

A Survey of Postsecondary Education Opportunities in Tennessee

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Increasing attention is currently being paid in many states to an analysis of participation rates in postsecondary education. Higher education administrators and policy makers have begun to focus on evaluating means to raise the overall education attainment levels of the citizenry. Most policy makers are troubled to learn that one-third of all adults in many states, including Tennessee, do not possess a high school diploma. While educational attainment rates in Tennessee, and much of the South, remained below the national average throughout the 1980s and 1990's, the nation as a whole witnessed a change in economic development strategies from a focus on labor, land, and taxes to a focus on investments in human resources and research (Nespoli, 1991). In the resulting marketplace, economic and social viability have become increasingly linked to "what you know" as much as they are to "what you do." As a result, those states that are underserved educationally are commonly underserved economically as well.

In a report by the American Association of State Colleges and Universities (AASCU), the national job market was predicted to grow by 18.6 million positions between 1996 and 2006 (AASCU, 1998). Service industries were predicted to outpace the growth of "goods producing industries" as a more knowledge-based economy replaces the historical skill dependent system. AASCU's report forecasts that jobs in professional specialties, such as business and health care, will supplant manufacturing and production in driving economic growth. Because of this shifting focus towards human capital, public and private spending on education and training must be viewed as investment tools rather than consumptive costs, and a premium must be placed on life-long learning.

Education and training are accepted as the primary paths for investing in human capital. Growth economists have stated that human capital presently contributes more than physical capital (technology, infrastructure, etc.) to economic development and expansion. Business and industry rely on two sources to boost the state economy: new entrants to the workforce and those already in the current workforce (Nespoli 1991). Increasingly, both in Tennessee and across the nation, new entrants to the economic system are individuals from disadvantaged backgrounds. Policies that deter members of these disadvantaged groups from the postsecondary system run counter-productive to economic development goals because these potential students are also future contributing taxpayers and active citizens in their respective communities.

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Social scientists have pointed out that the demographic shifts in America are prompting change more dramatically than government policy. Access to, and the diversity of participation in higher education must be given urgency because of the rapid developments in technology and changing workforce needs. Opponents of policies that advance educational attainment and socioeconomic diversity initiatives sometimes overlook the economic reality of the costs of allowing access to postsecondary education versus costs associated with the maintenance of welfare, unemployment, and prisons. The costs of access to higher education should be perceived as investments, while spending in the areas noted are outright consumptive costs. Elected and appointed officials can either invest now by reducing some of the obstacles that stand in the way of economic and social progress or pay more at a later date to compensate for short-sighted policy decisions.

The primary purpose of this research was to identify factors and characteristics that influence students' likelihood to pursue postsecondary education. Given the importance of education from both an individual and social perspective (IHEP, 1998) policymakers must be presented with a broader overview of the factors that impact college participation. This research sought to develop an understanding of those reasons that students selected for continuing their education past high school graduation. As a secondary goal, the research attempted to gauge the factors that have the most influence on the individual student's college choice decision. As noted, increased emphasis must be placed on identifying and implementing policies that promote increasing educational attainment levels if both the nation and the states are to remain competitive in the global marketplace.

Theoretical Framework

Many attempts have been made to formally ascertain the variables that comprise a student's decision whether or not to attend college, and beyond that, which institution to attend. Although much has been learned, it still seems as though the process is somewhat akin to the Churchillian characterization of the former Soviet Union. The factors that go into the decision making process for students are fairly well known, yet even those factors are fragmented by gender, race, region, etc., and the understanding of this process is complicated in part by the steep slope of the information overload students must decipher in order to arrive at a college decision. Often, students themselves are unsure what influenced their college decision, instead relying on the nebulous "gut feeling." No wonder, then, that the task of studying the decision making process is at best daunting.

The decision to attend college positively impacts a person's life in numerous ways (Pascarella & Terenzini, 1991; IHEP, 1998). The economic, social, and intellectual benefits accrued from education are among the many reasons that approximately one-fourth of the US population participated directly or indirectly in education in 2000 (National Center for Education Statistics [NCES], 2001). Of that group, 68.1 million were enrolled in America's schools and universities, and another 8.5 million were employed as teachers, faculty, or staff in educational institutions. In addition to costs

associated with these operations, millions of dollars each year are invested to help students pay for education. Investing those dollars wisely is therefore of paramount importance to those developing a quality elementary, secondary, and higher education system.

