

Maine's College Graduates

Where They Go and Why

(Revisited)



UNIVERSITY OF
SOUTHERN MAINE
Center for Education
Policy, Applied Research,
and Evaluation

Finding Maine's Future Workforce

Maine's College Graduates Where They Go and Why Finding Maine's Future Workforce (Revisited)

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The Center for Education Policy, Applied Research, and Evaluation (CEPARE), in the College of Education and Human Development of the University of Southern Maine, provides assistance to school districts, agencies and organizations by conducting research, evaluation and policy studies on a wide variety of education topics. In addition, CEPARE co-directs the Maine Education Policy Research Institute (MEPRI), an institute jointly funded by the Maine State Legislature and the University of Maine System. This institute was established to conduct studies for the Maine Legislature on Maine education policy and the Maine public education system. CEPARE may be contacted by e-mail at cepare@usm.maine.edu



The Finance Authority of Maine (FAME) is an independent State agency that develops and administers programs related to the financing of both higher education and business in the State of Maine. FAME serves as the guaranty agency for the Federal Family Education Loan Program and provides financial resources in the form of student grant, loan and scholarship programs, as well as administration of the State's college savings plan. FAME also provides a wealth of information and outreach programs for Maine students and families designed to encourage young people to aspire to and pursue higher education opportunities. FAME's Commercial Division helps Maine businesses grow, expand and succeed through a broad array of innovative financial tools designed to help companies of all sizes, at all stages, achieve their business goals. FAME represents "Business and Education at Work for Maine."

February, 2006

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Executive Summary

In the knowledge-based economy of today, training and retaining a college educated workforce is crucial to the vitality of Maine. Approximately one-half of Maine's high school graduates who go on to college leave the State to do so. A previous study, *Maine's College Graduates: Where They Go and Why* (2003), looked at the factors that influenced where Maine residents go to college and where they ultimately live and work. The current study, *Maine's College Graduates: Where They Go and Why (Revisited)*, replicates the previous study with a different cohort in order to determine if the findings are indeed consistent and generalizable to a broader population of Maine's college graduates. In addition, it provides discussions of some policy recommendations that may help Maine retain a more educated workforce in the future.

The survey entitled *Higher Education Survey 2004* was completed by a sample of Maine residents who had earned a college degree in 1997 or 1999. A comparison of useable returns with survey returns from the 2003 study, which focused on those who received a degree in 1998, indicated that the groups surveyed were equivalent. Therefore, for this analysis, the three groups of respondents were combined, resulting in research findings based on over 1,780 college graduates.

Major findings include:

- The reputation of colleges and the quality of the programs they offer, are the most important factors to Maine's high school graduates in deciding where to attend college, regardless of whether they stay in Maine or leave the State.
- Affordability and the availability of financial assistance are also important factors for both groups of graduates.
- Approximately one-half of the college graduates surveyed chose to remain in Maine, or to return to Maine to live and work.
- Many of those surveyed who initially left Maine to attend college, later returned to the State to complete their degrees.
- The factors behind decisions about where Maine's college graduates choose to live and work differ for those who stay and those who leave the State. Graduates that stayed in Maine to live and work rated being close to family, and cultural and social ties as being important, while in contrast those that live and work outside Maine rated career opportunities and pay and benefits as being very important.
- Approximately one-half of those surveyed were working in helping professions: health care, education, government and public agency.

- Among those surveyed who worked in the business and technology field, about two-thirds worked and lived outside of Maine, while approximately half of those in the helping professions were living and working inside Maine.
- Approximately one-half of those identified as the “Best and Brightest” students earned their degree from a Maine college.
- However, two-thirds of those identified as the “Best and Brightest” live and work outside of Maine.

These findings indicate that Maine needs a comprehensive long-range plan for retaining a college-educated workforce. This plan should include steps to better market Maine’s colleges and universities, provide support for more Centers of Excellence programs, and provide greater financial assistance to students. An equally important part of this plan should include increasing employment opportunities within the State, as well as encouraging greater cultural diversity and social opportunities.

Introduction

There is a growing recognition among policymakers, business leaders, and educators alike that the quality of the K-12 public education system in a state, as well as higher education attainment levels of its citizens, are critically important to the economic viability of the State and the economic well-being of its citizens. And there is considerable evidence to support this consensus. For example, one study indicates that the home values are as much as 10 percent higher in areas where the K-12 education is of higher quality (*Hungerford & Wassmer, 2004*). The same study also suggests a relationship between school quality and earnings, indicating that, along with increased years of education, the quality of the education is also an important factor in determining earnings.

Additionally, a more highly educated citizenry benefits both individuals and states. Recent data from the U.S. Census Bureau (2004) reports that workers 18 and over with a high school diploma earn \$27,915, while those with a bachelors degree earn almost twice as much on average, \$51,206 yearly. Those workers without a high school diploma reportedly earned only \$18,734 yearly, and those workers with an advanced degree make on average \$74,602 a year. Studies have found that individuals who have earned post-secondary degrees have better health and health benefits, live longer, and have greater economic and social status. States benefit with lower public health costs, lower crime rates, higher tax collections, and greater community participation on the part of citizens (*Baum and Payea, 2004; Weiss, 2004*).

In the case of Maine, there is a strong tradition of providing its youth a high quality K-12 public school system. Relatively speaking, Maine's K-12 system ranks high nationally on several key characteristics. For example, Maine's high school graduation rate is approximately 87.6%, a six year high for the State and a rate above the national average of 85.2% (*The Condition of K-12, 2005*). In recent years, Maine's 4th and 8th graders have scored among the top five states in the nation on the National Assessment of Educational Progress (NAEP). Also, on the Third International Mathematics and Science Study, Maine ranked in the top ten, a ranking that places Maine ahead of France, England, Germany, as well as many other states in the U.S.

But while Maine's youth are getting a highly respected K-12 education, too few of its citizens have earned post-secondary college degrees. According to a 2004 report by the U.S. Census, only 24.2% of Mainers age 25 to 65 have earned a bachelors degree or higher (*U.S. Census Bureau, 2004*). This ranks Maine 40th among the states and significantly behind other New England States (e.g. Massachusetts 36.7% ranked 2nd, New Hampshire 35.4% ranked 4th). Only approximately 31% of 18 to 24 year old Mainers are enrolled in college (*U.S. Census Bureau, 2004*). While Maine had experienced a slight reversal of out-migration trends in recent years, approximately half of those who go on to college still migrate out of Maine each year, and Maine's young adults between the ages of 20-24 are twice as likely as those 35 years or older to move out of the State (*Maine's Changing Population, Realize! Maine, 2004*).

