percent shortfall on the economy.
34 In each case the full difference is reflected by 2016. However, since this will evolve over time the simulations spread the difference between 2006 and 2016 in single year increments and ramp the change in by 10 percent each year. This does not accurately reflect the timing to declining high school graduation levels. It should provide an accurate approximation of the impact for policy discussion.
Table 7
Estimated Economic Impact of Shortfall in BA Degreed Population in Minnesota 2016

<table>
<thead>
<tr>
<th>Variable</th>
<th>Baseline Level</th>
<th>2,800 Shortfall Impact</th>
<th>7,000 Shortfall Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment</td>
<td>3,972.2</td>
<td>-.538</td>
<td>-1.362</td>
</tr>
<tr>
<td>Personal Income</td>
<td>$341.7</td>
<td>-.095</td>
<td>-.239</td>
</tr>
<tr>
<td>Wage Bill</td>
<td>$198.7</td>
<td>-.090</td>
<td>-.225</td>
</tr>
<tr>
<td>Real State Product</td>
<td>$353.6</td>
<td>-.052</td>
<td>-.129</td>
</tr>
<tr>
<td>Population</td>
<td>5,551.4</td>
<td>-.283</td>
<td>-.709</td>
</tr>
</tbody>
</table>

These numbers suggest five important points.

- The impact of a shortfall at either level is high. For instance, with a 7,000 BA shortfall it is estimated there would be about 1,400 fewer jobs in the state and personal income would be lower by $239 million dollars. The other aggregates indicate a similar decline from a baseline.

- Although large in absolute terms, the impact is not significant in relative terms. For instance, under the larger shortfall in the last column the 1,400 jobs is only .034% of total jobs that year. The personal income change is .07 % and wages are .1 % lower.

- The impacts are proportional given the change in the number of BA’s. For instance, the 2,800 figure is 40 percent of the 7,000 and each of the impacts is roughly this same percentage. This implies that there is no compounding impact of this change, at least in the short run.

- A full economic impact analysis as presented here is instructive. For instance, to simulate the impact on the economy average wages where reduced by the difference in wage rates for 25 to 35 year old people with a BA degree and some college from the national current population survey. If we simply multiply this difference by the 7,000 figure we would estimate wage income to be lower by about $114 million. This would reflect lower wages for this population. However, total wages are lower by about $225 million in the simulation. The multiplier effect of the impacts is important.

- Tax revenue would be lower in the state. For these purposes we use a fairly gross percentage derived from Minnesota budget information. The state produces a figure called the price of government. This is a measure of the cost of all general government services statewide measured by the ration of total revenue to personal income. It answers the question: How much do Minnesotans pay to state and local governments in total? It is comprehensive and includes nearly all revenues generated by state and local units of government as well as public school districts. All state taxes, property taxes, special assessments, fees and charges are included. Federal taxes are not included. The current estimate
of the price is 16.0%. If this is applied to the change in personal income of $239 million suggests a reduction of $38 million. This compares to a total own source revenue figure of about $38 billion estimated for fiscal year 2011 in the state. Again, while the absolute figure is large the proportion of the total is not.

Research Findings and Conclusions

Research Findings
Two independent approaches to projecting occupational job growth have been presented. Both are rigorously constructed and based on recognized data and received methodology. But each produces estimates for Minnesota of total employment and changes at different occupational levels that are dramatically different and difficult to reconcile. For a policy maker the choice of the ‘right number’ is important since that choice would lead to very different policies.

The number of new and replacement bachelor degrees between 2006 and 2016 for BLS/DEED is 279,900, or about 28,000 each year if one assumes a linear rate between 2006 and 2016. The BEA/REMI figure for that definition is 348,787, or about 35,000 BA’s each year. These needs can be met be either internal production or in-migration.

There are three important findings on the supply side that are identified in this section. First, the state has been producing about 28,000 new bachelor degrees annually. Growth in production the last few years has been strong and rates relative to population has been increasing. However, the 2005 rate is not much higher than the average for the last 20 years and if applied to projections for relevant population cohorts in 2016 suggests a production level of about 28,000. If the 35,000 annual figure is correct then there may well be a capacity problem in the state. There may simply be a population supply problem to meet this need.

Second, it is not likely that this level could be increased through improved high school graduation levels. The actual number of graduates will fall, perhaps by as much as 10 percent. Increasing the actual graduation rate is a possibility, but this may not prove fruitful since Minnesota already has one of the highest graduation rates in the country. Increasing the participation rate is another policy target, but difficult given changes in demographics and traditional participation rates by students of color.

Third, Minnesota continues to be an importer of highly educated people. New in-migrants of people holding bachelors degree ranges anywhere from 2,200 to 3,400 people annually. But the state already ‘relies’ on this flow to meet current labor market needs. It would take substantial economic incentives relative to other states to improve this population flow.

Simulations of the impact on the Minnesota economy where performed under the assumptions of a shortfall in the number of BA degreed people in the state. At the high end this produced job declines of about 1,400 and lower personal income by
about $239 million. While both numbers are large they represent a small proportion of the total.

**Conclusions**
These estimates represent one possible outcome in a spectrum of educational and occupational choices in the future. In one sense the proposition offered is conservative; it simply represents a number of people obtaining some college education instead of a full BA. Alternatively, these people may only receive a high school education and the economic impact would be larger since their wages would be lower. At the same time these estimates are high because they double count multiple job holders. While it is difficult to choose a future state of affairs, state policy makers do need analysis that reflects the most probable outcome. The estimates presented here are based on recognized data sources and methodologies.

With these provisos in mind, the economic estimates do not suggest a significant impending problem. Although the data reflect Minnesota, there is no reason to believe that other states would experience negative impacts that are relatively higher. Economies are simply too large and these impacts take a long period of time to manifest themselves in a meaningful way. But this point reflects the greatest weakness of this analysis. There will be labor and educational training issues in the future, but they will take longer than 2016, the date used in this analysis, or 2020, the date used elsewhere, to impact an economy in any dramatic way. The state of Minnesota may be able to withstand a 7,000 shortfall in BA’s for some time, but not over a very long term course. While politics tend to respond to immediate needs, not long term concerns, these issues should be addressed in a thoughtful manner.

Higher education institutions need to view this information much differently. They need to fill seats and operate the business. The information suggests a frustrating environment. On the one hand there will be demand from business as labor needs go unmet. On the other hand there will be fewer students to fill the seats being demanded. While adult education and retraining will be a likely response, it’s not clear this will meet the needs of the business sector in search of replacement workers.

**Policy Recommendations**
The results here point to a number of general policy recommendations.

1) States need to implement a process that systematically analyzes occupational projections on a regular basis. Models at the state level need to be reevaluated and updated on an annual basis. Any system must utilize all available information. The system must utilize sophisticated modeling techniques to fully understand the economic implications of these projections.

2) States need to formally establish a process that includes all of the higher education institutions in the state to thoroughly communicate and evaluate these projections. This should include the public four and two year systems, the private non-profit institutions and for profit schools. The state role is to aid in
planning, not to necessarily direct responses. Leaders at these schools are competitors in the higher education market and they will have to make decisions they feel are in the best interest of each institution.

3) States need to review policies that may inhibit the flexibility of institutions to change. In an increasing dynamic labor market educational institutions need to be more responsive than current practices allow. This has significant implications for stakeholders at these institutions and they need to be a part of the process from the beginning.

4) The relationship of state policy connecting economic development and higher education is weak. Simply putting some representative from higher education on some workforce council is inadequate. Better coordination is needed between higher education and economic development agencies.

5) States must create policies that address all aspects of potential labor market imbalances. Some of these efforts are already underway.

   i) States must improve high school graduation rates.
   ii) States must make sure its graduates are prepared foe college or the workforce.
   iii) States must improve college graduation rates in a timely manner. Too many students start college and do not finish or take many years to finish. This wastes taxpayer’s dollars and is irrational for students given opportunity costs.

6) There are other labor market policies that have not been widely considered. States could consider investments in programs to improve net migration rates such as tax credits or other incentives. This is a zero sum game across all states, but this type of competition would not be new.

7) States could create incentives on the replacement aspect of the equation. Reducing the number of job replacements through pension or tax policies would help the economic problem although it does nothing for educational institutions.

8) States should take a much broader and innovative view of the productivity problem. Labor imbalances can be met through a more productive workforce. While more education has been proposed as one approach to this issue, there may be others. States should investigate technological changes across all business sectors that may result in a general productivity increase. The possibilities are wide open and quite uncertain, but they may include something like a statewide free high-speed broadband access (other countries already have but this progress is slow in this country).  

35 “The average broadband download speed in the US is only 1.9 megabits per second, compared to 61 Mbps in Japan, 45 Mbps in South Korea, 18 Mbps in Sweden, 17 Mbps in
9) States may consider tax policies that incent businesses to enter into continuous retraining and upgrading programs that improve labor productivity. While businesses may do some of this already, the point is to get ahead of the labor imbalance and mitigate issues across the economy.

France, and 7 Mbps in Canada, according to the Communication Workers of America”. See wpressesc.com/01179677598_us_internet_slow
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Improving Higher Education Attainment in High-demand Disciplines: State-level Policy Developments in Utah and Washington

WICHE Ford Fellows Project

Brad L. Mortensen
June 9, 2008
Introduction

As we now move well into the 21st Century, the importance of a state’s higher education policy framework is increasing. Recently the National Center for Higher Education Management Systems (NCHEMS), has emphasized this by drawing comparisons of U.S. higher education attainment with the international community. Such comparisons suggest several implications that magnify the importance of establishing an effective higher education policy focus. Among the 30 members of the Organisation for Economic Co-operation and Development (OECD), the U.S. and Germany are the only two nations to see their levels of educational attainment slip in younger generations (see Figure 1). Having dropped from second to tenth in higher education attainment in the time span of a single generation, the combination of lower U.S. postsecondary educational attainment and rapid increases in other nations presents serious challenges to the future economic competitiveness of the United States.

Figure 1. Percentage of Younger and Older Adults Attaining Higher Education (Associates and Higher), U.S. and OECD Countries, 2005


The review of other educational pipeline data from OECD’s Education at a Glance 20071 suggests the capacity of the U.S. to reverse trends in postsecondary educational attainment may be in trouble. When it comes to high school completion, the U.S. ranking declined from 11th among 16 reporting OECD nations in 1995 to 18th among 22 reporting in 2005. The ranking for the percentage of 20-

1 OECD’s Education at a Glance 2007 is available online at www.oecd.org/edu/eag2007
29 year olds enrolled in public and private institutions also fell among peer nations, as the U.S. ranked 16th among 28 reporting OECD nations in 2005, after having been ranked 13th 10 years earlier. Further exasperating the downward trend in college completion levels are data that show the U.S. ranks 15th among 24 reporting OECD nations in higher education completion rates.

The federal system of government between in the U.S. dictates that higher education policy, for the most part, is developed under the jurisdiction of the individual states. Because of this, pressure is placed on state leaders to develop effective higher education policy strategies to improve the attainment of the U.S. as a whole. Among other issues, these strategies must address the need to generate a highly educated populace that complements the state’s economic demands and circumstances. The strategic and systematic development of effective state policies represents the major instrument of response that can be employed within the U.S. to reverse the country’s downward trend in higher education attainment.

NCHEMS has also highlighted that the ability of individual states to improve educational attainment among their residents appears to vary widely. When comparing patterns across states of educational attainment by different age groups, some states have realized improvements, while nearly as many have suffered the same type of decline across generations that plagues the U.S. as a whole (see Figure 2).