Many students begin the college search process as early as the ninth grade year with some industrious students starting as early as middle school. A flowering industry of private college counselors has developed with parents willing to pay hundreds of dollars per hour for prudent guidance about the college search, test taking, financial aid, etc. (McDonough, 1994; McDonough, Korn, & Yamasaki, 1997). Understandably, the college selection process can be a very stressful activity. Galotti and Kozberg (1996) found that not only did students report continuous stress throughout the process with only a modicum of enjoyment, but that the emotional experiences were the same across gender, race, and academic ability. The academically capable, who might appear to be the most confident of a positive outcome in the process, described the process as just as stressful and difficult as students of modest academic ability. Many schools have refocused their recruiting messages to try to encourage prospective students to engage in activities they enjoy rather than padding a resume or application with an overload of community service, Advanced Placement courses, and after-school organizations that tend to place too many demands on them and therefore reduce the enjoyment from the college selection process (Zernike, 2000).

Several studies have utilized the individual student as a measurement unit rather than a focus on institutional or state level constructs (Fuller, Manski, & Wise, 1982; Hossler, Braxton, & Coopersmith, 1989). Although there are many variations of college choice models, most student college choice revolves around the student and peers maximizing the utility of that decision (Hossler, Braxton, & Coopersmith, 1989). Several studies have also been done to inform policy makers with regard to college/non-college choice debates (Kohn, Manski, & Mundel, 1976; Bishop, 1977; Nolfi, 1978; Fuller, Manski, & Wise, 1982; Manski & Wise, 1983). Hossler, Braxton, and Coopersmith (1989) compared and contrasted this research, identifying measurements employed by each. The expected costs of college, both actual costs and cost associated with lost income, are evident in all of these predisposition models and/or theories. Psychological, sociological, and economic factors have also been employed to varying degrees. Among the considerations made are measures of student background characteristics, parental education level, income disparity, high school characteristics, and high school quality (Kohn, Manski, & Mundel, 1976; Bishop, 1977; Nolfi, 1978).

The model of student college choice explored by Hossler and Gallagher (1987) has provided an outline of the logical steps a student would address in the decision making process: predisposition, whether or not the student would like to continue formal education; search, considering and selecting characteristics of higher education; and choice, developing choice criteria and selecting an institution to attend. Numerous factors ranging from family income to peer influence can affect any of the three stages in the process, and many factors play a role in all three stages.

Chapman (1981) argued that a student's decision of which college to attend is first influenced by the background and characteristics of the student's family and second by

external influences which include peers and family members, the makeup of the college and the school's communication efforts with the potential student. Chapman's first category, student and family background and characteristics, canvases a wide range of factors that could impact a student's decision to attend college, including, among others race, gender, socioeconomic status, academic ability, and educational aspirations.

Academic ability is one of the more easily understood factors in a student's decision to attend college. The higher the GPA, the more likely the student will attend college (Hossler, Schmitt, & Vesper 1999). That and other academic indicators (test scores, academic track, extracurricular activities, etc.) have been shown to be powerful if not primary influences on college choice (Hearn, 1991). This meritocratic principle cited by Hearn (1984), which posits that educational factors play a more dominant role than socioeconomic, racial or gender characteristics, would appear to be a guiding principle in the quest to understand college choice. Those same academic barometers can also "trigger a whole set of other responses to the student that...help shape college choice" (Chapman, 1981, p. 494). In other words, the more academically nimble students may elicit more encouragement, guidance, and resources to continue their education.

The meritocratic principle, while a good indicator of college attendance, has not held for determining which schools students matriculate. The idea that the more academically gifted students regardless of gender or race would tend to gravitate toward the more prestigious schools has not been validated. African Americans and students of lower socioeconomic status were less likely to attend more selective schools even if academic ability and achievement were robust (Hearn 1984; 1991). According to Hearn's (1991) research "the evidence suggests that within the matching process lies a sorting mechanism that subtly reinforces nonmeritocratic principles" (p. 168). Other research though, has shown that students from families with lower educational attainment levels and lower income do not make significantly different choices than other students (Toukoushian, 2001).

Race has always been a peculiar factor for college student institution choice to researchers. As Freeman (1999) concluded, "it is clear ... that even previous findings on college choice take on a different meaning when applied to African Americans" (p. 21). Such a conclusion demands that prior college choice paradigms be expanded and amended. Hossler, Schmitt, and Vesper (1999) arrived at a similar conclusion. In an attempt to answer some of the questions that surround African Americans' college decision making process, McDonough, Antonio, and Trent (1997) found that African Americans have more difficulty being accepted into their first college choice and are more likely to attend colleges that are great distances from home. The same work also established a set of choice criteria for African Americans matriculating to historically black colleges and universities (HBCU) that included the dominant influences of religion and social network. Other research has shown that the process of choosing a college varies among African Americans, Whites, and Hispanics (Perna, 2000). Race clearly plays a vital though still somewhat unclear role in the college choice process.