At present, Maine's employment-age population is not as highly educated as needed to be economically competitive now, and most assuredly, not in the new global economic community. Fortunately, many organizations in Maine are taking steps to address this issue. Programs have been implemented that attempt to increase the percentage of Maine high school graduates going on to college, to keep more Maine high school graduates in the State for higher education, and to find ways to entice these college educated Mainers to stay in the State after graduation. Organizations attempting to address the situation include the Mitchell Institute, MELMAC, the Maine Compact for Higher Education, the Maine Youth Summit, and several others. In addition, Maine's Community College System was created in 2002, and in just three short years, degree enrollment in the seven community colleges has increased 44%.

Getting young people to pursue a college degree is only half the battle, however. Maine also needs them to stay in the State, or return to the State, to live and work after they have earned a college degree. There has been considerable concern regarding a "Brain Drain" within the State, the idea that Maine's college educated youth leave the State for school and work and never return. Two strategies often mentioned to combat the problem of young educated Mainers leaving the state are; (1) enticing more to stay for school, and (2) making Maine a more desirable place to live and work.

As a State, it is important that Maine understand what factors influence where a Maine resident chooses to attend college, and what influences their decision about where to live and work. It is important to understand the reality of the situation; only then can Maine policymakers determine what may be done to improve the overall education levels in the State.

Three years ago, the Finance Authority of Maine (FAME) and the Center for Education Policy, Applied Research, and Evaluation (CEPARE) at the University of Southern Maine, collaborated on a first of its kind study designed to increase our understanding of how Maine's young people were deciding what college to attend, and what influenced their decisions most in where they decided to live and work after earning their first college degree. Entitled *Maine's College Graduates: Where They Go and Why (2003)* the major findings from this study were:

- The reputation of colleges, the quality of their programs, and school size are the most important factors to Maine's high school graduates in deciding where to attend college.
- Personal preferences for attending college in Maine or in another state, along with financial aid packages they were offered, are also significant considerations for Maine high school seniors.
- Approximately two-thirds of 1998 college graduates sampled chose to remain in Maine, or to return to Maine, to live and work.
- Where Maine's residents who have earned a college degree choose to live and work depends largely on whether family and social ties, or career opportunities are more important to them.

- Over one-half of Maine’s “Best and Brightest” college graduates in 1998 chose to stay in Maine, or to return to Maine to earn their college degree.
- However, the majority of Maine’s “Best and Brightest” ultimately choose to live and work outside of Maine.

These findings were important for many reasons, not the least of which was that they challenged some of the general perceptions held by many Maine citizens. But the researchers of this initial study believed that before “we rush to judgment” and take action, it was important to determine if the findings from this initial study of one college graduate class were consistent and generalizable to a broader population of Maine’s college graduates. In other words, were the opinions of this one group of Maine’s college graduates surveyed held consistently by other Maine residents who have earned a college degree?

To answer this question a second study of Maine’s college graduates was undertaken. The purpose of this second study of college graduates was to replicate the first study with a different cohort of college graduates. More specifically, the present study sought answers to four key questions, the same four explored in the initial 2003 study. These four research questions were:

1. What factors influence where Maine’s high school graduates choose to attend college?
2. What factors influence where Maine’s college graduates choose to live and work?
3. How many Maine residents who leave the State for college return to Maine to complete their degrees, and to live and work?
4. Are Maine’s “Best and Brightest” youth choosing to attend college outside of Maine, and are they choosing to live and work outside of Maine as well?

Methodology

To answer these research questions, a survey entitled the *Higher Education Survey 2004* was mailed to a sample of nearly 7,115 Maine residents who had earned a college degree in either 1997 or 1999 (the earlier study focused on 1998 graduates). In essence, graduates were surveyed 5-8 years after they had earned their first college degree, and after they had begun work or were pursuing an advanced education degree.

The sample was drawn from loan borrowers who had at least one loan guaranteed by the Finance Authority of Maine (FAME). These loan borrowers were chosen as the sample for three primary reasons. First, most Maine college students rely on some type of loans to help finance college, regardless of the type of institution they attend, or where they attend college. Thus, using FAME borrowers as the sample increased the likelihood that the sample was representative of Maine residents who attend college. Second, one of the major shortcomings of most studies of post-collegiate graduates is that they only represent very selective populations because of the inability to locate many graduates. Using the FAME sample of borrowers increased the likelihood of having current mailing addresses for college graduates. Third, by surveying loan borrowers the sample reflected the views of college graduates from a much wider range of higher education institutions, both in-state and out-of-state.

The survey used in this second study consisted of many of the same items as on the 2002 survey. It also included a few questions not on the original survey, questions intended to provide a greater depth of information regarding respondents' reasons for choosing where to go to school as well as where to live and work. The survey sections dealt with demographics, education experience, post-graduation work experiences, and future plans of respondents. Similar to the earlier survey, key sections dealt with the reasons behind decisions regarding where to attend school, and where to live and work.

The surveys were customized to be appropriate for four different groups. That is, the sample was divided into the same four sub-categories as in the 2002 study:

1. **Stay/Stay Sub-Sample:** Maine residents who: (a) chose to attend college in Maine; and (b) chose to live and work in Maine after graduating from college.
2. **Stay/Leave Sub-Sample:** Maine residents who: (a) chose to attend college in Maine; but (b) chose to live and work outside of Maine after graduating from college.

3. **Leave/Return Sub-Sample:** Maine residents who: (a) chose to attend college outside Maine; but (b) chose to return to live and work in Maine.
4. **Leave/Leave Sub-Sample:** Maine residents who: (a) chose to attend college outside Maine; and (b) chose to live and work outside Maine.

Table 1 reports the survey distribution and return rate information. As was the case in the 2002 study, survey respondents could either complete the survey online or return the completed survey by mail in the pre-addressed, stamped envelope provided. A total of 7,115 surveys were mailed to 1997 and 1999 college graduates, and of those 1,312 were sent back as undeliverable (unknown correct addresses). Of the 5,803 surveys that were deliverable, 1,078 surveys were returned and used for the study, for a return rate of 18.6%.

**Table 1: Survey Distributions and Return Samples
2004 Survey Counts**

1997 & 1999 Graduates	Stay/Stay	Stay/Leave	Leave/Return	Leave/Leave	Totals
Population Samples	5456	2381	1517	1217	10,571
Surveys Mailed	2000	2381	1517	1217	7115
Total Delivered	1680	1913	1288	922	5803
Returned Surveys	299	318	218	243	1078
Percent Return Rates	17.8%	16.6%	16.9%	26.4%	18.6%

Once the surveys were returned and the responses were computerized, an initial analysis was undertaken to determine the comparability of the three samples (1997, 1998, 1999 graduate samples). If the samples were comparable, the three samples could be combined into one group, and thereby increase the generalizability of the findings. Demographic information such as high school grades, decisions to attend a private or public college, college GPA, and parent's education levels were examined to determine if the samples were equivalent. Analysis on each of these demographic determinants revealed that the three survey years were, indeed, statistically equivalent. Because the groups were found to be equivalent, the three data sets were then merged into one to provide for a more robust analysis. Thus, the findings section describes the results of the analyses done on the merged data set, which included the data from the 2002 study. Accordingly, the results described in the following sections reflect the perception of 1,789 Maine college graduates from the two studies.