**Figure 2. Percentage of Younger and Older Adults Attaining a Bachelor’s Degree by State, 2006**

Over recent years, policy observers in higher education have diagnosed an evolution in higher education policy agendas across states. During the three decade period from the 1950 to 1980, most states articulated a higher education policy position that embedded regulatory coordination principals in various state-level higher education governing or coordinating structures to promote efficiency and clear organizational structures. Several analysts have noted, however, that a number of states transitioned away from the regulatory coordination traditions of the 1950s, 1960s, and 1970s and instead developed a new role in higher education policy leadership. This new role sought to incorporate market-oriented perspectives in a variety of higher education policy arenas, from planning to outcome measures and from client focus to partnering with public and private providers.

The purpose of this paper is to review policy efforts being made at the state level to increase the higher education attainment of our citizens. To evaluate these efforts, the paper reflects on the development of initiatives within the states of Utah and Washington to expand education attainment in critical areas of high workforce demand over the last 10 years. The cases surrounding the development of these policies across the two states exemplify the efforts that can be made within a state to bring a new level of policy leadership to addressing problems of educational attainment.

Following a section that provides background information for Utah and Washington, the individual policy developments are presented. Finally, conclusions are drawn regarding the effectiveness of such policies and their overall impact on addressing educational attainment within two state context.

Background on Utah and Washington Higher Education

Utah and Washington were selected for comparison in this study because of several factors. The states and cases within the states are not intended to represent all state-level experiences in higher education policy. Rather, they are intended to provide an in-depth look at the policy developments within two states. While geographic location is one regional similarity for Washington and Utah, other indicators regarding the demographic, economic, political, and higher education environment across the two states suggest a number of differences. The following paragraphs and tables summarize conditions in these areas not only for the purpose of comparing the two states in this study, but also for the possibility of considering the application of the policies and conclusions discussed in this paper to other locations.

Political Context

The political environment across the two states varies quite significantly. During the time period of this study, Utah was one of if not the most Republican states in the country. From 1993 through 2006, Republicans held an average of 68 percent of the seats in the State Senate and 72 percent of the seats in the House of Representatives. The state’s governors and lieutenant governors through the period were also exclusively Republican.
Washington, on the other hand, represented a state with a greater partisan balance. Although all the governors during the time of the study were Democrats, a Republican and Democrat split time as lieutenant governor, and only Republicans held the secretary of state position. Legislative majorities vacillated between the two political parties, with control of the Washington House of Representatives and the State Senate changing hands six times from 1994 to 2006.

**Demographic and Economic Context**

Demographic and economic indicators across the two states also reflect a number of differences (see Table 1). Utah ranks 34th among states in both its population and gross state product, while Washington ranks 20 positions higher at 14th in both categories. This places Washington at the top of the second quartile of states when it comes to number of people and size of the economy, while Utah is in the lower portion of the third quartile of states on these measures. Both states, however, have a population that is growing more rapidly than the national average. The impact of growth among college-going populations is estimated to be much greater in Utah. Projected college-going population growth in Utah is four or five times the level projected for Washington and for the U.S. as a whole, respectively.

When considering the plight of state expenditure increases that exceed the revenue capacity of the state’s tax structures, both Utah and Washington stay within a couple of percentage points of the national average level of projected state budget shortfalls in 2013. In Utah, the poor aren’t quite as poor as they are in Washington or the rest of the U.S., as the average income for the poorest 20 percent of the population is about $3,200 or 25 percent higher, and the number of children living in poverty is several percentage points lower.

Washington and Utah both have a greater share of the population that has received a high school diploma or equivalent than the national average. Both states also exceeded the national average score for the New Economy Index, an indicator that reflects the level of information technology and knowledge-based economy in the two states. Washington’s score on this indicator is second only to Massachusetts in terms of the number of high technology, export-focused, high growth jobs and companies.
Table 1. Demographic and Economic Indicators

<table>
<thead>
<tr>
<th></th>
<th>Utah</th>
<th>Washington</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population, 2005</td>
<td>2,469,585</td>
<td>6,287,759</td>
<td>296,410,404</td>
</tr>
<tr>
<td>Gross state product, 2004 (in millions)</td>
<td>$82,546</td>
<td>$253,085</td>
<td>$11,655,335</td>
</tr>
<tr>
<td>Projected % change in population, 2005-2020</td>
<td>24%</td>
<td>20%</td>
<td>14%</td>
</tr>
<tr>
<td>Projected % change in number of all high school graduates, 2002-2017</td>
<td>31%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>Projected budget surplus/shortfall by 2013</td>
<td>-6%</td>
<td>-8%</td>
<td>-6%</td>
</tr>
<tr>
<td>Average income of poorest 20% of population (2004)</td>
<td>$15,382</td>
<td>$12,210</td>
<td>$12,168</td>
</tr>
<tr>
<td>Children in poverty (2004)</td>
<td>13%</td>
<td>17%</td>
<td>18%</td>
</tr>
<tr>
<td>Percent of population with less than a high school diploma or equivalent (2004)</td>
<td>9%</td>
<td>10%</td>
<td>14%</td>
</tr>
<tr>
<td>New economy index (2002)</td>
<td>69</td>
<td>86</td>
<td>60</td>
</tr>
</tbody>
</table>


Higher Education Context

The state-level higher education structure for each state varies, as Utah has a statewide governing board in place while Washington functions under a statewide coordinating board with individual governing boards for four-year institutions and a statewide governing board for community and technical colleges. The makeup of Utah and Washington’s state-level higher education system, including the type and number of institutions, the type and number of students, levels of public support, and tuition rates, are included in Table 2.

Some interesting observations from this data represent the greater proportion of institutions and students in the public four-year category in Utah compared to Washington. One explanation for this is that three of the seven public four-year institutions in Utah play both a two- and four-year role, and have a substantial share of the responsibility for the production of two-year degrees. Nevertheless, the impact of this simple variable is significant across the two states and likely has an impact regarding relatively lower tuition levels for public four-year institutions, greater compression across tuition levels by type of institution, and higher levels of state and local support. Another observation relates to the significant achievement gaps in both states of the levels of educational attainment between the white and Latino population at both the high school and associate degree level.
Table 2. Higher Education Facts and Figures

<table>
<thead>
<tr>
<th>Institutions of Postsecondary Education</th>
<th>Utah</th>
<th>Washington</th>
<th>Enrollment by Institution Type (2004)</th>
<th>Utah</th>
<th>Washington</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public 4-year</td>
<td>7</td>
<td>11</td>
<td>Public 4-year</td>
<td>99,785</td>
<td>85,800</td>
</tr>
<tr>
<td>Public 2-year</td>
<td>6</td>
<td>35</td>
<td>Public 2-year</td>
<td>34,649</td>
<td>187,779</td>
</tr>
<tr>
<td>Private 4-year</td>
<td>9</td>
<td>32</td>
<td>Private 4-year</td>
<td>38,861</td>
<td>36,695</td>
</tr>
<tr>
<td>Private 2-year</td>
<td>5</td>
<td>3</td>
<td>Private 2-year</td>
<td>3,614</td>
<td>670</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>176,909</td>
<td>310,944</td>
<td>$3,442 Public 4-year institutions</td>
<td>$5,254</td>
<td></td>
</tr>
<tr>
<td>Graduate</td>
<td>15,972</td>
<td>27,713</td>
<td>$2,225 Public 2-year institutions</td>
<td>$2,553</td>
<td></td>
</tr>
<tr>
<td>Professional</td>
<td>1,443</td>
<td>4,867</td>
<td>$5,388 Private 4-year institutions</td>
<td>$20,101</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Per $1,000 of personal income, FY 2006</td>
<td>$10</td>
<td>$7</td>
<td>Positive numbers for mean more students entering than leaving to attend college. Negative numbers reveal the reverse.</td>
<td>6,486</td>
<td>-3,211</td>
</tr>
<tr>
<td>Per capita, FY 2006</td>
<td>$272</td>
<td>$244</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% change, FY 1996-2006, in constant dollars</td>
<td>61%</td>
<td>54%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Racial and Ethnic Gaps in Educational Levels (ages 25-54) 2000</th>
<th>Utah</th>
<th>Washington</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school</td>
<td>Whites 7%</td>
<td>Hispanics/Latinos 42%</td>
</tr>
<tr>
<td>Associates degree or higher</td>
<td>38%</td>
<td>14%</td>
</tr>
</tbody>
</table>


When it comes to measuring the performance of higher education in these two states, Utah and Washington are generally considered to be among the better performing states in higher education. According to *Measuring Up 2006: The National Report Card on Higher Education*, published by the National Center of

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2 NCPPHE’s *Measuring Up 2006: The National Report Card on Higher Education is available online at measuringup.highereducation.org*
Public Policy and Higher Education, these two states demonstrate relatively strong performance when compared to other states. The *Measuring Up 2006* report grades states in five categories: (a) preparation, (b) participation, (c) affordability, (d) completion, and (e) benefits relative to the performance of other states.

Utah was tied for having the best grades in preparation and affordability. Despite a downward trend in participation, state performance remained consistent across the categories of affordability and completion, and improved in the categories of preparation and benefits.

Washington also scored among the highest states in one category, sharing high marks for completion with 12 other states. The report cited improvement for Washington’s higher education performance in three categories: preparation, completion, and benefits. Scores were consistent over the decade in affordability, but declined in the area of participation.

From these data, we see common trends for improved preparation and benefits across the two states, consistent marks in affordability, and decreased performance in the area of participation. Only in the completion category did variation exist across the 10-year trends of the two states. In this category, Utah remained constant and Washington demonstrated improved performance.

<table>
<thead>
<tr>
<th>Category</th>
<th>Utah Grade</th>
<th>10-yr Trend</th>
<th>Washington Grade</th>
<th>10-yr Trend</th>
<th>Best States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation</td>
<td>A</td>
<td>↑</td>
<td>B</td>
<td>↑</td>
<td>A</td>
</tr>
<tr>
<td>Participation</td>
<td>B</td>
<td>↓</td>
<td>C-</td>
<td>↓</td>
<td>A</td>
</tr>
<tr>
<td>Affordability</td>
<td>C-</td>
<td>⇓</td>
<td>D-</td>
<td>⇓</td>
<td>C-</td>
</tr>
<tr>
<td>Benefits</td>
<td>A-</td>
<td>↑</td>
<td>A-</td>
<td>↑</td>
<td>A</td>
</tr>
<tr>
<td>Learning</td>
<td>I</td>
<td>?</td>
<td>I</td>
<td>?</td>
<td>+</td>
</tr>
</tbody>
</table>


Despite the rather positive reviews in these areas, both Utah and Washington are included among the 21 states that show higher education attainment decreases from the older generation to the younger generation in Figure 2. Washington’s decrease is relatively small, a decline of 1.9 percent from 45-64 year olds to 25-34
year olds. This is similar in magnitude to the 1.6 percent decline for the U.S. as a whole. However, Utah’s attainment gap between the older and younger generations is the tied with Hawaii’s for having the third largest decline of 4.8%.

**Workforce Development Policies**

With this background understanding of the political, economic, population, and higher education backgrounds within each state, the topic of consideration shifts to recent policy developments in higher education across the two states. The question of what policies are being undertaken to better prepare the state’s workforce and improve the accountability of the state higher education system can form instructive reviews of efforts being made to improve the educational attainment across these two states as an initial step to improving policy effectiveness on a state-by-state basis.

In both Utah and Washington, a significant undertaking in state policy over the time period of this study focused on the need to prepare additional educated citizens in key workforce areas. Shortages of educated and prepared employees in key disciplines drew considerable attention from the business community and state policymakers. Utah’s efforts focused on specific initiatives in engineering and nursing, while Washington’s program for high-demand enrollments was both broader and more competitive in scope. The following paragraphs summarize the policy developments in these areas for each state.