Somewhat more clear is the role that a student's parents play in the college choice process. While it may seem that the forces of parental preference are significant, students' college decisions are influenced more by their parent's education levels and

level of encouragement through the decision and search process. Litten (1982) found that parental education had stronger effects on college choice than the student's race or gender. Hossler, Schmitt, and Vesper (1999) posited that the higher the level of parental education, the more likely a student will attend college. They also found that family support, in the form of college savings and assistance with campus visits, are key indicators of college attendance. For ninth grade students, parental encouragement and parental education, along with student achievement as measured by grades, were the strongest predictors of college aspiration. Surprisingly, though, Hossler, et al, found that parental income was not a good predictor of postsecondary attendance. Similar conclusions were drawn by McDonough, Antonio, and Trent (1997). Other research has shown that parental income is, however, a predictor of where students attend; children from lower income families (or lower SES) were less likely to attend selective schools (Hearn, 1984; 1991; Lillard & Gerner, 1999).

Studies have also focused on the role that peers and family structure play in the college decision process. Friends of the same gender and same academic track (college-bound vs. vocational) tended to have greater influence over college choice than friends of a different gender or different academic track (Hallinan & Williams, 1990). Ninth graders with peer groups composed of college aspiring students also were more likely to attend college (Hossler, Schmitt, & Vesper, 1999). Lillard and Gerner (1999) found that students who lived with both biological parents were more likely to apply to or ever attend a four-year school and were more likely to attend a more selective school than were students who lived with only one biological parent.

Research has consistently shown that the element of cost affects a student's college choice decision (Chapman, 1981; Perna, 2000). The cost factor could potentially influence a student's decision during any of the three steps outlined by Hossler and Gallagher (1987): predisposition, search, and choice. Leslie and Brinkman (1987) reviewed 25 studies examining the relationship between participation rates and college costs and calculated a student price response coefficient that revealed a drop in the college enrollment rates for every \$100 increase in tuition, irrespective of financial aid availability. In an extension of the work, Heller (1997) concluded succinctly that "as the price of college goes up, the probability of enrollment tends to go down" (p. 649). While cost could clearly play a role in a student's decision whether or not to attend college, it could also be a factor of varying weight in the choice of where to attend. Wetzell, O'Toole, and Peterson (1998) found that African American student enrollment yields were significantly more sensitive than White student enrollment yields to changes in net cost, which would allow the conclusion that cost and financial aid factors substantially affect access to and enrollment in higher education for African Americans than their peers of other races.

Litten (1982) described the college choice process as a funnel. From an institutional perspective, the large pool of prospective students becomes smaller as deadlines in the admissions process are met. As officials make access a priority, there is the knowledge that participation rates will narrow the eventual number of enrollees. As noted by Hossler, Braxton, and Coopersmith (1989), higher education policy makers would benefit greatly from a heightened knowledge of the college choice patterns of the

constituents that they serve. Such awareness could provide insight to market perceptions and allow policy makers to see themselves as seen by students (Hossler, Braxton, & Coopersmith, 1989).

Research Methods

The current research project is framed around the college choice model first put forward by Hossler and Gallagher (1987). This three-stage model involving predisposition, search, and choice shaped the survey instrument employed. For the purpose of the current study, however, the focus will remain on answering the primary question of which factors and characteristics shape the college/non-college decision. Specifically, the data entailed in the study was collected by using a Likert-type scale based survey instrument. This instrument, the Senior Opinion Survey, was distributed to graduating high school seniors in early May of 1999 in order to determine the relative importance of several independent variables on the college choice decision. The survey distribution date presents the research with especially reliable data on the college decision because choices at this point in the academic year represent actual rather than perceived college choice characteristics (Hossler, Braxton, & Coopersmith, 1989).

In an effort to understand the college choice decisions of Tennessee high school seniors, a broad based survey of the state's graduating students was conducted at the end of the 1999 academic year to provide data to better inform higher education planners. The statewide survey extended beyond the more common single institution studies (Wetzel, O'Toole, & Peterson 1997) and answers the call for research that includes large student sample sizes and examines the choice processes of students representing multiple high school and postsecondary institutions (Hossler, Braxton, & Coopersmith, 1989). Perhaps most importantly, the survey instrument reached students who opted not to continue their education. This methodology provided a captive audience of students on the eve of high school graduation that for various reasons did not feel compelled or able to attend postsecondary education.

A stratified, random sample of seniors was employed to target a cohort of 2,300 graduating students out of the total population of 50,000 graduating seniors in Tennessee public and private secondary institutions. The sample was stratified along the following criteria to ensure that a proper representation of high schools was included in the target pool: region, urban/rural, socio-economic status, racial composition, and public/private. As Babbie (1990) noted, stratified sampling allows a greater degree of representativeness, thereby decreasing the probability of sampling error. If the respondent pool for the research were randomly selected from the population as a whole, the possibility of selection bias would have been present, because the sample would potentially overestimate the perceptions of students in the state's large, metropolitan high schools, especially those in Memphis and Nashville. In order to accurately ascertain perceptions of students across the state, it was critical that the sample be stratified.