Table 2 reports the profile of the graduates by sub-sample and year. Looking at the profile, one can see that the percents within each sub-category remain fairly consistent, comparatively, by survey year. Also as shown in **Table 2**, 59.9% of the survey respondents stayed in Maine to earn a 2-year or a 4-year degree (**stay/stay** and **stay/leave**), while the remaining 40.1% left the State to attend school (**leave/return**, **leave/leave**). And at the time they were surveyed 53.6% of the respondents indicated they were living and working outside the state (**stay/leave**, **leave/leave**), leaving 46.4% in the State (**stay/stay**, **leave/return**). **Table 2** also breaks down the data by survey year.

Table 2: Profile of Graduates by Category

Year	Stay/Stay		Stay/Leave		Leave/Return		Leave/Leave	
	n	%	n	%	n	%	n	%
1997	121	26.7	126	27.8	96	21.1	111	24.4
1998	227	32.0	227	32.0	86	12.1	170	23.9
1999	178	28.5	192	30.7	123	19.7	132	21.1
Total (n=1,789)	526	29.4	545	30.5	205	17.0	413	23.1

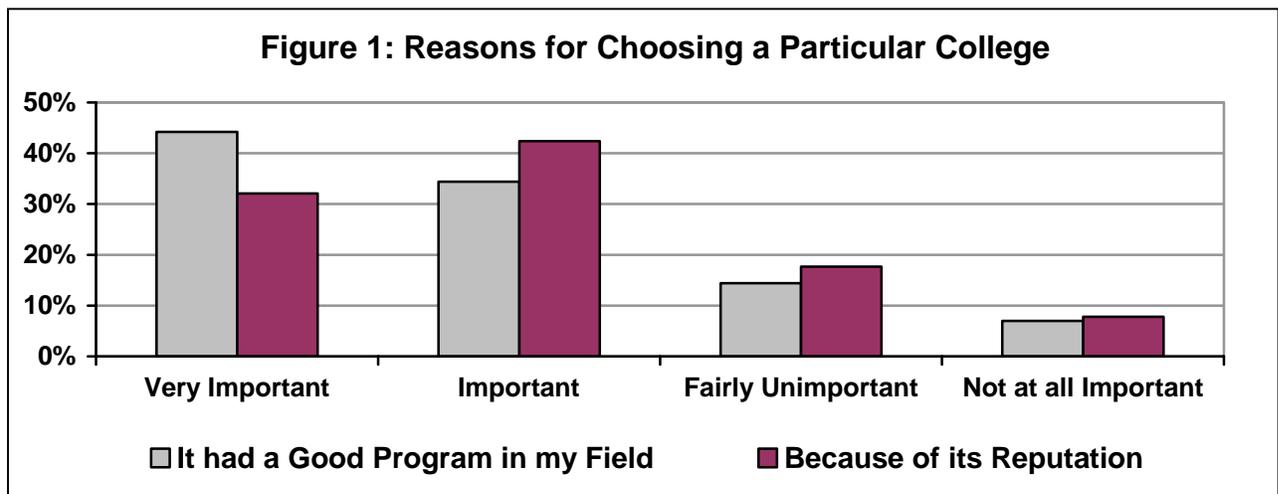
Findings

Survey responses of the 1,789 Maine graduates were analyzed in order to answer the four core research questions. Findings from these analyses are described here for each research question.

Research Question 1:

What factors influence where Maine high school graduates choose to attend college?

To answer this question, respondents were given a list of reasons for choosing a college and then asked to indicate how important each was in their choice of the college they attended. As shown in **Figure 1** below and **Table 3** on the next page, two factors were considered the most important for *both those who chose to stay in Maine for college and for those who left the State for college*. These two were: (1) good program and (2) reputation. In fact, as may be seen in **Figure 1**, these two reasons were “Important” or “Very Important” for over 70 percent of the respondents.

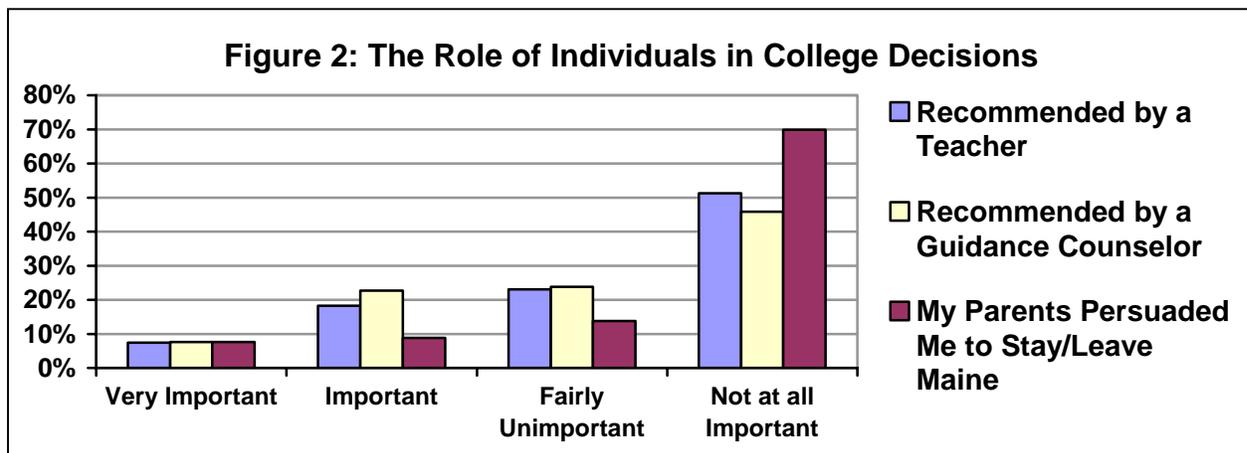


The third most important factor for those who chose to attend college in Maine was affordability, while school size was the third most important factor for those choosing to attend college outside Maine. It is noteworthy that the analysis revealed that the only factors in which there were significant differences in the responses between those that left Maine for college and those that stayed in Maine to attend college, were for the factors of affordable, cultural/social, and commuting distance. Affordability and commuting distance were more important factors for those that chose to stay in the State for school while cultural/social reasons were more important for those that chose to leave for school. However, affordability and financial aid were important considerations for both groups of students. Overall, almost two-thirds of all the graduates indicated these two factors played important roles in their decisions.