**Utah Workforce Preparation Initiatives**

Since 2000, two significant state-level higher education initiatives have taken place in Utah to address workforce shortages in specific fields. The first to occur was an engineering and computer science initiative, followed by the nursing initiative. How these initiatives began and have been implemented in Utah are described in the paragraphs that follow.

**An initiative for engineering, computer science, and related technologies.**

Utah’s engineering initiative is viewed as a highly successful program. Passed into law during the 2001 General Session, this program’s intent was to double and triple the number of engineers graduating from Utah colleges and universities. Increasing engineering graduates, it was hoped, would provide the human capital to grow Utah businesses and economic activity. The call to increase the number of engineering graduates originally came from Governor Mike Leavitt. During the presentation of his budget recommendations for the 2000 General Session to the Utah State Board of Regents (SBR) in the December 1999, Leavitt first unveiled his challenge to “double the number of engineering and computer science degrees awarded by the institutions by 2008.” He went on to explain, “This will drive the economy. Future jobs will be paid for or driven by technology and engineering.” The following month in his January 2000 State of the State address, Leavitt announced that he had challenged SBR “to double the number of engineering and computer science graduates.” Nothing of note developed over the 2000 legislative session. In the 2001 State of the State address, Leavitt followed up by laying out an even greater imperative to address this need.
We also need to double in five years and triple in eight years the number of engineering, computer science and tech graduates in Utah universities, colleges and applied technology centers. Let this be the beginning of a new emphasis on market relevance in the allocation of resources at our colleges and universities. I have proposed an aggressive building program to add the physical capacity on our campuses, and funding to assure we have qualified faculty and up-to-date equipment. We need 15,000 engineering and computer science students by 2005. Our economic future depends on it.

As part of Leavitt’s budget recommendations accompanying the 2001 State of the State address, he included an engineering initiative package to increase capacity, improve quality, and provide incentives. Recommendations included nearly $132 million for engineering specific and general classroom buildings, $5.5 million in ongoing and $4 million of one-time funds to expand programs, hire and retain faculty, and enhance equipment, and $800,000 to begin a loan forgiveness program for Utah resident engineering and computer science students who stay in Utah to work for four-years after graduation. To implement this program, legislation passed as Senate Bill 61, *Enhancements to the State Systems of Public and Higher Education* officially launched the engineering initiative. The major components of this legislation, along with the associated funding, are outlined in Table 4.
Table 4. Engineering Initiative Components of Senate Bill 61

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Approved Funding, 2001-02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering and Computer Technology Initiative</td>
<td>Initiative for USHE to double by 2006 and triple by 2009 the number of graduates in engineering, computer science, and related technology programs.</td>
<td>N/A</td>
</tr>
<tr>
<td>Technology Initiative Advisory Board</td>
<td>Appointed by governor as business and industry representatives with expertise in engineering and computer science. Advises SBR in their implementation of the initiative, including making recommendations on the allocation of funds, establishing a strategic plan for the initiative, reviewing and assessing programs, and reporting annually to the legislature.</td>
<td>N/A</td>
</tr>
<tr>
<td>Student Loan and Loan Forgiveness Program</td>
<td>Established to recruit and train talented engineers and computer scientists. Loans granted to students attending a USHE institution who declare intention to complete an engineering or computer science degree and then work in that field in Utah for at least four years. Each year of work repays one year of tuition and fees.</td>
<td>$500,000 one-time</td>
</tr>
<tr>
<td>Incentive Program for Faculty</td>
<td>Annual appropriations by the Legislature to “hire, recruit, and retain outstanding engineering and computer science faculty” (53B-6-105.9.(2)). Required USHE institutions to match the appropriated funds received to match on a one-to-one.</td>
<td>$1,000,000 ongoing (to be matched 1:1)</td>
</tr>
<tr>
<td>Equipment</td>
<td>To improve the quality of instructional programs under the engineering and computer science initiative.</td>
<td>$2,500,000</td>
</tr>
</tbody>
</table>

A number of elements of this legislation are worth noting. In order to guarantee that the initiative remained on target from the perspective of the business community, the Technology Initiative Advisory Board (TIAB) was created in statute to oversee the initiative. TIAB was charged with assessing programs, reviewing the need in the private sector for engineering and computer science graduates, recommending allocations for new appropriations, and fulfilling statutory reporting requirements. The initiative also included the creation of a student loan forgiveness program for students who graduated in engineering and then remained in Utah to work. For each year they worked in the state, students would receive one year’s forgiveness of the tuition and fees. Another facet of the initiative included one-to-one matching requirements for the ongoing funding to hire, recruit, and retain faculty. Institutions receiving such funding allocations were required to match the appropriated amounts with additional funding from internal reallocations, tuition increases, or other sources.
With this structure in place, the engineering initiative received additional funding increases, even during times of state revenue declines, for seven straight years. As stated in reports of the advisory board, the number of engineering, engineering technology, and computer science graduates have increased since the inception of the initiative, though the increase has fallen short of the Leavitt target, which became codified in Senate Bill 61, of doubling by 2006 and tripling by 2009.

The backing and support demonstrated by private industry toward the success of the engineering initiative, through the TIAB and otherwise, is frequently referenced in Utah as a leading indicator for the success of the program. For example, a former executive branch staff member stated in reference to this initiative, “the engineering initiative was totally different though because you had the business community behind it. And the legislators will listen to the business community.”

Table 5. Engineering Initiative State Appropriation Increases and Graduates, 2000 to 2008

<table>
<thead>
<tr>
<th>Tax Funds Allocated to Institutions</th>
<th>Student Loan Forgiveness Program</th>
<th>Bachelor’s Degrees</th>
<th>Masters &amp; Doctorate Degrees</th>
<th>Total Degrees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ongoing Increases</td>
<td>One-time Increases</td>
<td>Ongoing Increases</td>
<td>One-time Increases</td>
<td>Bachelor’s Degrees</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>2000-01</td>
<td></td>
<td></td>
<td></td>
<td>935</td>
</tr>
<tr>
<td>2001-02</td>
<td>$1,000,000</td>
<td>$2,500,000</td>
<td>$500,000</td>
<td>999</td>
</tr>
<tr>
<td>2002-03</td>
<td>$2,000,000</td>
<td>$1,000,000</td>
<td></td>
<td>1,129</td>
</tr>
<tr>
<td>2003-04</td>
<td>$500,000</td>
<td></td>
<td></td>
<td>1,191</td>
</tr>
<tr>
<td>2004-05</td>
<td>$500,000</td>
<td>$500,000</td>
<td>$50,000</td>
<td>1,146</td>
</tr>
<tr>
<td>2005-06</td>
<td>$1,500,000</td>
<td>$500,000</td>
<td>$50,000</td>
<td>1,095</td>
</tr>
<tr>
<td>2006-07</td>
<td>$500,000</td>
<td>$700,000</td>
<td>$50,000</td>
<td>1,039</td>
</tr>
<tr>
<td>2007-08</td>
<td>$3,000,000</td>
<td>$2,000,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Utah State Board of Regents, Data Book (multiple years).
Note: Graduates include all USHE engineering and related technology graduates as well as computer science graduates.

Table 5 demonstrates the amount of additional ongoing and one-time appropriations received, as well as the total amount of engineering and computer science graduates since 2000. The number of graduates has fallen short of the goal of doubling by 2006 and tripling by 2009. In 2003-04, the number of engineering and computer science graduates reached a high level of 1,624, some 36 percent higher than the baseline from 2000-01. However, over the last three years of reported data the number of degree recipients has declined, so that in 2006-07 the level had only increased 22 percent above the baseline.

As noted by the different columns for bachelor’s as well as master’s and doctorate degrees, a more significant level of growth has occurred at the graduate degree level compared to the undergraduate level. Graduate degree production reached an increase of 83 percent above baseline in 2005-06. On the contrary, bachelor’s degree reached their highest level of increase in 2003-04, increasing only 27 percent above the baseline level. Based on the number of graduates in 2006-07, baccalaureate engineering and computer science graduates in Utah grew only by 11
percent from 2001, despite the significant state funding increases provided as well as the institutional matching funds which further leveraged the resources.

**Utah’s Nursing Initiative**

In the summer of 2003, a group known as the Nursing Leadership Forum (NLF) produced a report on the pending nursing shortage across the nation and the impacts of this shortage in Utah. Pressure had started to build earlier in the year on the nursing issue. During the 2003 General Session, Dixie State College had received a small amount of funding to expand its nursing program to help address an immediate shortage in that community related to the opening of a new, much larger hospital. Other institutions had also requested funding for nursing programs, but in a season of greater budget reductions than budget additions, only DSC received additional resources.

NLF came together in an effort to build broader support to address this problem. The membership of this group included the Dean of Nursing at the University of Utah as the chair with representatives from the other USHE institutions with nursing programs, BYU, Westminster College, the University of Phoenix, the Utah Health Care Association, the Utah Hospital Association, the Utah Nurses Association, and the State Department of Licensing. The bottom-line of the report recommended that the way around the shortage was to train more nurses. Because Utah as a state was in the fortunate position, according to the report, to have more demand for nursing programs than supply for being able to accommodate students, the simple answer was to increase the supply of nursing student opportunities through the infusion of additional financial support across state institutions.

Citing the need to expand programmatic opportunities at multiple levels across the state, NLF recommended training more nurse educators at the master’s and doctorate level as well as increased funding for training of bachelor and associates prepared registered nurses. Table 6 displays the recommendations of the leadership forum, including the number of additional nursing student slots that would be required, as well as the funding requirements to increase programs to those levels.

<table>
<thead>
<tr>
<th>Nursing Degree Type</th>
<th>UU</th>
<th>WSU</th>
<th>DSC</th>
<th>CEU</th>
<th>UVSC</th>
<th>SLCC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>RN - Associate</td>
<td>200</td>
<td>29</td>
<td></td>
<td>30</td>
<td>68</td>
<td>80</td>
<td>407</td>
</tr>
<tr>
<td>RN - Bachelors</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>80</td>
</tr>
<tr>
<td>Master’s</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Projected Cost</td>
<td>$1,875,000</td>
<td>$2,163,000</td>
<td>$325,000</td>
<td>$476,152</td>
<td>$853,122</td>
<td>$891,000</td>
<td>$6,583,274</td>
</tr>
</tbody>
</table>

Source: Utah State Board of Regents.
After adopting this plan, SBR included one-third of the NLF proposal, or $2.2 million, in its 2004-05 budget request with the idea that the full amount could be phase funded over three years. During the 2004 legislative session, an additional $675,000 of ongoing support was provided for eight USHE institutions (two more institutions than the NLF recommended receive funding) on the condition that the funds be matched one-to-one with institutional sources. Intent language also specified the concentration of these funds in two-year RN programs to reduce workforce shortages. The 2005 session provided an even greater boost, this time seeing $1,500,000 of ongoing support flow to nine USHE institutions (all but Utah State University). Only the addition of $250,000 in ongoing funds was allocated in the 2006 session, with an additional $500,000 appropriated in 2007. After four years of pushing for the $6.5 million in additional funds, the total amount secured equaled approximately $2,925,000 of base funding, or just over 44 percent of the original target, to expand the number of nursing slots to address future nursing shortages.

The number of students completing associate or baccalaureate degree nursing programs during the rather short timeframe of the nursing initiative has shown some early signs of expansion. ADN and BSN nurse graduates grew from 1,929 in 2004-05 to 2,221 in 2006-07. The growth of 15 percent over a three-year span occurred despite a nearly 6 percent decline in 2005-06, when only 1,816 degrees were granted.