In order to develop an instrument that accurately gauged student perceptions, the instrument was pre-tested in March of 1999 at four high schools randomly selected from

the population. These schools were later removed during the full sampling phase in order to prevent threats to the reliability and validity of the results. Pre-testing provided the authors an opportunity to assess the difficulty of the instrument and to obtain a rough estimate of costs and administrative time. Based upon the results of the pre-test, several elements within the Likert-type scales were revised and the overall length of the instrument was reduced in response to concerns about respondent fatigue. As noted in Dillman (1978), Babbie (1990) and Salant and Dillman (1994) pre-testing is a critical component of successful survey research.

Valid responses were obtained from 1,372 respondents, representing a response rate of 59.7%. Although the response rate was moderate, the large oversample from the target population provided considerable assurance that the results were generalizable to the population as a whole. According to Salant and Dillman (1994), a sample size of 1,045 was needed to be able to generalize to the overall population with a ± 3 percent degree of confidence. The practice of over-sampling is a widely accepted practice in the field as a means to overcome the non-response problem (Dillman 1978; Babbie 1990). Another element that increases the reliability of the research was that the various stages of the total design method as detailed in Dillman (1978) were followed. An initial survey, coupled with a post card follow-up and a second mail-out was utilized in order to maximize the response rate.

Results and Observations

The results of the Senior Opinion Survey are presented in several sections. The initial section provides a general overview of the educational participation patterns of the high school graduating class of 1999. Responses related to post-high school educational intentions were compared across several classifications including race, family income, and college entrance exam scores. The second section presented comparisons of those respondents who chose to pursue postsecondary education out of state rather than enroll at a public or private school in Tennessee. Further, "in state" versus "out of state" comparisons were aggregated along several college choice patterns and demographic characteristics. The final section focused on the factors influencing college attendance. Both those students who planned to participate in post-secondary education, as well as non-participants, were also examined.

Plans after High School

Of the 1,372 students completing the Senior Opinion Survey, 79.3% reported that they would attend a college or university in the Fall of 2000 (Table 1). Another 8.1% reported that they planned to pursue postsecondary education through technical, business, or vocational schools. Data are also presented in Table 1 comparing the intentions of is minorities and non-minority students, lower income and upper levels of income, and scores on the college entrance exam most common in Tennessee, the ACT. Not all students reported all demographic information; therefore, the number of valid responses is shown in each column. These numbers are sufficient to conclude that

discrepancies can be found in the college participation rates of various socioeconomic groupings.

TABLE 1

What do you plan to do after you finish high school?

<i>Valid Responses</i>	Valid Percent						
	Total	Minority	White	Income less than \$30,000	Income \$30,000 and above	ACT less than 25	ACT 25 and above
<i>Valid Responses</i>	1338	342	960	270	851	636	313
Go to college	79.3	76.6	80.7	67.8	84.0	86.2	95.8
Go to technical, business, or vocational school	8.1	12.3	6.5	13.7	6.0	6.0	1.3
Go to work full time	7.2	5.3	7.7	9.6	5.5	3.5	1.6
Enter the armed forces	3.1	2.9	3.1	3.7	2.9	2.5	1.0
Other	2.3	2.9	2.0	5.2	1.5	1.9	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

These student groupings also differed in reporting their plans to enroll in four or two year programs of study. Table 2 provides a presentation of the difference between the students in each group that considered four-year programs instead of two-year or shorter programs. Though the statewide average of enrolling in four-year programs was 82.3%, discrepancies can be found between race and the ACT score groups. Most notable is the

TABLE 2

What type of degree/certificate program do you plan to enroll in?

<i>Valid Responses</i>	Valid Percent						
	Total	Minority	White	Income less than \$30,000	Income \$30,000 and above	ACT less than 25	ACT 25 and above
<i>Valid Responses</i>	1239	329	879	248	800	616	305
Four or more year program	82.3	76.0	85.4	69.0	88.0	85.7	97.4
Two year program	13.2	20.1	9.8	23.4	8.4	11.2	2.0
Less than two year program	4.4	3.9	4.3	7.7	3.6	3.1	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

large difference in the four-year program participation plans of students with different income levels. When controlling for other factors such as ACT, income disparity appears to be pushing otherwise qualified students away from the four-year choices into the two-year sector. An examination of participation patterns, “plans to attend full- or part-time,” points to differences in the percentage of students planning on attending full- or part-time. A higher portion of White than minority students as well as those in the upper income levels indicated plans for full- rather than part-time participation.