**Table 3: Reasons for Choosing to Attend a Particular College
Percentage who thought reason was Important/Very Important**

Reasons for choosing a school	Stay	Leave	All
Good program	79.2%	77.1%	78.6%
Reputation	71.5%	79.0%	74.5%
Size	66.9%	74.8%	70.2%
Wanted to stay/leave Maine	67.1%	68.0%	67.4%
Financial aid	60.9%	68.4%	64.0%
Affordable	71.0%	50.6%	63.1%
Cultural/social	46.2%	59.8%	51.9%
Commuting distance	53.3%	23.2%	43.5%
Classes at convenient times	38.7%	20.8%	32.1%
Had a job in the area	38.9%	15.6%	31.5%
Guidance counselor recommended	30.9%	29.3%	30.3%
Friend or spouse attending	27.1%	25.0%	26.3%
Athletic program	13.3%	27.6%	25.2%
Alma mater of my parents	20.9%	26.1%	22.9%
Teacher recommended	25.1%	26.4%	18.9%
Parents persuaded me to stay/leave	18.4%	13.7%	16.4%

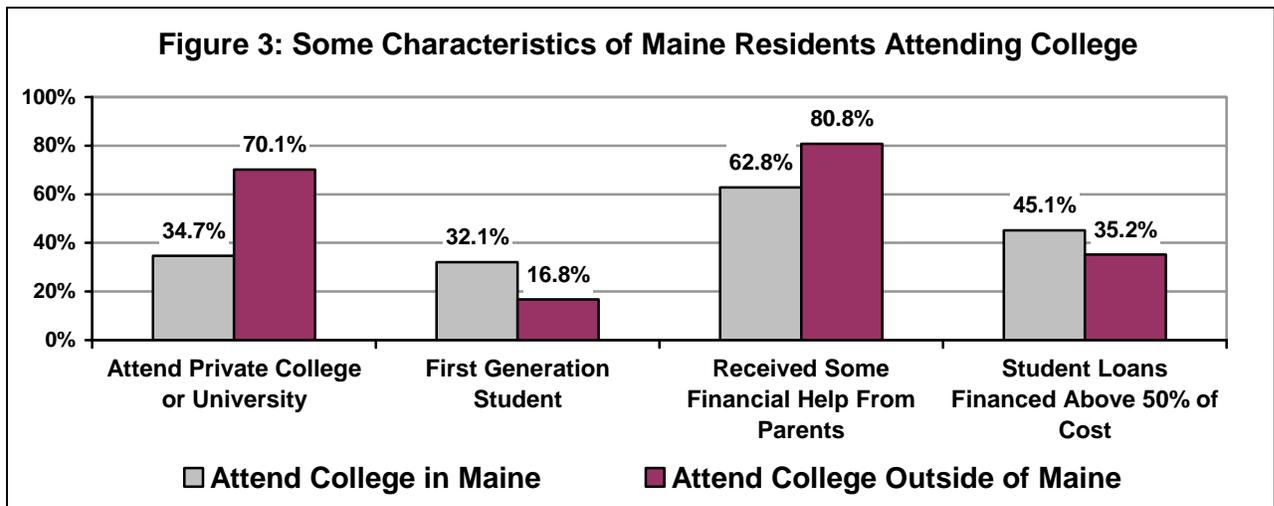
As in the previous study, several factors were shown to play a less critical role in the decision about where to attend college. The role of specific individuals; parents, teachers, and school counselors, were shown to be less important factors, as may be seen in **Figure 2**. In fact, a large percentage of those surveyed indicated that these factors were not even considered (i.e. not applicable) (parents 62.7%, school counselor 50.1%, teacher 55.4%). Additionally, among those that did rate these factors for importance, the majority rated them to be only of little or no importance. Thus, it appears that while information about a colleges' program and reputation are critical factors in choosing a particular college, parents, teachers and counselors may play a minimal role in helping students in their college selection process.



Additional analysis was undertaken to examine the characteristics of students who stayed in Maine and earned a college degree and those who left the State to earn a degree. **Figure 3** below provides some of these findings. By looking at characteristics of college students who stayed and students who left for college, the data reveals that a greater percentage of those that stayed for school went to a public college (63%), compared to the percentage that left the State and attended a public college (29.9%). Students that left the state were more likely to go to a private school (70.1%) and those that stayed for school were more likely to attend a public institution.

In the case of first generation college students (i.e., first in the family to attend college), the data shows that of those who stayed for school, 32.1% were first generation college graduates. Comparatively, of those who left for school, only 16.8% were the first in their families to attend college. Thus, of the 456 first generation college students, the majority of them (337) stayed in Maine to attend college, while only 119 left the state to attend college. This evidence suggests that more of Maine’s first generation college goers are likely to stay in the State to earn their first college degree.

Respondents were also asked about the financing of their education. Of those who attended college in Maine, approximately 63% received some help from their parents, while over 80% of those respondents who chose to attend college outside of Maine received some financial help from parents. The table also shows that a larger percentage of those who stayed in Maine used student loans to finance over 50% of their college costs (45.1%), compared to those who left Maine for college (35.2%).



Students who transferred to another college were also examined to determine if different factors influenced their decisions. **Table 4** on the next page reports the reasons transfer students reported why they chose both their original college and the college to which they transferred. As the evidence indicates, selecting a school with a “Good Program” remained the most important reason for choosing both the original and transfer colleges. As might

be expected, a higher percentage rated affordability, commuting distance, having a job in the area, and classes at convenient times as being important to very important in selecting their transfer college, as compared to their reasons for selecting their original college.

Table 4: Reasons for choosing Original and Transfer College
Percentage who thought reason was important/very important

Reasons	Original college	Transfer college
Good program	73.3%	84.5%
Affordable	66.3%	74.9%
Wanted to stay/leave Maine	65.8%	67.2%
Commuting distance	50.7%	65.9%
Size	58%	57.1%
Reputation	58.7%	56.6%
Had a job in the area	39.8%	51.7%
Financial aid	57.9%	48.5%
Classes times convenient	34.8%	48.2%
Cultural/social	48.2%	47.6%
Friend or spouse attending	26.8%	36.5%
Teacher recommended	30.0%	26.1%
Counselor recommended	40.7%	21.4%
Parents persuaded to stay/leave	17.4%	19.6%
Alma mater of parents	18.7%	18.9%
Athletic program	23.3%	17.1%

In summary, the evidence indicates that there are some key factors that influence Maine’s high school graduates decision of which college or university to attend. These factors are the quality and reputation of colleges and size of the institutions, and are not dependent on where they attend college (in-state; out-of-state), and what type of college they attend (public or private).