Employers of the students being trained for the nursing initiative contributed financially to expand the programs in addition to working cooperatively for legislative support. As an example, the largest hospital network in Utah gave donations to six USHE institutions, BYU, and Westminster College to expand their programs and produce about 600 more nursing graduates over a five year period.

**Washington Workforce Preparation Initiatives**

In the state of Washington, a similar set of initiatives developed to support workforce preparation in particular “high-demand” fields. Policymakers used the term “high-demand” to describe (a) instructional disciplines where student demand exceeded the number of available educational slots and (b) career fields that employers had difficulty finding enough qualified graduates to fill open positions. In cases where lack of higher education enrollment slots factored into an insufficient supply of skilled labor, the term “high-demand enrollment” program was applied, so long as both of the conditions were met under this two-pronged definition.

One factor that influenced creation of a high-demand enrollment program in Washington developed from a concern policymakers and analysts had regarding the state’s funding model for new enrollments. The incentives for this model created an emphasis on expanding programs with costs less than the per student amount funded by the state. The philosophy behind this incentive was if the institution allocated the new enrollment slot to a relatively inexpensive program, greater discretionary income remained for the institutions. This created fiscal disincentives to expand higher cost programs, like nursing or engineering. Although these high
cost programs had greater demand in the marketplace, internal policy and budget incentives discouraged expansions to meet marketplace demand.

Despite disincentives for developing higher cost programs on the campuses, the need for trained individuals in high demand fields provided the state’s higher education community an opportunity to advocate for funding of additional enrollments by concentrating on these high-cost, high-demand disciplines. Through alliances with industry and business partners who lobbied the legislature that they weren’t getting the type of graduates they needed, a partnership formed with the industries feeling pinched because of a shortage of graduates in high demand fields. This became a strategy to increase the overall number of enrolled students funded by the state.

Backed initially by Governor Locke for the 1999-2001 biennium, the new initiative directed the state’s Higher Education Coordinating Board (HECB) to administer a pool of funds that would be allocated through a competitive proposal process at two- and four-year institutions throughout the state. Proposals were to detail how the institution would use the funding and accompanying enrollment slots to meet the two-pronged high-demand enrollment need. Through the legislative budget process, $4,750,000 was set aside for HECB to administer as a high demand enrollment pool to cover 500 enrollment slots.

During the following 2001-03 biennium, state revenue shortfalls resulted in no additional funding being provided for a second round of high demand enrollment allocations. Because of continued interest in providing greater access in high-demand enrollment areas, the legislature adopted language that directed public institutions to prioritize the expansion of student slots in high demand disciplines for the two fiscal years of the biennium. The specific legislative language stated, “When allocating newly budgeted enrollments, each institution of higher education shall give priority to high demand fields, including but not limited to technology, health professions, and education.”

As part of the required fiscal year-end report on high-demand activities those years, HECB pointed to several difficulties in addressing high demand enrollments without a new pool of legislative funds. Because high demand programs typically had higher costs-per-student than other programs, institutions could not simply move a slot to a high demand program from another program on a one-for-one basis. This limited the capacity to make simple enrollment reallocations to address high-demand enrollment needs. Another complication rested in the fact that during a time of budget reductions, institutions already faced pressure to cut enrollment to reduce costs across the board. The combination or resource reductions on top of legislative direction to reallocate slots to high demand programs significantly reduced the capability of institutions to expand high-demand programs through reallocations.

Though partnerships across public institution sectors and with the private business and economic development groups helped to increase the ability to respond to a limited number of high demand areas, HECB believed a restoration of the high demand enrollment pool was necessary to meet the growing state needs in this
area. This was perhaps reinforced by the relatively little amount of evidence provided by institutions that they had demonstrated the ability to specifically increase the number of high demand enrollment slots for students at their institutions.

Funding for the high demand enrollment pool resumed in 2003-05 biennium. One pool was made available to the State Board for Technical and Community Colleges (SBCTC), with $6,304,000 in fiscal year 2003-04 and $6,305,000 in fiscal year 2004-05, appropriated to expand enrollment capacity in the high-demand areas within the community and technical colleges. The disciplines targeted for expansion included viticulture (grape growing), enology (wine making), health services, applied science and engineering, and worker training programs.

For four-year institutions, originally the biennial appropriation was established with a two-year total of $8,275,000 to HECB for administering the competitive proposal process to support 500 new FTE enrollment slots at the six public four-year institutions. Almost half (246) of the slots were scheduled to be added during the 2003-04 fiscal year, while the remainder would be added during the 2004-05 year.

The 2003 budget bill directed HECB to consider as a priority a number of instructional areas when allocating the high-demand enrollments. These areas included nursing and other health professions, applied science and engineering, teaching and speech pathology, computer and information technology, and ecology and viticulture. In addition to these areas, legislative language also encouraged consideration of “compelling proposals that document specific regional student and employer demand in fields not listed” (SB 5404, Sec. 610, 2003).

The authorizing legislation for the 2003-05 biennium also stated that the public four-year institutions were “eligible to apply for funding and may submit proposals that include cooperative partnerships with private independent institutions” (SB 5404, Sec. 610, 2003). The idea behind these public/private partnerships was to promote the utilization of existing facility capacity at independent institutions. However, no cooperative proposals between public and private institutions were submitted for the 2003-04 competitive process.

In the 2004 session, supplemental appropriations to the established biennial budget increased the number of high-demand enrollment slots for both two- and four-year institutions. For the community and technical colleges, the appropriation to SBCTC for 2004-05 was increased by $3,563,000 for an annual total of $9,868,000. For the four-year institutions and HECB, the number of high-demand enrollment slots increased by 247 for 2003-04 and 603 for 2004-05, while funding increased to a total of $11,838,000 for the biennium, an identical dollar increase as that provided for SBCTC of $3,563,000. In addition, the language allowing public institutions to partner with independent institutions was amended to allow independent institutions to apply directly for the grants. However, Governor Locke used his line-item veto authority to strike this provision.

With the transition to a new governor in 2005, the priority placed on the high demand enrollment program waned. The program received no funding in the
original biennial budget for 2005-07. However, a supplemental appropriation of
$900,000 was authorized during the 2006 session of the legislature which focused
on the regional universities (Eastern Washington, Central Washington, and Western
Washington) and The Evergreen State College. The funding could be used to
expand enrollment slots in certificate, undergraduate, and graduate programs.

A significant new direction for the high demand enrollment program developed
during the deliberations to establish the 2007-09 biennium. The state community
and technical college system received a large infusion of state funding totaling
$17,160,000 to expand enrollment by 1,300 full-time equivalent students over the
two-year period in high-cost, high-demand fields such as “computer science, allied
health sciences, and commercial and electrical construction.”

Regional universities also received targeted legislative support in the 2007-09
budget to expand high-demand programs. Eastern Washington University received
state funding of $1,170,000 to add 100 full-time equivalent students in programs
“such as engineering, computer science, and health care.” Central Washington
University received $1,801,000 from state coffers to add 155 full-time equivalent
students in such fields as special education instruction and information technology,
with an expectation that the largest part of the expanded programs would occur at
centers CWU operated on six community college campuses throughout the state.
Western Washington University received $920,000 in state funds with the
expectation of adding 65 full-time equivalent students in programs such as teaching
English–as–a-second language and early childhood education.

In addition to this level of support for high demand programs, the 2007-09 budget
also began a new student financial aid program known as “Opportunity Grants” for
community and technical college students pursuing certificates and credentials in
high demand fields. The grants were intended to provide assistance with tuition,
books, tools, and fees for low-income community and technical college students.

Table 7 summarizes the biennial funding amounts, slots, and other details of the
high-demand enrollment program.
Table 7. Washington High-demand Enrollment Program Appropriations by Biennium 1999-2001 to 2005-07

<table>
<thead>
<tr>
<th>Biennium</th>
<th>Eligible Institutions</th>
<th>Biennial Funding</th>
<th>Appropriated Enrollment Slots</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2001</td>
<td>All public</td>
<td>$4,750,000</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>2001-2003</td>
<td>All public</td>
<td>$0</td>
<td>0</td>
<td>No additional funding provided. Institutions directed to reallocate to address high-demand areas.</td>
</tr>
<tr>
<td>2003-2005</td>
<td>Public community/technical colleges</td>
<td>$16,172,000</td>
<td>Not specified</td>
<td>Provision allowing independent colleges to apply was vetoed</td>
</tr>
<tr>
<td>2003-2005</td>
<td>Public-four year and independent colleges and universities</td>
<td>$11,838,000</td>
<td>850</td>
<td>Appropriated as part of 2006 supplemental. Limited to CWU, EWU, WWU and TESC</td>
</tr>
<tr>
<td>2005-2007</td>
<td>Public, regional universities and TESC</td>
<td>$900,000</td>
<td>Not specified</td>
<td></td>
</tr>
<tr>
<td>2007-2009</td>
<td>Public community/technical colleges, CWU, EWU, WWU</td>
<td>$36,051,000</td>
<td>1,620</td>
<td>Includes $15,000,000 for Opportunity Grant financial aid program for community and technical college students; directs specific dollars and enrollment slots to CWU, EWU, and WWU</td>
</tr>
</tbody>
</table>

Source: State of Washington Legislative Evaluation and Accountability Program Committee, multiple years.

Policy Impacts and Recommendations

As stated earlier, despite having relatively strong performance in their state higher education program, both Utah and Washington are in a position, along with 19 other states, where educational attainment for their younger 25-34 year old generation lags the attainment of the 45-64 year old generation. As such, the importance for each state to develop mechanisms that expand enrollment capacity and attainment for this younger generation is a compelling policy interest.

In reviewing the state policies of Utah and Washington that address these issues through the specific window of workforce preparation initiatives, the following conclusions arise:

- Proposing initiatives focused on increasing capacity in disciplines with employment demands can be an effective budget strategy.

- Inconsistent support for these initiatives minimizes program effectiveness and sends mixed signals on the importance of the program to the implementers who must work to achieve its success.

- Identifying appropriate outcomes and accountability instruments at the time the program is established improves the likelihood that desired outcomes are achieved.
Successfully addressing educational attainment gaps, especially among the fastest growing demographic groups, requires greater policy intervention than a focus on key areas for workforce preparation.

The conclusions are discussed in greater detail throughout the paragraphs that follow.

**Workforce demand as a budget strategy**

Clearly, both higher education systems in Utah and Washington experienced success from a budgetary perspective through the development of initiatives that focused on increasing enrollment in programs that promote areas of particular workforce need, whether it be focused on engineering and nursing, as it was in Utah, or whether it has a broader focus accompanied by a competitive process like the one established in Washington to expand programs producing too few graduates for employers’ demands.

Over the periods outlined in this paper. Utah higher education institutions secured additional ongoing funding of $9,000,000 and one-time funding of $7,200,000 for engineering, and $2,925,000 for nursing. Additional funding provided support for the engineering student loan forgiveness program for students who graduated in engineering or computer science and then remained in Utah to work. Meanwhile, Washington institutions garnered new programmatic funding of $54,711,000, and beginning in 2007, $15,000,000 in funding for a student financial aid program for students studying in high-demand programs.

Building collaborations with business and industry groups to speak to the need of additional support in these program areas provided a key mechanism to advance these programs in the respective legislatures of the two states. The focus on specific workforce disciplines also helped to overcome often-voiced legislative concerns about higher education merely producing more English or history majors.