Comparisons of Students Staying In-State to Those Going Out of State for College

Of those high school seniors that completed the Senior Opinion Survey, 1,037 reported that they had made their final choice of college/university to attend as of the date of survey administration. Sixty-seven percent of those students reported that they intended to remain in Tennessee and attend either at a public or private institution. The demographic composition of those students who reported that they planned to pursue postsecondary opportunities out-of-state were compared with those students staying in-state to determine the demographic makeup of each group.

Responses to questions about postsecondary academic plans were investigated for information on any relative differences between students attending in-state and out-of-state institutions. The responses are similar on all four questions with those students staying in-state being slightly more committed to full-time attendance at a four-year institution. The out-of-state students reported that Tennessee institutions did not recruit them as heavily as their peers who were staying in-state. The demographics of the “in-state” versus “out-of-state” groups did not vary considerably. Slight differences can be seen in gender and race comparisons, but disparities are found in socioeconomic and academic preparation variables (the average ACT score of students attending out-of-state schools was 23.0 compared to 22.4 for in-state students). Additionally, the self-reported family income of these two populations was also different, as almost 46% of the out-of-state students came from homes making over \$60,000. Finally, students attending college out-of-state institutions also reported slightly higher ACT scores than their peers who remained at in-state institutions.

Factors Influencing the College Choice Process

One of the primary research objectives of the study was to identify those factors that impacted the non-participation decision. Those students who did not plan to continue their education beyond high school were asked to rate the importance of eight factors (or reasons) on their decision to stop their progression through the educational system. Table 3 provides a detail of the average responses based upon a Likert-type classification of “0” (not at all important) to “3” (very important). The self-reported intention to pursue employment and begin earning steady income was cited as the most important factor, with concerns for costs of college ranking second. Thus, these individuals did not envision the long-term benefits of further education outweighing the immediate tuition

costs and lost income from less than full-time employment. Other factors such as burnout and frustration were indicated in the other categories on the rankings.

TABLE 3

Factors Influencing Decision To Not Attend

	Mean*
1 I want to work and earn some money	1.996
2 It is too costly	1.678
3 I am tired of school and want to do something else	1.467
4 I probably could not do well in college	1.439
5 College is not related to my future occupation	1.244
6 Would not know what to major in	1.213
7 No desirable college nearby	1.063
8 Member of high school staff advised me against college	0.744

*Scale: Not at all=0; Not very important=1; Fairly important=2; Very Important=3

For those students who reported that they did plan to continue their education, the survey explored their reasons for choosing an institution. Table 4 provides a detail of the responses of all the college-bound students in the sample, with the average score for each of the 27 possible factors provided in rank order from most to least important. For the overall population, very practical factors such as programs toward a career, cost considerations, and financial aid availability seemed to guide college choice. Factors such as parental advice, counselor recommendations, and college recruiters ranked at or near the bottom of these considerations.

TABLE 4

Factors Influencing College Choice

	Mean*
1 The college offers the kind of program that I need to enter my chosen occupation	2.693
2 Employment opportunities at this college	2.405
3 Cost that I could afford	2.376
4 Had a superior program in your intended major	2.363
5 Ease in obtaining financial aid/loans	1.990
6 Academic reputation of the college	1.965
7 Information received from school made a good impression	1.907
8 The social life is very attractive	1.759
9 I have a scholarship to go there	1.728
10 Knew more about it than other schools	1.712
11 The school's graduates gain admission to the top graduate and professional schools	1.690
12 Size of the college	1.513
13 Plan to live and work in the same state after college	1.509

14	Part-time employment opportunities available at this college	1.504
15	Special programs for academically talented students	1.488
16	Located near my home	1.469
17	The college has an active religious program	1.466
18	It was easy to get admitted	1.370
19	The athletic program is attractive	1.278
20	Rankings in national magazines	1.194
21	Near enough that I could live at home	1.171
22	My parents wanted me to go there	1.093
23	My friends are going there	1.059
24	Religious affiliation of the school	0.938
25	Teacher or counselor recommended it	0.921
26	College recruiters convinced me to go there	0.850
27	Parent(s) attend the same school	0.446

*Scale: Not at all=0; Not very important=1; Fairly important=2; Very Important=3

The participation decision varied significantly by ACT score ($\chi^2=22.6$), father's educational attainment ($\chi^2=28.2$), mother's educational attainment ($\chi^2=22.0$), gender ($\chi^2=21.7$), and income [$(\chi^2=21.4)$ - $df=1$, $Sig.=.000$ for all]. However, significant differences were not found with respect to race ($\chi^2=1.83$, $df=1$, $Sig.=.170$). Specifically, as an ACT score increased, the propensity of college attendance also increased; those students whose parents did not attend college were less likely to pursue postsecondary opportunities, women were more apt to attend college than their male peers, and those students in upper income brackets were more apt to continue their education than those in lower brackets.