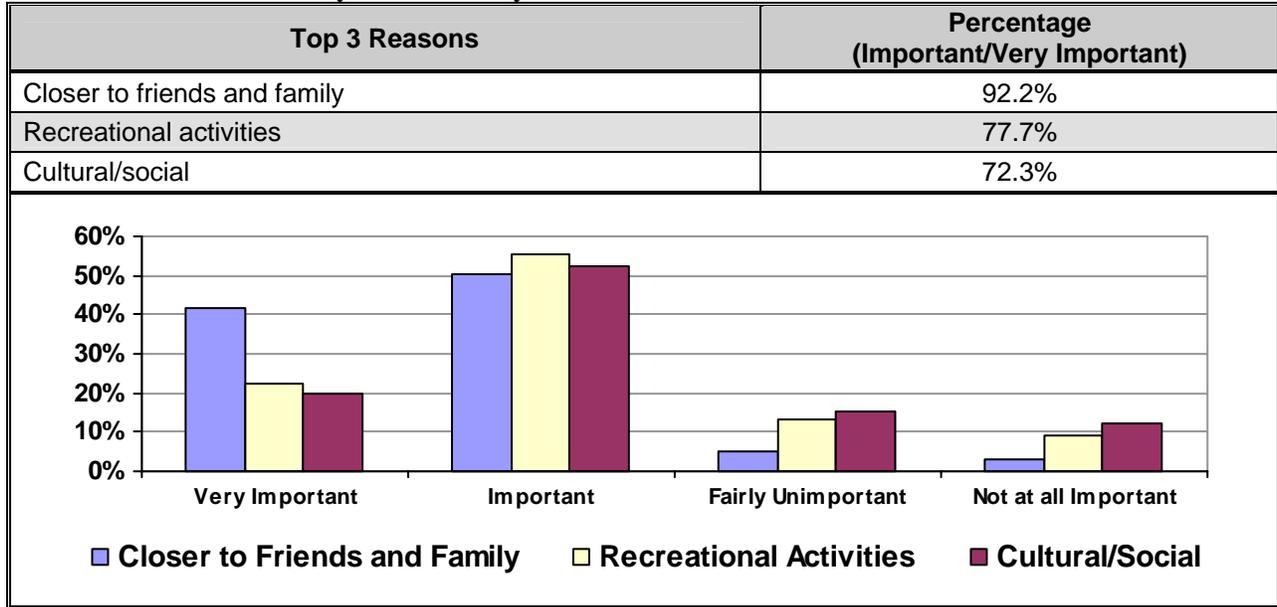
Research Question 2:

What factors influence where Maine’s college graduates choose to live and work?

A second important issue to understand is what factors influence where Maine residents choose to live and work. That is to say, regardless of whether they attended and earned a degree from a Maine college or university or from one outside the state, what determines where they live and work after earning their initial degree? Unlike the evidence in **Table 3**, which showed that the top reasons influencing decisions on where to go to college, were basically the same for those who chose to stay and those that chose to leave the State, what is apparent from the live and work information is that *the reasons for staying in Maine to live and work are quite different from the reasons for leaving the State to live and work.*

Table 5 reports the top three reasons why graduates chose to live and work in Maine. Being closer to friends and family, recreational activities, and cultural/social reasons were most important.

Table 5: Key Reasons Why Graduates Chose to Live and Work in Maine



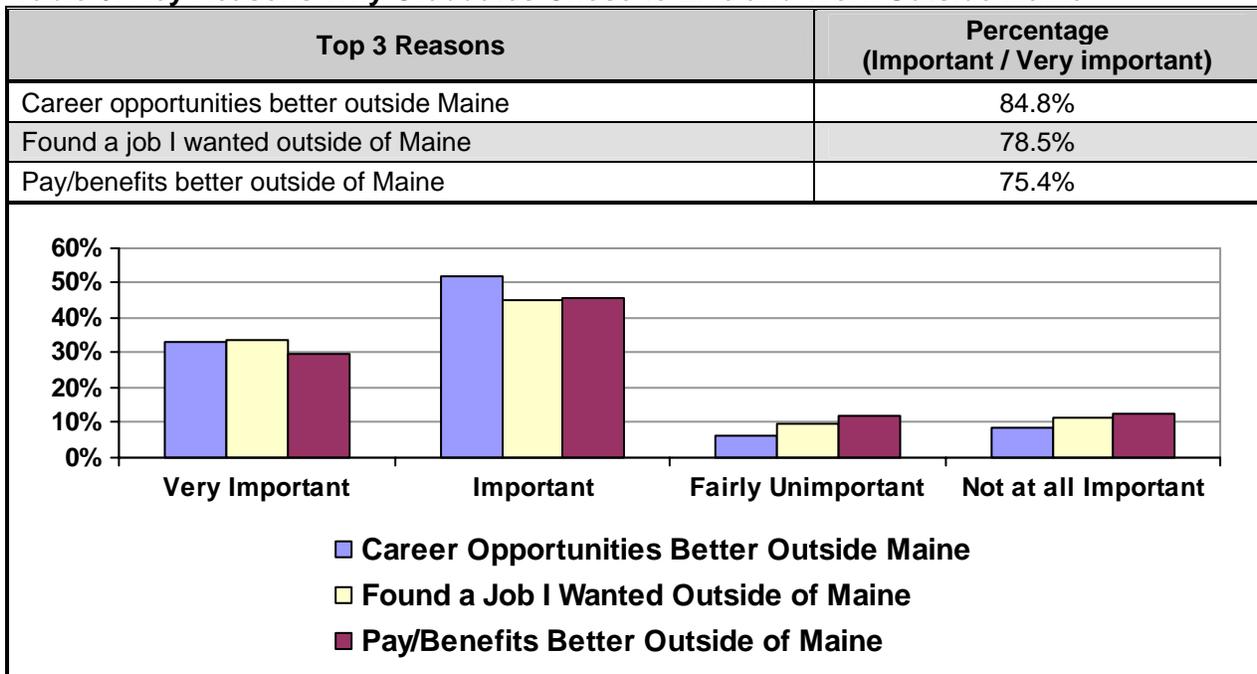
Typical comments from survey respondents were:

- “I chose my undergraduate college because it was not in the State of Maine. I returned to be close to my family after the birth of my child.”
- “I've sacrificed to be able to move back to Maine. I don't earn as much as friends in other areas, and I haven't been able to get a job in my field. I do love living here, but I recognize there may come a time when I'll have to choose between a more fulfilling career, or living in this area. Unfortunately, the more fulfilling career will probably win out.”

Least important were career opportunities and pay and benefits. In fact, only about one in five indicated these reasons were important considerations in where they were going to live and work.

In contrast, and as shown in **Table 6**, for those who chose to live and work outside the State, the most influential factors were career opportunities, as well as pay and benefits.