**Inconsistent support detracts from objectives**

As political and economic conditions played out in each of the states over the time period of the study, policymakers provided varying levels of support for the programs from year to year. While this may have been necessary in light of fiscal and policy conditions across the states, it created a mixed message regarding the priority and ongoing commitment of the program for institutional faculty and officials who were required to implement the program over time. Figures 3 and 4 below demonstrate the year-to-year fluctuation in funding levels across the workforce-targeted educational attainment policies in two states.
While the order of magnitude for the changes varies much more greatly in Washington than in Utah, fluctuation in funding levels introduces questions of uncertainty regarding the ongoing commitment and significance of the program. Utah’s appropriation levels appear more consistent over the period of the study, demonstrating a more continuous priority throughout leadership changes in the governor’s office, the legislature, and the system of higher education. Both the TIAB and the NLF identified targets of necessary funding levels in order to achieve the enrollment and graduation levels suggested at the outset of the programs. With funding commitments consistently falling short of those targets, the implementers of the initiatives may have taken that as a signal that the full goals of the initiative were also only intended to be partially achieved.
Although Washington institutions did have the benefit of biennial appropriations to provide two years of consistency in program directions, the wide swings over biennia from funding to no funding back to funding and then only funding a limited number of institutions was a result of not only economic but also political leadership fluctuations. This sent considerable mixed signals across the higher education institutions regarding the importance and commitment to address high demand workforce shortages. It also gave institutions little time to ramp up proposals for high demand programs from year to year, causing them to perhaps submit proposals not for the program with the highest demand, but instead for the program which could most easily be jump-started.

Because of organizational differences that focus on institutional, departmental, and individual faculty priorities within colleges and universities, the conveyance of statewide policy objectives that must be implemented at the classroom level requires signals that consistently span organizational boundaries and priorities. With fluttered and inconsistent signals from state policymakers, spanning these boundaries becomes more difficult.

**Identifying outcomes and accountability instruments**

The effectiveness of programs in both Utah and Washington were challenged by the unclear identification of outcomes or accountability instruments for measuring those outcomes. In Utah, the outcome to double and triple engineering and computer science graduates was very clear. However, the difficulty in achieving the desired ends, particularly in view of the data presented in Table 5, may be based on inadequate interim benchmarks for those outcomes.

For instance, because the additional dollars appropriated each year were not associated with a particular number of enrollments or graduates expected, institutions had the ability to utilize that funding in higher cost graduate programs that produce fewer graduates per dollar, or increase compensation for faculty as a retention measure. While these behaviors were expressly allowed by the statute creating the initiative, they may have resulted in delaying the primary goals of doubling the number of graduates by 2006 and tripling the number by 2009.

Furthermore, exactly which numbers the system of higher education was expected to double was never expressly identified. SBR was charged with identifying the fields that were to be included under the heading of related technology for the initiative. However, the exact parameters surrounding which engineering disciplines at which level were to be targeted for doubling or tripling were not established. Neither was the baseline number of graduates from which performance was to be measured.

Unlike the engineering initiative, policymakers did not identify clear objectives for Utah’s nursing initiative. Although the leadership forum established targets of increased enrollment opportunities and acted as an advisory board for the initiative, formal recognition of these targets and the role of the forum yielded additional ambiguity over the directives and the desired outcomes of the initiative. Again, a particular number of additional enrollments were not associated with the increase in
funding. Even over just a three-year period, however, the expansion in the number of graduates in these programs appears significant.

In Washington, policymakers did tie appropriations to expected enrollment slots, but the purpose of “high-demand” enrollment was less clear. In interviews, some state-level higher education observers questioned the identification of some programs as high-demand (e.g. elementary teacher preparation programs – “For crying out loud we have too many elementary teachers! That’s not the point”). This policy objective became clarified as time passed. As described above, during the 2007-09 biennium funding became targeted for specific programs in specific institutions, and in some cases even at certain points of delivery. Debate and other unclear objectives about the role of private institutions competing in the request for proposals also created some confusion about the objectives of the program, at least from the point of view of independent institutions. Representatives of these schools suggested that if the program was first and foremost about educating more students in the areas of highest demand, the state would consider all programs, public and independent, in making the decisions.

The ambiguity reflected in these cases concerning policy outcomes, accountability for measuring the outcomes, or procedures to achieve the outcomes muddied the policy environment and created greater difficulty in implementing the identified workforce educational attainment objectives. Another implication of these objectives was the assumption that attention primarily on the supply side of the delivery model would be adequate to yield the desired results. While both states have invested in student financial assistance packages to stimulate student demand in the desired programs, the significantly greater proportion of resources devoted to the supply of available enrollment slots may or may not be the most appropriate policy response in order to meet the objectives outlined by policymakers.

Educational attainment gaps require broader intervention

In addition to refining policy mechanisms in the areas of select fields related to high demand workforce needs, the experiences of these states demonstrate that even with fairly intense efforts to improve the preparation of additional students in high-demand areas related to workforce preparation, educational attainment trends across the two states demonstrate a lower level of achievement for the younger generation. In other words, a focus strictly on engineering, nursing, computer science, or other disciplines may not be enough to raise the tide of educational attainment across an entire generation.

One significant factor that impedes educational attainment for the younger generation in Utah, Washington, and many other states is the educational achievement gaps across demographic groups, especially regarding the rapidly growing Latino population. As shown in Table 2, Latinos across these states are six times more likely than whites to fall short of graduating from high school. Whites, on the other hand, are about two-and-one-half times more likely to receive at least an associate’s degree. While this trend in and of itself may not be the only factor limiting educational attainment across younger generations, it is a significant
contributor that requires addressing if these states hope to maintain a competitive position in educational attainment.

Understanding the factors that contribute to lower attainment among the Latino population and other demographic groups, including affordability, language difficulties, insufficient academic preparation, cultural traditions, insufficient support systems, or other barriers to educational success are necessary policy consideration. Because low educational attainment groups tend to lack the natural policy advocates that high demand workforce preparation fields might have, such as business and industry or hospital associations, the responsibility to address these concerns rests with a network of state policymakers, higher education leaders, and other interested individuals. While many have viewed this issue as a moral imperative for some time, the problem is quickly rising to, if it has not already reached, the level of a serious workforce preparation impediment. The need to provide support systems, academic preparation assistance across the elementary, secondary, and postsecondary levels, and affordability mechanisms to reduce educational attainment gaps across demographic groups demonstrates a compelling policy interest to improve educational attainment and workforce preparation beyond efforts to expand enrollment capacities in high demand fields.

**Conclusion**

This paper has explored policy cases in Utah and Washington related to expanding educational attainment in high-demand workforce areas. While the states have made significant financial commitments in these areas in order to address specific demands advocated by business and industry, a combination of inconsistent funding levels, unclear outcomes, or mixed accountability indicators have inhibited the full realization of the policy goals articulated at the beginning of these initiatives. While these endeavors demonstrate some significant policy achievements, they also offer windows into the policy process and create opportunities for learning how to improve the alignment of goals, outcomes, and accountability mechanisms as well as maintain a steady, consistent effort toward the achievement of those ends.

In addition, an understanding of these cases offers the realization that more must be done in order to reverse the trends across many states and the U.S. as a whole where younger generations have failed to meet the same level of postsecondary educational attainment as their older counterparts. With the value of increased educational attainment being recognized increasingly by the international community, the U.S. has seen a significant decline in the proportion of its population earning higher education credentials. A significant factor contributing to this downward trend is the gap in educational attainment among demographic groups. Over the long term, this could create a significant impact on the competitiveness of the U.S. internationally. However, with the majority of higher education policy being driven by state policymakers, it is imperative that they assess the broader barriers to educational attainment within their states and adopt policy instruments with clear outcomes, accountability measures, and consistent support in order to place their states, and the country, in a more desirable position.
An Examination of the Enrollment Effects of New Mexico’s Lottery Success Scholarship Program at New Mexico State University

Eduardo Servin
College tuition rates have shown a steady increase over the years. According to the College Board, average tuition fees for public universities, including room and board, grew 5.9 percent this academic year, while private universities, excluding room and board increased 6.3 percent. Public two-year institutions had an increase in tuition and fees of 4.2% in the same year. Between the period of 1997-1998 to 2007-2008, tuition and fees rose 4.4% per year at four-year institutions and 1.5% per year at two-year institutions. From 1996-97 to 2006-07, total student aid soared by 82 percent in inflation-adjusted dollars. During the 2006-07 academic year, approximately three-quarters of full-time undergraduate students acquired financial aid in some form. Federal funding for college students has increased because the number of eligible students has gone up, however the amount has been frozen thereby decreasing in value. Many states instituted scholarship programs in an attempt to fill the void, and three types of awards have become popular with policymakers: merit-based aid which requires some kind of achievement, need-based for students with economic necessity, and blended programs. Blended awards are a hybrid of merit-based and need-based programs, and they attempt to combine the best elements of both programs. Additionally, there are workforce contingent aid programs that are commonly known as loan forgiveness and loan repayment programs. The current report focuses on some of the observed intentions, benefits, and drawbacks of state merit-based scholarships. It also provides a discussion of the results of a single-institution study that examined the impact of a merit-based program on the enrollment of at-risk students, and concludes with an examination of blended scholarship programs.

**Intentions and Benefits**

Legislatures that enact new merit-based aid programs set out one or more of the following objectives for their investment: rewarding deserving high school students; providing high school students with a financial incentive to excel so they can qualify for a state scholarship; increasing college participation; recruiting and retaining students; mitigating “brain drain” by keeping the “best and brightest” in state, often as a spur to economic development; and attracting industry.

Currently, fourteen states offer scholarships based strictly on merit. The most widely known and largest such program is Georgia’s “Helping Outstanding Pupils Educationally” or HOPE scholarship. Enacted in 1993, it is the most extensive merit-based aid program in the United States and has awarded over 3.8 billion dollars in aid to over 1,154,821 Georgia students. According to Dynarski, the HOPE scholarship “increased college attendance rates among all 18- to 19-year-olds by 7.0 to 7.9 percentage points”. In the 2006-2007 fiscal year, the HOPE scholarship served 207,618 students. In the current year the program is serving 158,566 students. In these two years the level of funding has dropped from $452.9 million to $230.4 million. Many other states have adapted the HOPE model for their own merit-based program in the years following its enactment.

One merit based program, Nevada’s Millennium Scholarship Program began in the fall of 2000 and is funded by the state’s tobacco settlement money. Since it was
enacted, the percent of high school graduates going directly to college from high school in the state of Nevada was 37.1%, the lowest of all 50 states. One year after its inception, the participation rate for the state of Nevada jumped to 44.7%.\(^1\) Nevada’s objective of keeping students in state has also been successful. Prior to the scholarship, for every student that left the state for college, one-and-a-half students remained. By the third year of the program, three students stayed in state for each student that left. States like Alaska, Nevada, New Mexico and West Virginia and Georgia also designed scholarships with the hope of keeping their best and brightest students in state. The political popularity of these scholarship programs might be the driving force in the legislatures of some states to create this these types of programs.

### Tradeoffs and Unintended Consequences

As with any public policy, enacting or investing in merit-aid programs entails an opportunity cost (represented by the policies or investments a state is unable to make once it funds a merit-aid program) and bears unintended consequences. While state merit-based scholarship programs may be politically popular, there is evidence suggesting that strictly merit-based programs contribute little to the goal of access to higher education. In New Mexico, Nevada and Georgia the programs have disproportionately benefitted wealthier students who have had numerous advantages throughout their educational paths. In contrast, need-based programs are designed with the primary objective of improving access, and are therefore more efficient at increasing participation because they are better targeted on those for whom finances weigh most heavily in enrollment decision-making.