Ranking the Factors by Subgroups

Tables 5a and 5b provide a detail of the differential rankings of college choice factors between "White" students and all other "minority" students. These tables contain frequency distributions of the top 25% of factors influencing the college decisions of these two groups. Although these factors were not listed in matching rank orders, they were similar. Both groups cited factors such as availability of financial aid and affordability, the quality and relevance of programs of study, and academic reputation as important variables in their college decision making process. Additionally, the presence of scholarships and access to employment while in school also ranked high among choice factors for both groups. One notable between group difference was that minority students placed a greater emphasis on the availability of financial aid than their other peers of different races.

TABLE 5a

White Students

The college offers the kind of program that I need to enter my chosen occupation	2.68
Employment opportunities at this college	2.34
Had a superior program in your inteded major	2.33

Cost that I could afford	2.32
Academic reputation of the college	1.96
Information received from school made a good impression	1.85
Ease in obtaining financial aid/loans	1.84
The social life is very attractive	1.76
Knew more about it than other schools	1.68
I have a scholarship to go there	1.64

TABLE 5b

Minority Students

The college offers the kind of program that I need to enter my chosen occupation	2.74
Employment opportunities at this college	2.59
Cost that I could afford	2.55
Had a superior program in your intended major	2.47
Ease in obtaining financial aid/loans	2.38
Information received from school made a good impression	2.06
Academic reputation of the college	1.99
I have a scholarship to go there	1.98
The school's graduates gain admission to the top graduate and professional schools	1.92
Part-time employment opportunities available at this college	1.83

Table 5c displays between group differences specific to “White” and “African American” students on several critical questions in the survey. Given the presence of two distinct groups, the one-way ANOVA procedure was utilized to produce a one-way analysis of variance for a quantitative dependent variable by a single factor (independent) variable. The analysis of variance procedure is often used to test the hypothesis that several means are equal. In essence, this technique was an extension of the two-sample t-test, but with more robust estimators (Nachmias & Nachmias 1996).

TABLE 5c

One Way ANOVA by Race

	Mean (Afri Amer)	Mean (White)	F	Sig.
Enrollment intent	2.15	1.89	7.535	0.007
Full-time or part-time enrollment	1.20	1.14	6.602	0.010
Degree/certificate	2.70	2.81	8.461	0.004
Cost that I could afford	2.59	2.32	20.649	0.000
Superior program in your intended major	2.51	2.33	11.143	0.001
Rankings in national magazines	1.38	1.13	15.498	0.000
Located near my home	1.60	1.46	3.127	0.077
Employment opportunities at this college	2.72	2.34	36.459	0.000
Grads admission to professional schools	1.98	1.61	27.834	0.000
The social life is very attractive	1.81	1.76	0.469	0.494

Athletic program is attractive	1.62	1.21	29.818	0.000
I have a scholarship to go there	2.07	1.64	25.132	0.000
My parents wanted me to go there	1.17	1.08	1.695	0.193
Academic reputation of the college	2.05	1.96	1.487	0.223
Parent(s) attended the same school	0.53	0.43	3.279	0.070
Religious affiliation of the school	1.11	0.93	5.633	0.018
High school preparation	1.74	1.78	0.962	0.327

As shown in Table 5c, not only does the intensity of participation decision vary by race, but so does the decision to attend on a part-time versus full-time basis. Financial factors were also much more important for African-American students than they were for their peers of other races. Not only is the presence of financial aid and scholarships much more important for African Americans, the availability of part-time employment was also significantly different between groups. One factor that was particularly intriguing was the increased importance that African American students placed on program offerings, and the ability of the institution’s graduates to obtain admission to top graduate and professional schools.

Of those factors that were not significantly different, the social life and high school preparation indicators were surprising given the literature on college choice. As noted in prior research (Hearn 1984; Hearn 1991; McDonough, Antonio, & Trent 1997; Freeman 1999), African American students have been much more apt to consider social indicators and parental support in their decisions. This was not illustrated in the current analysis. Questions related to social life, parental influence, religious affiliation, and location were not significantly different, nor were they ranked as important by either group in the college choice calculus. Finally, African American students felt that they were more prepared for college than their peers of other races. Once again, this contradicts holdings in the literature and demands further analysis. In sum, African American students are more apt to consider cost, scholarships, and academic prestige in their college decision than their other race peers. These findings suggested that the decision to attend college is much more of an economic decision (i.e. human capital based) for African American students than for their other race peers.