Table 6: Key Reasons Why Graduates Chose to Live and Work Outside Maine



Typical comments made by these respondents were:

- “I wanted to leave Maine to attend college, and I wanted to experience life in a large city. I stayed outside of Maine because of higher pay, better career opportunities in my field, and advancement opportunities.”
- “I do love the State of Maine. I am extremely proud that I was born and raised there. I would like to give my daughter the same chances during her youth. But my husband and I could not afford to move back. Lower incomes, high taxes, and no public transportation makes living there a hard sell.”

For these graduates, social and recreational factors were much less important.

What about five years from now? Where are Maine’s graduates most likely to be living and working? Survey respondents were asked about these plans and **Table 7** reports where respondents anticipated being five years from the time they completed the survey. One in five (21.4%) of respondents indicated that they were unsure about where they would be in 5 years, while about 40% anticipated being in Maine and a similar percentage anticipated being outside of Maine. Only 8% of those that had stayed in Maine for school and to live and work indicated that they would be living outside of Maine in 5 years. Those who had left Maine to live and work had a higher percentage of respondents indicating they were unsure about where they would be in 5 years (25.9% and 29.0%), compared to those who stayed in Maine to live and work (13.1% and 17.9%). Almost one in five (21.6%) of those who left for school and then returned to live and work, indicated that they would be living outside of the

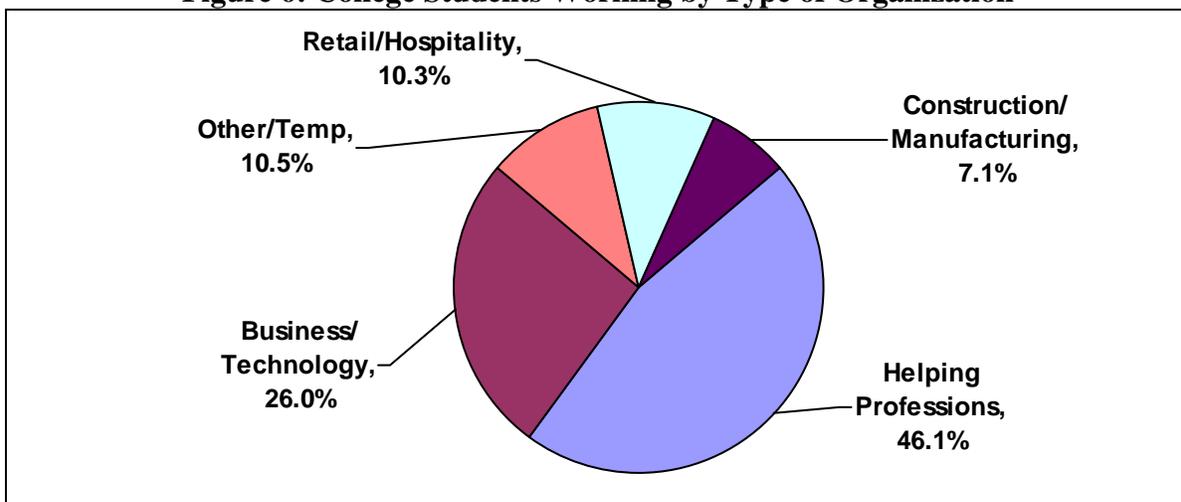
State in 5 years. What is unclear from the survey responses are why these Maine graduates will be leaving the State. These findings seem to indicate that those living outside the State were more uncertain about where they would be living in the future. These findings also seem to indicate that those who were currently living in the State but had gone outside Maine for school were more likely to envision themselves outside of Maine in the future.

Table 7: Where Respondents Reported They Would Be Living in 5 years

	In Maine		Outside of Maine		Don't know	
	n	%	n	%	n	%
Total	694	39.8%	674	38.7%	375	21.4%
Stay/Stay	402	78.8%	41	8.0%	67	13.1%
Stay/Leave	68	12.8%	327	61.4%	138	25.9%
Leave/Return	179	60.5%	64	21.6%	53	17.9%
Leave/Leave	45	11.1%	242	59.9%	117	29.0%

A secondary analysis was also conducted of the professions of those who chose to live and work in Maine and those who left the State. **Figure 6** reports the type of organizations that survey respondents were employed in at the time of the survey. Organizations were grouped according to the nature of the work they performed.

Figure 6: College Students Working by Type of Organization



Type of Organization

- *Helping Professions*: Healthcare, Education, Government/Public Agency
- *Business/Technology*: Finance/Insurance/Real Estate, Professional/Business Service Provider, Technology Company, Self-employed

- *Construction/Manufacturing:* Construction, Manufacturing, Farming, Transportation/Public Utilities
- *Retail/Hospitality:* Entertainment, Hospitality, Retailer
- *Other:* Other and Temporary Employment Agency

The data in **Figure 6** reveals that a large percentage of those surveyed (46.1%) were in the helping professions; healthcare, education, and government or public agency. A quarter of those surveyed were in a business or technology organization. Smaller percentages of those surveyed were in the other/temporary, retail/hospitality, or construction/manufacturing fields (10.5%, 10.3%, & 7.1% respectively).

When separating out each organization by those that chose to stay or leave for work, one finds that the majority (66.7%) of those who indicated they were in the business or technology fields, work and live outside the State. Out of those who indicated they worked in the helping professions, a slightly greater percentage (53.3%) worked and lived within the state. Accordingly this data shows that, within the study sample, people in the business and technology field are more likely to be living and working outside the State, while those in the helping profession are fairly equally represented both within and outside the State.

An additional analysis was undertaken to determine if differences existed for first generation college graduates. As shown in **Table 8**, first generation graduates appear to be fairly evenly distributed across the professions, with a slightly higher percentage of first generation graduates in the helping professions. However, it does not appear that first generation Maine college graduates are more prevalent in particular professions.

Table 8: Percentage of 1st Generation Graduates Working in Different Professions

Type of Organization	Total Respondents	Number 1 st Generation	Percent 1 st Generation by Profession
Helping Professions	738	200	27.1%
Business/Technology	417	93	22.3%
Other/Temp	168	38	22.6%
Retail/Hospitality	166	44	26.5%
Construction/Manufacturing	114	27	23.7%

Research Question 3:

How many Maine residents who leave the State to attend college return to Maine to complete their degrees, and to live and work?