While Nevada’s Millennium scholarship was successful in increasing participation, fewer minorities were eligible and able to take advantage of the program. Nevada reported 70% of high school graduates were classified as White, 14% were Hispanic, 9% were Black and 7% were Asian. 83% of Whites who graduated from high school were eligible and accepted the scholarship while 10% of Hispanics, 5% of Blacks and 2% of Asians were eligible and accepted the scholarship. Furthermore, over one-third of students that accepted the award reported family income of more than $75,000. Only 30% of Nevada high school students reportedly have family incomes in that range. In contrast, nine percent of Millennium recipients reported family incomes in the $20,000-$25,000 range. Data for percentage of recipients below the $20,000 was not available. Thus, more financially secure families that are better able to fund their child’s education are disproportionately benefiting from these types of merit-based scholarships. Families at the top of the income bracket have legitimate concerns with affordability but they have more options than those families at the bottom of the income spectrum. Additionally, independent students might also be adversely affected because policies are usually not written to address some of their concerns such as having to work and attend school.

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Another drawback that has been noted is growth rate differences in merit- versus need-based aid. Some critics assert that as merit-based programs grow they do so at the expense of need-based programs. For example, in the first year of Nevada’s Millennium Scholarship, 2000-2001, the state was allocating almost the same amount of monies to need-based aid and merit-based aid. The following year, the allocation for need-based aid was $7.47 million while merit-based aid was $13.35 million. Overall however, there has been increase in both merit- and need-based aid, but merit-based aid has grown more in real terms. According to the 2004 Annual Survey Report of the National Association of State Student Grant and Aid Programs (NASSGAP), between the years 1998 and 2003, need-based aid increased by 52%; in contrast, merit-based aid rose 158% during the same time frame. More recent NASSGAP studies show some improvement, but the gap remains. The 2004-2005 survey showed 49% of aid was need-based, 16% was merit-based, and 35% was other. This 35%, which is classified as “other”, happens to include special purpose programs and programs with both need and merit based components (blended). Special purpose programs would include workforce contingent (loan forgiveness). The 2005-2006 report showed no change for need-based aid, while merit-based aid increased to 20% and the other aid was 32% in total percentages.

An additional problem is that states with broad merit-based programs are encountering difficulty in sustaining the merit-based programs due to high demand and rising costs. Factors such as population growth, increasing eligibility, increasing tuition, and diminished lottery revenues are concerns for the states, and a typical response has been to further restrict eligibility in ways that tend to further disadvantage lower-income students. For example, Nevada’s Millennium Scholarship originally required recipients to graduate from an accredited Nevada high school with a grade point average of 3.0, and maintain a 2.0 GPA once enrolled in college. However, just two years after the inception of the program, Nevada increased the college GPA requirement to 2.6 to slow the rapidly escalating costs of the program. In contrast, New Mexico is trying to cut administrative costs rather than affect the number of applicants.

Another unintended consequence is that students are tempted to take less rigorous preparatory and college courses in order to meet the GPA requirements. According to Cornwell and Mustard, Georgia high school students appear to be taking less demanding college courses. In New Mexico, where eligibility is based on first college semester GPA performance, students are taking fewer credit hours and less challenging courses to become eligible for the scholarship in their second semester of college.²

One more concern particular to states that have merit-based programs funded through lotteries is that lotteries are a regressive form of taxation. Low-income people purchase a disproportionate number of tickets. Moreover, the dollar it takes to purchase a lottery ticket has greater marginal utility to a poor person than in

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does to a wealthier individual. That is, poor people are funding these merit-based scholarships that tend to benefit middle-, and upper-middle class families.

**A Single Institution Study of the New Mexico Lottery Success Scholarship**

An introductory sentence is needed here to transition from the preceding discussion. Such as: The tradeoffs associated with aid distributed by merit alone are illustrated with the Lottery Success Scholarship (LSS) in New Mexico. The stated goals of the merit-based state of New Mexico Lottery Success Scholarship, or LSS, were to increase access to higher education and mitigate the brain drain. A recent study investigated the impact of the LSS on enrollment rates for Latino versus White students. The state’s Latino population is growing at a much faster pace than the White population. The 2005 American Community Survey, conducted by the U.S. Census found that, by a narrow margin, the Latino population is currently the major ethnic group in the state with 43.6% of the state’s population identifying themselves as Latino. By comparison, the White population is 43.1%. The study investigated changes in undergraduate enrollment observed before and after implementation of the program, as well as changes in low-income enrollment and rates at which members from both groups received LSS awards. Low-income status was defined as students from families with an estimated family contribution $0. These included independent and dependent students. Latinos were a focus of the study because the institution is a Hispanic Serving Institution on the US – Mexico border, and the Latino population is a majority in the state.

Prior to the implementation of the LSS in 1998, Latino undergraduate institutional enrollment rates at the institution studied were for 1993-1994 5040 while White undergraduate enrollment was 8304. In 1994-1995 Latino undergraduate enrollment was 5118 while White undergraduate enrollment was 8021. In 1995-1996 Latino undergraduate enrollment was 5109 while White undergraduate enrollment was 7538. In 1996-1997 the Latino undergraduate enrollment was 5256 while White undergraduate enrollment was 7118. Financial barriers represent one important reason for these differences, and Latinos may face an increased burden in comparison to other racial groups with regard to meeting college expenses. For example, the Pew Hispanic Center (2004), found that between the years 1999–2000, 41% of White undergraduates had unmet financial needs, in contrast to 57% for Latinos, and 56% for African-Americans respectively.

Additionally, Latinos, for the most part enroll in community colleges, which are attractive because they are more responsive to the needs of non-traditional students, because they are often nearby to students’ homes, and many community colleges have open admissions. The Pew Hispanic Center, found that Latinos are more likely to attend open enrollment institutions; with 66% of Latinos attending undergraduate institutions select “open door” schools.³ College selectivity and college completion are strongly related. There is a low percentage of degree attainment with open door institutions.

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³ The Pew Hispanic Center (2004),
Following implementation of the LSS, Latino enrollment rates increased while White undergraduate enrollment rates decreased. Nevertheless, the White undergraduate enrollment rate remains well above Latino enrollment rates. As of 2005, there were over 52% White undergraduate students in comparison to just over 41% Latino undergraduate students enrolled at the studied institution.

Latino low-income undergraduate enrollment rates also changed after the implementation of the LSS, but not significantly. Initially there was an observed increase in Latino low-income enrollment before it declined in 2001 (Figure 1). White low-income undergraduate enrollment levels steadily decreased. One possible explanation for the early rise in low-income Latino enrollment is that the state mounted an early publicity campaign concerning the LSS targeted to Latinos.

**Low Income Enrollment Rates**

Finally, the study examined LSS recipient rates at the institution. Overall, Latinos as a whole did not have a significantly lower LSS recipient rate compared to the White recipient group. In contrast, the proportion of LSS recipients among low-income Latino students was significantly lower than the proportion of White low-income LSS recipients. Below is a graph of the LSS recipient rates.
The state’s poverty rate for the Latino population is 23% while the White poverty rate hovers around 10%. Nevertheless, low-income White students still received more scholarships than their Latino counterparts. Overall, the research is consistent with previous studies that have found a negative impact on enrollment among low-income students associated with merit-based aid.\(^4\,^2\) Furthermore, these results parallel those produced by an investigation of the impact of the LSS on enrollment at a separate institution, which found that White students appear to be benefiting more from the award. The researchers reported “the program disproportionately attracts wealthier and less able students,” and noted “less capable students among the middle and upper classes will comprise the bulk of new enrollments.”\(^5\) The results suggest that the LSS, as currently designed, may not be serving low-income Latino and White students particularly well. The study claims that the quality in the students in decline because of the decline in ACT scores and the retention rate. In a subsequent study, the authors pointed out the flagship university had taken measures to create programs and help students persist and were having some success increase the retention rates.

Research has demonstrated some of the unintended effects of the strictly merit-based LSS program while accomplishing some of the intent of the program in mitigating some of the brain drain. Future amendments of the law designed to create a more blended-aid program may help better serve low-income students.


Blended Programs

Blended scholarship programs are growing more popular with state grant-aid programs. The intent of the programs is to help prepare at-risk students for college by blending financial need with academic and other behavioral benchmarks. The benchmarks are established to better prepare students for college and improve persistence. The programs also aim at keeping students in state to provide an educated workforce for industry. Blended programs cannot be categorized as strictly merit- or need-based aid. Of states with programs that blend merit and need criteria, Indiana and Oklahoma have more established programs, while Oregon and Tennessee are two of the more recent blended programs.

The Indiana 21st Century Scholars Program began in 1990. One key policy goal of this program is to relieve the financial burden of college on poor and moderate-income Indiana families while attempting to influence the behavior of students. According to the State Student Commission of Indiana, “Income eligible 7th and 8th graders who enroll in the program and fulfill a pledge of good citizenship to the state are guaranteed the cost of four years of undergraduate college tuition.” In 1992, Oklahoma’s Higher Learning Access Program (OHLAP) was implemented. The OHLAP requires that enrollees’ family income does not exceed $50,000. Students must also meet certain academic and behavioral benchmarks. Specifically, they must maintain a 2.5 grade point average, attend school regularly, refrain from substance abuse as well as delinquent acts, and complete a 17-credit core curriculum in high school.

The Oregon Shared Responsibility/Earned Opportunity Program has been described, by David Longanecker, as an indirect blended program. In contrast to the more established Indiana and Oklahoma programs, the Oregon program is more recent and became law in the summer of 2007. Based on the Minnesota model, researchers suggest this program will offer need-based aid that the middle class will tolerate; thus, families are supposed to share the financial burden of higher education. Students are expected to work about 12 hours a week during a semester, and full-time during the summer. If not, the student has the option of taking out loans of about $2,750 a year. This comes out to approximately $13,750 for five years, the average graduation time. According to Oregon policy makers this debt amount is a very manageable amount for a recent college graduate. While this may be true for middle- and upper-income groups, it is not so straight forward for low-income families. The work and debt component requirement is a more complicated issue; lower income families, especially minority low-income families will likely have trouble comprehending the assumption that college debt is acceptable if it is manageable. Consequently, it may have an adverse impact on participation for these groups.

Another more recent blended program is the Tennessee Education Lottery Scholarship program (TELS). The TELS program was implemented in 2004 and has four goals: to promote access to higher education through financial aid, increase success in high school through the scholarship incentive, promote economic
development through workforce training, and keep Tennessee’s brightest students in the state.

In an effort to increase access to higher education, the eligibility requirement of TELS is a high school grade point average of 3.0, or a score of 19 on the ACT. The first version of the bill required both a 3.0 GPA and a score of 19 on the ACT as benchmarks. Ultimately, policy makers were concerned about the difficulty of underrepresented students reaching both the criteria, and elected to expand the pool of qualified students by accepting either the GPA or the ACT score. This change was not without controversy, and the admission standard continues to be debated by the legislature. However, as currently written, the total projected eligible African American students in Tennessee increased from 6% to 12%. Out of a total of 42,772 eligible students in Tennessee African American comprise 7,163. 3194 of the African American students were eligible to receive the award. Moreover, in the fall of 2004, the initial enrollment for the TELS program resulted in a 6.9% growth, the largest increase in enrollment for first-time freshman in public higher education in the state of Tennessee.6

Blended aid programs are growing in popularity and better address the limitations of purely merit-based aid.

**Conclusion**

As college tuition rates continue to rise, how individuals pay for college becomes a more pressing issue for most students and policymakers. Whatever their virtues, aid programs that rely solely on merit-based criteria appear to be inefficient...

Consequently, many states have enacted hybrid programs that blend financial need with academic and, in some cases, behavioral benchmarks as criteria for distributing aid awards. The blended programs have also aimed to help at-risk students and better academically prepare them for the rigors of college. Overall, states and the federal government would do well to work together on the issue. Recently, a presidential candidate promoted the idea of blended aid in an effort to link college financial aid to the jobs students pursue after graduation.