Tables 6a and 6b provide an examination of the relative difference in response sets by self reported family income. Among those students reporting income under \$30,000, it is no surprise to find “ease in obtaining financial aid/loans” as a deciding factor. Another interesting difference between the lists was the reference to location to home. The “\$30,000 and above” student reflects a desire to attend a school “located near my home” while the “under \$30,000” student reported the need to be “near enough that I could live at home.”

TABLE 6a

Family Income Less Than \$30,000

Cost that I could afford	2.753
The college offers the kind of program that I need to enter my chosen occupation	2.743

Employment opportunities at this college	2.623
Ease in obtaining financial aid/loans	2.496
Had a superior program in your inteded major	2.356
Information received from school made a good impression	1.984
Part-time employment opportunities available at this college	1.901
I have a scholarship to go there	1.885
Academic reputation of the college	1.870
Knew more about it than other schools	1.788

TABLE 6b

Family Income \$30,000 or Greater

The college offers the kind of program that I need to enter my chosen occupation	2.686
Had a superior program in your inteded major	2.375
Employment opportunities at this college	2.343
Cost that I could afford	2.260
Academic reputation of the college	2.020
Information received from school made a good impression	1.887
Ease in obtaining financial aid/loans	1.820
Social life is very attractive	1.803
Knew more about it than other schools	1.704
The school's graduates gain admission to the top graduate and professional schools	1.678

Although the tables provide information related to the relative preferences of each income group, they did not elaborate on significant differences between the two groups. Students, regardless of parental income, placed greater emphasis on the program offerings of institutions in the college choice process. However, lower income students placed a greater emphasis on cost, relative proximity of the institution to their home, employment opportunities at the institution, and the presence of a scholarship/financial aid than their upper income peers. Regardless of income, students placed very little importance on factors such as rankings in national magazines, attractiveness of the social life on campus, athletic programs, institutional religious affiliations, and parental college recommendations. A listing of these factors has been provided in Table 6c.

TABLE 6c

One Way ANOVA by Income

	Mean (Less 30K)	Mean (Greater 30K)	F	Sig.
Enrollment intent	2.38	1.80	44.824	0.000
Full-time or part-time enrollment	1.25	1.12	25.639	0.000
Degree/certificate	2.61	2.87	40.539	0.000
Cost that I could afford	2.75	2.26	71.747	0.000

Superior program in your intended major	0.24	2.38	0.118	0.732
Rankings in national magazines	1.12	1.24	3.637	0.057
Located near my home	1.69	1.40	14.650	0.000
Employment opportunities at this college	2.62	2.34	20.433	0.000
Grads admission to professional schools	1.78	1.68	2.032	0.154
The social life is very attractive	1.64	1.80	5.893	0.015
Athletic program is attractive	1.25	1.28	0.175	0.676
I have a scholarship to go there	1.89	1.64	8.077	0.005
My parents wanted me to go there	1.16	1.07	1.768	0.184
Academic reputation of the college	1.87	2.02	5.371	0.021
Parent(s) attended the same school	0.44	0.43	0.024	0.877
Religious affiliation of the school	1.01	0.91	1.845	0.175
High school preparation	1.86	1.75	6.939	0.009

Tables 7a and 7b identify those factors which impact college choice decisions for respondents by ACT score. Although students with an ACT score above 25 placed a greater emphasis on the presence of scholarship opportunities in the college choice decision, both groups noted that programming, cost, employment opportunities, and academic reputation played the greatest role in their decision calculus. Although the costs of receiving a college education was important to both groups, it was more important for those students who scored below 25 on the ACT, and the difference between the two groups was statistically significant ($F=9.176^{**}$). The relative proximity of the institution was also much more important for those students who scored below a 25 on the ACT than their peers. This finding correlates significantly with observations noted for lower income students.

TABLE 7a

ACT Less Than 25

The college offers the kind of program that I need to enter my chosen occupation	2.699
Employment opportunities at this college	2.436
Cost that I could afford	2.409
Had a superior program in your intended major	2.335
Ease in obtaining financial aid/loans	2.028
Information received from school made a good impression	2.023
Academic reputation of the college	1.961
Knew more about it than other schools	1.843
Social life is very attractive	1.767
The school's graduates gain admission to the top graduate and professional schools	1.696

TABLE 7b

ACT 25 and Greater

The college offers the kind of program that I need to enter my chosen occupation	2.645
Had a superior program in your intended major	2.366

Cost that I could afford	2.263
Employment opportunities at this college	2.232
Academic reputation of the college	2.087
I have a scholarship to go there	2.039
Ease in obtaining financial aid/loans	1.752
Information received from school made a good impression	1.698
Social life is very attractive	1.693
Special programs for academically talented students	1.650

Tables 8a and 8b compare the opinions of those students who chose to attend college in the state of Tennessee with those going out of the state to continue their postsecondary education. Although the first four factors on each list were found to be identical, students assigned differential importance to a variety of program related constructs. Those students who remain in-state consider cost slightly more than their peers going out of state. This finding echoes the data which noted that out-of-state students having significantly higher family income levels than those students remaining in-state.