There is a commonly held perception by many in Maine that once Maine's high school graduates leave the State to attend college, they do not return to Maine, or if they do, they do so only after they have earned their first college

degree. But to date, there has been very little factual information or assessment of this perception. Fortunately, the specific design used in this study (and the initial one) helps to shed some light on this perception. Information about how many Maine residents leave the State for school and to live and work can be found by looking at the data for the population sample in this study. **Table 1**, on page 7, shows the original sample numbers for each of the three college graduation years examined in this study. This evidence reveals that while it has been well documented that approximately half of those graduating high school seniors going on to college leave Maine for school, if one adds the number of Maine respondents who actually earned a college degree (i.e., the stay/stay and stay/leave sub-samples) one finds that approximately 75% of those who actually earned a college degree in either 1997, 1998, or 1999 earned that degree from a Maine institution. This suggests that a considerable number of high school graduates who initially leave Maine for college end up returning to the State to complete their degree program and graduate from a Maine institution. At least in these three years, *a trend does appear to exist where a substantial portion of Maine's high school graduates who obtain college degrees are in reality attaining college degrees from Maine institutions.*

Of those that did graduate from a college outside of Maine, it is also important to note that approximately 55% (1997, n=721; 1998, n=595; 1999, n=796) returned to Maine to live and work. This data suggests that the supposed "Brain Drain" in the State is not as prevalent as many have assumed. If the number of graduates who earned their degree from a Maine higher education institution and stayed to live and work in Maine is combined with those who earned their degree outside of Maine, but chose to return to Maine to live and work, approximately 66% of these individuals are living and working in Maine. These findings are particularly noteworthy because they suggest that Maine is not losing as many of its college educated young people as originally assumed.

Research Question 4:

Are Maine's "Best and Brightest" youths choosing to attend college outside of Maine, and are they choosing to live and work outside of Maine?

The evidence suggests more Maine resident college graduates are earning their initial college degrees and deciding to live and work in Maine than generally believed to be the case. But, what about the "Best and Brightest"? There is also a fairly widely held belief that the best and brightest high school students are the most likely to leave Maine for higher education and ultimately stay away to live and work.

In neither of these studies was it possible to obtain objective, independent documentation of student performance (e.g., SAT scores, college transcripts, etc.) So, for the purposes of this study, the "Best and Brightest" were defined by high school grades (reported grades of A or B in high school) and parental education levels (post baccalaureate degrees). Considerable national research has established that these factors are good predictors for identifying high performing students

when standardized test scores such as the SAT's are not available. Using this definition of the "Best and Brightest", in this study, 592 respondents were identified as the "Best and Brightest", representing approximately one-third of all the respondents.

Table 9 reports the decisions about where to go to college and live and work for this sample of Maine's "Best and Brightest". The data in the table indicates that 48.1%, or *approximately one-half of those identified as the "Best and Brightest"*, earned their degree from a Maine college. Clearly, many of Maine's "Best and Brightest" high school students are attending and earning their first degrees from Maine colleges. However, this is not the case for where these graduates decide to live and work. *Almost two-thirds (69%) of these "Best and Brightest" live and work outside Maine.*

**Table 9:
Where Maine's "Best and Brightest" Attended College and Chose to Live and Work**

Group	Stay/Stay		Stay/Leave		Leave/Return		Leave/Leave	
	n	%	n	%	n	%	n	%
"Best & Brightest"	74	12.5%	211	35.6%	110	18.6%	197	33.3%

Of those considered the "Best and Brightest", 69.4% chose to attend a private college, leaving 30.6% of the "Best and Brightest" in public colleges and universities. This data indicates that although approximately half of the "Best and Brightest" stay in Maine for college, a majority of them are attending Maine's private colleges. The "Best and Brightest" students that leave the State to attend college are also more likely to attend a private college.

An analysis was also done to examine the work occupations of the "Best and Brightest". As may be seen in **Table 10**, the analysis revealed that the "Best and Brightest" made up approximately a third in each type of organization, with a slightly greater percentage of the "Best and Brightest" in business/technology (36.9%), and less of a percentage in construction/manufacturing (28.1%). It appears that, overall, the "Best and Brightest" are fairly evenly spread throughout occupations.

Table 10: Percentage of Maine's "Best & Brightest" College Graduates by Profession

Type of Organization	Total Respondents	Number "Best & Brightest"	Percent "Best & Brightest" by Profession
Helping Professions	738	243	32.9%
Business/Technology	417	154	36.9%
Other/Temp	168	59	35.1%
Retail/Hospitality	166	54	32.5%
Construction/Manufacturing	114	32	28.1%

Discussion Section

This study sought to determine the reasons behind Maine high school graduates' decisions of where to attend college, and where to live and work after graduation. The evidence indicates that the primary factors guiding decisions about where to attend college are the reputation of the school and the quality of the programs offered. These factors were found to be important regardless as to whether the respondents stayed in Maine or left the State for college. Affordability and financial aid also factored heavily into college decisions for both those who stayed in the State and those who left.

The reasons behind decisions of where to live and work differed depending on whether the respondents stayed in Maine or left the State. Those who stayed in the State reported that being close to their family and friends, recreational activities, and the cultural/social environment were important factors that guided their decision to stay in Maine. Those who left Maine to live and work rated career opportunities, and pay and benefits to be the most important reasons guiding their decision on where to live and work.

Given that the findings for this study match those of the previous study and are, therefore, more generalizable, what policy implications do these findings suggest? What programs may be instituted that will help keep Maine high school graduates in the State for both higher education and to live and work? The evidence from this expanded study indicates that the discussion and points made on the original study still hold true.

The respondents in this study indicate very clearly once again the importance that program quality plays in college decisions. Quality matters to all college attending Maine residents. Statewide, it is important that there be a breadth of programs available for in-state as well as out-of-state students. But if the State of Maine intends to increase the number of Maine residents who choose to stay in Maine to earn a degree, it becomes imperative that Maine take steps to improve the quality of programs offered at its various institutions. In many cases, this may mean establishing and financially supporting Centers of Excellence Programs; programs of the highest quality and reputation supported by strong resource bases. And where quality programs already do exist, public awareness should be increased so that Mainers, especially Maine high school students, know the strength of these programs and what they have to offer. Some survey respondents indicated that they might have attended Maine colleges or universities had they known about the strength of those programs. Just as Maine residents are attracted to attend college in other states because they have high quality programs, Maine's Centers of Excellence Programs may also attract high school graduates from other states to attend colleges in Maine.

The evidence from this study also indicates that affordability remains a primary concern for Maine students entering into or continuing higher education. Typical comments by survey respondents included:

- “I could not have begun my college career without financial aid as my family's income was very low. I was determined and successful. I think these programs are essential for disadvantaged youth as well as others.”
- “I left Maine to go to college because of the financial aid package -- Maine schools wanted more money than out-of-state private schools. I came from a single parent home and couldn't afford to go to school in Maine. I returned because I lived here most of my life and my family is here.”
- “If full scholarship packages had been offered to Maine for students graduating 1st and 2nd in their class at the time, I would have stayed in Maine.”
- “Paying back my loans is the reason I cannot afford to live in Maine.”
- “Offering loan forgiveness for college grads to come back or stay in Maine is a great incentive to get young people to Maine -- especially in rural areas!”