In light of the findings and mounting evidence, changes can be made to grant aid programs that include a merit component, which would likely result in increasing the numbers of low-income and traditionally underrepresented students:

- Eliminate the immediate enrollment clause after high school graduation. Currently, the program calls for immediate enrollment after graduation and we are finding that many students delay enrollment.

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o Provide sliding award amount based on need. Some students may have more need than others in paying for college and this should be a consideration.
o Allow students to re-qualify if they fail to meet program requirements in a semester. Some students fail to meet requirements and lose the scholarship permanently. Students should be allowed to re-qualify for the program.
o Redirect funding to better promote the state scholarships. Some resources should be used to promote the program in the areas where low-income and minority populations reside.
o Target schools with low-income and traditionally under represented students in higher education and provide them with benchmarks to better prepare them for the rigors of college. Funding should be targeted to better address deficiencies for underperforming high schools.
o Establish more lenient academic criteria to better compensate for inequities in college preparation and expand the pool of eligible students. Some states have lowered requirements to expand pool of students. However, as you expand the pool of applicants the number of scholarships could decrease.
Interstate Migration: Washington’s Reliance on Imported Workers to Meet Employer’s Human Resource Needs

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Interstate Migration: Washington’s Reliance on Imported Workers to Meet Employer’s Human Resource Needs

Abstract

This brief analyzes the migration of highly educated workers into Washington state to meet the needs of employers and fuel the state’s economy. Using American Community Survey data the analysis finds that Washington relies heavily on imported workers to meet the needs of employers, particularly in scientific, health, and technical occupations. These findings are consistent with other quantitative and qualitative approaches used to assess occupational shortages. Washington’s higher education system has not kept pace with the rapid growth of the state’s economy and as a result Washington is among the states most dependent on workers trained elsewhere.

Introduction

Washington, like many states, needs to educate more of its residents to higher levels. A number of projects in recent years have begun to converge on a set of key academic programs that would prepare graduates to enter high-demand occupations. Greater responsiveness to employer needs in turn provides returns to the community through economic development and a variety of social returns. A key part of the work to date has been around the assessment of academic program needs relative to employer, community, and student demand. A 2005 Higher Education Coordinating Board (HECB) report, The State and Regional Needs Assessment, identified key occupations including computer science, engineering, software engineering, architecture, and health care that exhibited shortages of workers and the academic fields necessary to prepare graduates for success in those fields. The report also found a more general shortage in graduate and professional programs. Finally, the report identified a need to better understand the specific training requirements for some of the identified occupations as well as a need provide incentives for attracting more students into a few of the high-demand academic fields of study.¹

It is clear that too few Washington residents attend and complete a postsecondary education program of study. As part of the “Washington Learns” initiative convened by the Governor in 2005, the Northwest Education Research Center (NORED) prepared “Making the Grade,” a report indicating that Washington falls well behind the “global challenge states” in terms of degree production at the baccalaureate and graduate levels. The report notes that Washington ranks among the highest states in terms of community college participation rates and associate degree conferrals. However, Washington has at the same time consistently ranked

in the bottom half of the nation in terms of baccalaureate participation rates, bachelor’s degrees conferred per college age student, and graduate degrees conferred.²

Employers also complain that they have difficulty hiring appropriately trained workers. In 2005, a University of Washington study revealed that employers have become more selective in the hiring process and that workers with a deeper and more sophisticated skill set are at a distinct advantage in this environment. Ideally, employers said, workers would develop a mix of technical skills and management, communication, and team work skills.³

The need for higher levels of training is reinforced by surveys conducted by the Workforce Training and Education Coordinating Board. For the past several years these surveys have consistently shown that roughly two-thirds of employers attempting to hire at the associate level or higher reported difficulty finding qualified applicants. As a result, many of these employers report negative impacts on their business including lost productivity and difficulty expanding their operations in Washington.⁴

Interstate migration patterns provide an additional lens with which to assess employer needs. Analysis of census data conducted by the National Center for Higher Education Management Systems (NCHEMS) demonstrates that Washington has been a net importer of highly educated workers. Through the last half of the 1990’s it was clear that many of these workers were predominantly entering occupations that aligned with those identified in other analyses conducted by the HECB and others. However, the utility of the migration data was limited due to a lack of timely updates to the data and concerns about continued reliance on highly educated “imported” workers. This brief examines the training levels and occupational choices of more recent workers entering Washington. The analysis will help us better understand which occupations have relied most heavily on workers trained outside of Washington.

At the time of the needs assessment, 2000 census data indicated Washington was only one of only 14 states that, on balance, imported workers with a bachelor’s degree or higher through the last half of the 1990’s.⁵ One of the key questions in

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2005 was whether that trend had continued at the same rate given the downturn in the economy after 2000, particularly in the high tech industry which had been cited as a magnet for the movement of highly educated workers into the state. Since the release of the needs assessment, new data has become available that allows us to examine what has occurred in recent years. In an updated NCHEMS analysis of net migration by state using 2005 American Community Survey data (ACS), it appears that Washington has become even more dependent on in-migration of highly educated workers. However, the data also appear to indicate Washington may face increased competition for highly-educated workers throughout the country. In 2005, 34 states reported net in-migration — more than double the number of immigrating states through the late 1990’s.

In response to these trends, the final report of the Washington Learns Steering Committee made sweeping recommendations focused on improving the states’ education system. In particular, the report calls for substantial increases in participation and completion at all levels of education citing a need to educate more residents to higher levels. The call for aggressive growth of the higher education system comes at a time when Washington, like most states, is facing new demographic challenges. After years of rapid growth of the college age population, the state is now facing a leveling off of growth of the “college age” population. At the same time that age group is facing a substantial change in its demographic makeup. Our young population, the college age kids of tomorrow, is more likely to be from a background that historically has not been well served by our higher education system in terms of enrollment, persistence, and completion. WICHE estimates that the high school class of 2018 will look quite different than the current class of graduates with 37% from minority groups compared to 25% in 2008, with most of this growth among underserved minority groups. An important challenge over the next several decades will be to improve participation and success in college for all students with particular attention to economically disadvantaged students and racial and ethnic minority students. This is an imperative for reducing the state’s reliance on “imported” talent and prepare Washington residents to compete for the state’s best jobs.

**Analytic Approach**

Drawing on the approach used by NCHEMS to examine net migration of workers by state, this analysis will examine the training level and occupational choices of workers leaving the state and those entering the state. The analysis uses data provided in the Census Bureau’s American Community Survey (ACS). The ACS groups aggregated to “working age” to include all 22-64 and calculations to annualize net migration.

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Public Use Microdata Population data set is published annually; the current analysis draws on data from 2005 to identify which occupations are attracting the greatest numbers of workers into the state.

Two broad groups are included in the study – those who moved to Washington in 2005 and those who left the state in 2005. The population under examination will be further limited to include only “working age” adults, those who were 22 – 64 years of age during the survey year. Unlike the approach used by NCHEMS the current approach reports international in-migration separately or eliminates international in-migration from the analysis. While many employers rely very heavily on foreign-trained workers as an important source of talent, the data do not allow for the calculation of a “net” number since those leaving the country were not captured in the survey sample. As a result, this analysis somewhat underestimates the reliance on imported workers.

Findings
In the NCHEMS analysis of the 2000 census data, Washington ranked 8th in terms of in-migration overall. As a measure of the relative level of reliance on “imported” workers, an in-migration rate was calculated. The NCHEMS analysis used the state’s population to calculate a rate, however, since this report is specifically concerned with the state’s capacity to educate its residents and the relative reliance on migration for new talent a different rate is used. Here, the ratio of net in-migration divided by degrees awarded is used as a measure of relative dependence on workers from outside the state. Using this measure, Washington ranked sixth in terms of dependence on in-migration of talented workers. Between 1995 and 2000 roughly 48 working age adults with a bachelor’s degree or higher moved to the state for every 100 bachelor’s or higher degrees awarded in the state. In 2005 Washington ranked second among the states in terms of dependence on imported talent - attracting 92 working age adults with a Bachelor’s or above for every 100 degrees awarded at the same levels (see figure 1).

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9 The term “in-migration” is used throughout this brief to refer to net in-migration including international in-migration. “Interstate migration” is used to refer to migration among United States but does not include international in-migration.


Overall the data indicate a great deal of mobility in and out of Washington State with the majority, roughly 60 percent, of the movement in and out of neighboring WICHE states.\textsuperscript{12} In total, interstate migration resulted in a net addition of over 23,000 working age adults in Washington State in 2005. In-migration of working adults from outside the United States would add an additional 37,000 working age adults. However, as indicated above, that represents only movement into Washington and does not account for those working age adults who left Washington and the U.S.

When migration is broken down by education level we find that the majority of workers entering the state are highly educated. Between 1995 and 2000, 48% of workers entering Washington held a bachelor’s degree or higher. That number swells to 60% of “imported” workers in the analysis of 2005 data (See figure 2). When U.S. migration and international migration are disaggregated we find that interstate migration is even more heavily weighted to higher educated workers with 78% of workers holding a bachelor’s degree or higher.

\textsuperscript{12} WICHE States include: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming.
Finally, connecting the analysis of migration to the Washington supply of workers prepared to enter occupations provides another lens to assess the degree to which demand is being met in various occupations. Key occupations that had previously been identified in the needs assessment and other research show near parity or some shortage even when imported workers are included in the analysis. Figure 3 shows that even with the addition of workers trained in other states, the supply of workers in research, scientific, medical and computer science occupations demand remains. In addition, management, sales, and service; editors, writers, and performers; human protective service, and engineering occupations rely heavily on imported workers to meet demand.\textsuperscript{13}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure2}
\caption{Net In-Migration By Education Level (Includes International In-Migration)}
\end{figure}

\begin{itemize}
\item 2005 Net In-Migration:
\begin{itemize}
\item Less than 1 year college: 21%
\item 1 year or more college (incl. AA): 20%
\item Bachelor's Degree: 37%
\item Graduate or Professional Degree: 23%
\end{itemize}

\item 1995-2000 Net In-Migration:
\begin{itemize}
\item Less than 1 year college: 26%
\item 1 year or more college (incl. AA): 26%
\item Bachelor's Degree: 29%
\item Graduate or Professional Degree: 19%
\end{itemize}
\end{itemize}

\textsuperscript{13} Demand for workers with a bachelor’s degree and higher is estimated using training level distributions of the “ultimate demand” analysis in the HECB State and Regional Needs Assessment and Estimates of 2007-2008 net openings for both covered and uncovered employment by Economic Modeling Specialists Inc. (EMSI) retrieved April 7, 2008.
Even in occupational fields where there appears to be sufficient local talent at the baccalaureate level, highly-educated workers are moving to the state. This may be a natural side effect of a rapidly growing state and a reflection of the greater mobility of working age adults with higher levels of education. In-migration of workers in these fields may also be an indicator of a preference among employers for workers with higher levels of education as suggested by the 2005 University of Washington Study.

**Conclusion**
Washington is a growing state with a vital economy that has benefited from an in-flow of talented workers trained elsewhere. The State must continue to attract the “best and brightest” from around the world if we are to remain a leader in the “New Economy”. However, we must also do a better job of educating Washington residents. Ensuring that Washington has a postsecondary education system that serves the State’s residents and prepares the educated and trained workforce Washington needs to fuel the State’s emerging and growing industries is a key concern of the State’s policy makers.