It is necessary for the State to provide sufficient non-loan financial assistance to keep Maine institutions of higher education competitive. As college costs continue to rise and students are faced with increasing debt to finance their education, the availability of need-based grant aid will become a significant factor in determining not only educational opportunity but also choice of institution. Increasing levels of grant financial assistance and targeted student loan forgiveness programs could also have an effect on those who leave Maine for higher earning power to re-pay student loan debt.

Policymakers should also consider targeted student loan forgiveness programs in partnership with private business seeking to bring qualified employees to Maine. This will assist in keeping college graduates in the State after they receive their diploma.

This survey provides evidence that both those that choose to leave the State to live and work, as well as those that stay, value cultural and social opportunities. Many respondents indicated that Maine's lack of cultural opportunities and diversity played a role in their decision to leave the State to live and work. Typical comments by respondents included:

- “I believe that if the State of Maine is serious about attracting a broader, more diverse culture and community, the State must invest (long term!) in cultural opportunities and institutions. And then pick out the most talented and experienced creative people to fill the leadership positions in those institutions and expand the consciousness and humanity of the people of Maine.”
- “Maine is a beautiful State, but it does not offer a lot to its citizens -- a lot of State funds and attention are more focused on attracting tourists and outsiders. Maine needs to enrich the cultural offerings (outside of Portland!) and open its doors to more diverse cultures in general.”

- “My main reason for leaving Maine had to do mainly with the homogenous culture. So many people are the same, and there's not enough diversity or culture of my liking.”

Strategies for expanding the arts and cultural opportunities in Maine could be linked with a comprehensive plan to increase employment opportunities. By focusing on cultural opportunities as well as increasing employment opportunities, Maine could become a more welcoming place for people of diverse backgrounds.

But as important as these suggestions are for increasing the number of Maine's high school graduates who choose to attend Maine higher education institutions, the evidence from this study and the initial one clearly indicates that Maine's so-called “Brain Drain” is as much, if not more, about economic development than it is about creating quality college programs. The findings from this study provide further evidence of the link between economic viability and keeping Maine's educated youth within the State. Although many of those surveyed indicated that they would like to have stayed in or returned to Maine after graduating from college, many felt that the job opportunities and pay in the State were simply not competitive with the rest of the nation and therefore chose to leave. Many of those that do stay, point out that they are trading better career opportunities and pay in order to stay in Maine. Survey respondents repeatedly mentioned the lack of business and technology opportunities in Maine. Typical comments included:

- “I would like to see the government officials stop complaining how students go out of State to college and how that's why they don't come back. Even if I went to college in Maine, if Maine doesn't have a job for me, I have to look elsewhere. The State needs to work on bringing in more high tech jobs that need college degrees in order to keep college graduates living and working in Maine.”
- “I couldn't find a job I wanted. Find me a good one and I'll move back in a second.”
- “The reason for the “Brain Drain” in Maine is simple: the State of Maine does not possess enough high paying jobs. The reason is money.”
- “I wish the State of Maine offered more opportunities for young adults who decide to reside in Maine. Many of my college and high school friends have left the State of Maine for higher wages and better benefits. I believe that at least half of them would return if it weren't for the lack of jobs.”

Those in the helping professions, specifically nursing and teaching, pointed out the lower pay and lack of sufficient benefits within the State. As was suggested in the previous study, Maine needs a comprehensive plan for increasing employment opportunities. This plan needs to address wage structures, tax burdens for individuals as well as businesses, and look to promote more extensive connections between higher education institutions and businesses.

Summary

The goal of this study was to examine empirical evidence on what influences Maine's graduating high school seniors' decisions about where to attend college and where to live and work once they graduate from college. The evidence clearly reveals that regardless of where these graduating seniors attend college, either in Maine or outside State borders, program quality and reputation are foremost in their minds in choosing a college. The evidence also suggests that even though many seniors chose initially to enroll in a college outside of Maine, a majority actually acquire their first college degree from a Maine higher education institution.

Whereas, reasons for choosing colleges are similar among most high school seniors, the factors that influence where college graduates choose to live and work are more diverse. For those college graduates who chose to stay in Maine to live and work, or return once they have earned a college degree, family and social ties are driving forces in their decisions. In contrast, the desire for greater career opportunities is a very important factor in the minds of those who chose to leave Maine to live and work. And career opportunities are the driving force behind the decision of Maine's "Best and Brightest" to live and work outside Maine.

What then can be done to encourage more of Maine's high school graduates to remain in Maine to attend college and, ultimately, to live and work? The evidence from this study identifies that maintaining and expanding the number of high quality college programs available within the State may help, as well as good financial assistance programs, and expanded cultural diversity and social opportunities. But, if the goal is to have and maintain a more highly educated workforce, the evidence clearly points to the need for greater economic development. If Maine is going to be competitive in the global economy, Maine must expand its economic base. Only by expanding career opportunities will Maine be capable of turning Maine's so-called "Brain Drain" into a "Brain Gain". Clearly this is critical to the future economic vitality of the State and its citizens.

References

- Baum, S., & Payea, K. (2004). Education Pays 2004: The Benefits of Higher Education for Individuals and Societies. The College Board.
- Benson, J., & Sherwood, R. (2004). Maine's Changing Population: A Summary of Structural Changes, Mobility and Regional Variations. REALIZE! Maine, Maine State Planning Office.
- Gravelle, P.B. & Silvernail, D.L. (2005). The Condition of K-12 Public Education in Maine. Maine Education Policy Research Institute, University of Southern Maine.
- Hungerford, T.L., & Wassmer, R.W. (2004). K-12 Education in The U.S. Economy. National Education Association.
- Kipp, S.M. (2000). A Fresh Look at College-Going Rates in Maine. Finance Authority of Maine.
- Mitchell Institute (2002). Barriers to Postsecondary Education in Maine. Senator George J. Mitchell Research Institute.
- Silvernail, D.L. (1997). "Maine's Ranking in the Percent of High School Seniors Enrolling in Universities and Colleges." Maine Education at a Glance. Center for Education Policy, Applied Research, and Evaluation, University of Southern Maine.
- Silvernail, D.L. & Gollihur, G. (2003). Maine's College Graduates Where They Go and Why Finding Maine's Future Workforce. Center for Education Policy, Applied Research, & Evaluation, University of Southern Maine & The Finance Authority of Maine.
- U.S. Census Bureau (2004). Current Population Survey. United States Census Bureau.
- Wolfe, B. and Haveman, R. (2002). Social and Nonmarket Benefits from Education in an Advanced Economy. Education in the 21st Century: Meeting the Challenges of a Changing World, Federal Reserve Bank of Boston.