The analysis presented in this brief demonstrates employer demand is not limited to a few fields. The need for highly educated workers is distributed across a broad range of occupations and the graduates entering those fields come from an even more diverse range of academic programs. So, while some occupations clearly have shortages that are more severe causing employers to rely more heavily on “imported” workers, in all occupational categories more highly trained workers are moving to the state than are leaving. As we grow our higher education system it
will be important to consider ways we might focus our growth on those fields with the most critical shortages, but it is clear that we have room to grow in virtually all fields.

In addressing Washington’s dependence on “imported” workers, a number of questions naturally arise. To what degree can Washington sustain a competitive economic position while relying on outside talent to fuel the fastest growing industries and occupations? How can we ensure Washington residents have access to the education and training necessary to compete for the best jobs in the state? In a growing state, is there a healthy balance between migration of highly educated workers and opportunities for the state’s residents?

The answer to these questions lies not in the occupational analysis, rather, the answer lies in the State’s demographic projections and in the choices our students make. To the extent that we are unable to serve all qualified residents who wish to enroll in our higher education system, to the extent that we send more students out of state to achieve their educational goals than we attract, and to the extent large segments of our population remain underserved by the education system we should grow our higher education system to serve these students. These are all indicators that have been separately evaluated and bringing this information together will be an important next step in moving toward a benchmark for an equitable and healthy balance in the provision of opportunity for Washington residents and attracting talent from outside the state to meet the needs of a growing economy.
The Latino Educational Pipeline and Zero Tolerance Discipline Policies

Brenda Valles
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Educational attainment levels for Latino students, particularly those of Mexican American decent are alarmingly low, in that too few are getting through the education pipeline by graduating high school, going to college and attaining graduate or professional degrees when compared to their White counterparts and other racial and ethnic groups such as Native Americans, African Americans, or Asian Americans. The college pipeline is even leakier for Mexican American students when compared or other Latino groups such as Puerto Ricans, Cubans, Argentineans or Dominicans. This policy brief examines the impact of zero tolerance disciplinary policies on the extraordinary leakage in the educational pipeline for Latinos.

A recent educational pipeline study from the UCLA Chicano Studies Research Center found that out of 100 Latino elementary school students, 9 will go to a 4-year university and only 8 will graduate with a B.A. Degree. Comparing Latino students with their White counterparts, 28 will graduate from college, for African American students, 13 will graduate from college. These figures are significant given that in Utah the population demographics rapidly shifting. The 2000 US Census found that Utah was over 11% which was an increase of Latinos of over 36% according to the Bureau of Economic and Business Research at the University of Utah.

Today the Utah State Office of Education cites Latinos make up nearly 20% in the public school system. What this means is the Latino population continues to grow and if this population is not educated that will have adverse consequences for the state’s economy. The Center for Higher Education Management Systems recently found that when students do not finish high school they have are more likely to be unemployed, Utah has a 34.1 rate of population that have not graduated high school and are not in the civilian workforce, the rate of participation in the workforce increases with increased education.

In this research brief, this problem of low rates of college-readiness will be focused on by looking at a particular policy that may be preventing college-readiness; in this case that policy is zero tolerance which is a policy to ensure school safety and encompasses in-school suspension, out of school suspension, and expulsion. There are many other barriers students of color face for college-readiness, in other words there are many leaks in the college pipeline for Latino students; this brief will not incorporate other barriers already researched into this brief nor will this brief present zero tolerance as the only potential leak in this pipeline.

This brief relies on research conducted on the impact of zero tolerance policies in the state of Utah, which recently implemented a more stringent set of policies in 2007 and which according to the Harvard Civil Rights Project houses one of the broadest zero tolerance policies nation-wide. Even though this brief is based on Utah data, similar findings have been found across the US, however those studies focus on African American students. This brief will first provide a history and rationale for zero tolerance policies and will follow by results of research examining the impacts of the application of this policy in Utah and lastly, will conclude with implications for public policy.
Zero Tolerance: A History & Rationale

As literature describes, zero tolerance was first used in reference to the position of drug enforcement agencies in California pursuing drug traffickers. Slowly, this term began to make its way into mainstream to describe the position of “not tolerating” social problems such as sexual harassment or drugs. In the late 1980’s, the term transitioned into public schools by Donald Batista, then Superintendent of New York City School District who implemented a policy targeting disciplinary problems and called it zero tolerance, this policy spread to California, Kentucky and New York by 1989.

Later in 1994 President Clinton signed the “Gun-Free Schools Act” authorizing schools to suspend students a year or more for possession of a firearm and ordered schools to recommend student infracting against this policy to the Juvenile Justice System. Thus, the purpose of zero tolerance, with support of the “Gun-Free Schools Act” is to maintain schools safe by keeping them free of weapons (not limited to firearms), violence, and drugs. Skiba, Roush and Ritter explain that the basic premise for these policies “...is based on the assumption of deterrence: irrespective of context, punishing school ‘troublemakers’ severely sends a message that misbehavior will not be tolerated, and schools will be more orderly and safer for those remaining”.

However, evidence suggests that zero tolerance policies may not be accomplishing its main objectives: to make schools safer. The National Center for Education Statistics released a report in 2000 that found that zero tolerance was not associated with improved performance measures of school safety. Both Reyes and the National Center for Education Statistics 2000 report found that students of color are disproportionately and more severely suspended through school-based discipline policies. Additionally, Reyes argues these severe consequences from zero tolerance are occurring for disruptive “adolescent-like behavior” rather than what the policy was written for. Keleher added to that by pointing out in a testimony to the US Commission on Civil Rights that zero tolerance also criminalizes students by referring them to the Juvenile Justice System.

Furthermore, applying zero tolerance practices has resulted in disciplinary decisions that appear to be absurdly severe. For instance in Utah it was reported in 2007 in the Associated Press that a student in Utah was suspended for giving his cousin a cold pill that had been prescribed to both students. Skiba has tracked several others, such as the Louisiana second grader who brought his grandfather’s watch for show and tell and the watch had a one-inch pocket knife attached and due to zero tolerance he was suspended for a month and forced to attend an alternative school; or the Ohio case of a fourteen year old girl who shared two Midol tablets with a thirteen year old classmate and was suspended for ten days with expulsion forgiven, the thirteen year old was allowed back after nine days of a ten day suspension after agreeing to attend a drug awareness class. There are countless other examples that reporters and scholars have tracked.
Adams suggests some unintended consequences of zero tolerance, and among an extensive list the following are six key points raised in this research, 1) students impacted the most by zero tolerance are from lower socio-economic status and other marginalized backgrounds, 2) zero tolerance has a tendency due to its expeditious and absolute nature to violate students’ right to due process, it is not situational or case-by-case, 3) schools are released from the responsibility to serve the student’s educational and developmental needs, 4) zero tolerance is resulting in disproportionately higher cases of students of color being charged or targeted, 5) removals for zero tolerance offenses are occurring for minor offenses than can be approached in more proactive and less drastic measures, and 6) zero tolerance is not a policy based on data or evidence indicating a decrease in violence through implementation.

These impacts of zero tolerance such as the disproportionate rates of discipline for students of color is troubling given recent population demographic shifts toward a larger Latino Utah population. Taking population changes into account, and that Latino students are not college ready or getting far in the college pipeline, it is urgent to point out the severe social, political and economic disadvantages for the state of Utah’s sustainability with the projected growth. Zero tolerance policies extend across the US, and as such there are unintended social, political implications to be aware of for many other states that have a growth of Latinos, particularly in the west.

What’s more, Utah recently passed legislation to make zero tolerance stricter with the enrollment of House Bill 286, this policy is written to release school districts from the responsibility to offer the availability of alternative education programs to students who are suspended or expelled for over ten days. This change in policy pushes the students suspended or expelled, for over ten days, out of an instructional classroom setting to whatever their guardians or parents can do for the student. In addition, this same bill allows school districts to suspend students over the age of nine for classroom disruption, and if a student exceeds that one suspension they can be directly referred to the Juvenile Justice System for a criminal citation based on classroom disruption. House Bill 287 adds “truancy” or school absence to the zero tolerance policies by citing a student over 12 years of age, or the parent/guardian with a class B misdemeanor if a student is frequently “truant”. The policy also states that if the student is habitually cited for truancy, the Juvenile Justice System can take custody and house them within a detention facility.

Subjectivity in the application of zero tolerance is all but inevitable, as “disruption” can be perceived in different ways for instance. In a seminal study of the impact of such judgments Casella examined discipline measures in two public schools and inmates at a medium security prison. He found that teachers and school administrators labeled certain students as “dangerous” when they did not meet the norms of the class. When he interviewed students he found that many who were labeled “dangerous” were cited for non-violent infractions which paralleled with those inmates he interviewed regarding their educational experiences and found they were pushed out of regular classes frequently for non-violent citations when
students and were then tracked, in a sense, to prison. They were kept from the instructional classroom environment and the support and resources needed which created a “feeder and intake” to prison as they could not get what they would have needed to get back to their regular classes after suspensions.

Results

Table 1. Out of school suspension incidents by range for White and Latino students.

<table>
<thead>
<tr>
<th>District</th>
<th>Range of Suspension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total White</td>
</tr>
<tr>
<td></td>
<td>Total Latina/o</td>
</tr>
</tbody>
</table>

Source: Table 07/08A Department of Education, 2005 Office of Civil Rights.

Table 1 includes 22 districts across Utah from small and large-urban, rural and suburban districts. It reaches 40% as a maximum as that is the highest rate of suspension across these districts. It is important to note that across the majority of the districts shown, Latino students have a higher suspension rate. In several districts, Latino students are suspended up to a 25% higher rate than their White counterparts indicating a significant disproportionate rate in that district. Other districts, although not as disparate, also have higher rates of Latino students suspended than White students.
Table 2. Out of School Suspension by Race/Ethnicity and Gender for White and Latino Students.

Source: Table 07/08A Department of Education, 2005 Office of Civil Rights.

Table 2 includes a total of 331,735 students, both females and males from White and Latino backgrounds across twenty-two districts of varying type. This table takes account of the overall percentage of suspension for each group. The percentages reflect a disproportionate number of Latino male students suspended over any other group presented, meaning they are twice as likely to be suspended as their female or White male counterparts.

In table 2 it is also evident that Latina female students have the same suspension percentage, albeit they have far different raw numbers of suspension, that being the case across the groups. This table is important because it highlights a gender effect between Latino students as well as a significantly higher suspension rate for Latino male students than other group.
Table 3. Male Student Suspension Rate Per Capita for White and Latino Students

These graphs indicate the difference in gender for White male students and their Latino counterpart in suspension rate, and below for White female students and their Latino counterparts. These plot graphs are important in that they illustrate the disproportionate rate between these two groups. In thirty-five percent of the districts, Latino students had a significantly larger suspension rate than White male students. Latina students were closer to White male students than to their Latino counterparts and White female students have an overall low suspension rate.

Table 4. Female Student Suspension Rate Per Capita Across for White Female and Latina Students

Many issues and contextual factors must be taken into account to understand low college going rates for Latino students and this analysis only speaks to one policy within the greater college pipeline. The important question, of who is disciplined
and for what infractions may be able to shed light on the problem of differential college-going rages among racial/ethnic groups.

Though this research is not exhaustive, the patterns evident in the data raise some important questions. However, given the remarkable disproportionate rates of discipline infractions in the twenty-two Utah school districts data was available for, the following implications have risen out of this initial analysis.

Public Policy Implications

• Mandate school districts collect disaggregate data on students.

• Create a state-wide electronic data base for discipline infractions to be logged and mandate all districts participate.

• Ensure discipline infraction requires severe punishment such as suspension or expulsion through a case-by-case basis.

• Further research.