TABLE 8a

Students Staying In-State

The college offers the kind of program that I need to enter my chosen occupation	2.683
Employment opportunities at this college	2.414
Cost that I could afford	2.397
Had a superior program in your inteded major	2.325
Academic reputation of the college	1.947
Ease in obtaining financial aid/loans	1.941
Information received from school made a good impression	1.901
Knew more about it than other schools	1.818
Social life is very attractive	1.717
I have a scholarship to go there	1.677

TABLE 8b

Students Going Out-of-State

The college offers the kind of program that I need to enter my chosen occupation	2.728
Had a superior program in your inteded major	2.411
Employment opportunities at this college	2.388
Cost that I could afford	2.241
Academic reputation of the college	2.054
Information received from school made a good impression	1.973
Ease in obtaining financial aid/loans	1.970
I have a scholarship to go there	1.846
Social life is very attractive	1.786
The school's graduates gain admission to the top graduate and professional schools	1.746

Comparisons to 1968 Tennessee Higher Education Facilities Commission Study

Research has suggested that the factors impacting college choice are fluid. This study has validated this assumption, noting that cost has become a much more important factor in the decision calculus than in the implementation of a prior version of the Senior Opinion Survey. In 1968 the Tennessee Higher Education Facilities Commission surveyed 9,932 Tennessee high school seniors with an instrument that was similar to and the basis for the current high school senior survey (THEFC, 1969). In fact, many of the core questions in the 1999 Senior Opinions Survey contained the exact language used in the 1968 instrument. This condition allowed the authors to analyze the relative movement of opinions across several core factors.

With respect to self participation, 66.7% of the respondents in the 1968 survey noted that they planned on continuing their education; 52.9% planned on going to college while 13.8% planned on going to technical, business, or vocational school. In the 1999 survey, 87.5% planned on continuing their education, 79.3% to college and 8.2% to technical, business or vocational school. A much smaller percentage of graduating high school seniors in 1999 planned on entering the workforce out of high school than before. In 1968, 24.5% planned on working full-time after graduation compared to only 7.2% in 1999.

Students whose fathers had obtained at least a bachelor's degree were just as likely to attend college in 1968 (89.4%) as they were in 1999 (90.7%). However, in 1968 only 43.9% of students whose fathers had a high school degree or less attended college, while in 1999 that figure had jumped to 69%. Similar effects were identified when examining the mother's education level. In 1999, 91.1% students whose mothers had obtained a bachelor's degree or higher planned on attending college, compared to 86.8% in 1968. In 1999, 68% of students whose mothers had a high school degree or less planned on attending college, compared to 44.1% in 1968. Family income also continued to be positively associated with the decision to attend college. In 1968, students from the low, medium, and high-income levels planned on attending college at rates, respectively, of 55%, 71%, and 85.9%. In 1999 students from the low, medium and high-income levels planned on attending college at rates, respectively, of 63.5%, 76%, and 90.3%.

The rise from 1968 to 1999 in college participation rates stems in large part from students whose father had a high school degree or less. Education, it seems, is no longer solely the domain or the goal of the offspring of educated people. Rather, it has begun to be recognized by more segments of society as a prerequisite for social mobility and economic potential. Americans who have taken advantage of higher education and who have thus benefited from its civic and economic rewards have recognized the importance of higher education today just as they did in 1968. Students whose parents did not continue their education past high school were more likely today than 30 years ago to enter higher education.

A similar economic undercurrent flows through the major factors students selected as "very important" in the college decision-making process. Financial variables including cost, employment opportunities, and scholarships were markedly more critical to students in the 1999 survey than they were to students in the 1968 survey. Though it

may be hard to argue that higher education costs have been substantially prohibitive in light of booming enrollments in the last 30 years, the comparison of the survey results does signal that perhaps students are required to make greater financial sacrifices today in pursuit of higher education.

Summary

Consistent with the literature (Chapman 1981; Leslie & Brinkman 1987; Heller 1997), the survey results revealed that cost plays a significant role in the college choice process. Of the top 10 factors influencing college choice, four were related to cost (Table 4). Similarly, cost and the desire to earn money were the primary reasons students chose not to attend a postsecondary institution (Table 3). As found in Hossler, Scmitt, and Vesper (1999) and Hearn (1991), academic ability was also a key indicator of college participation, as were family income and parents' education levels (Table 1). The survey results indicated that the four most dominant factors in college choice centered around a student's chosen career (college major and occupation) and cost factors. Additionally, no major differences were found in the most important college choice factors between White and minority students (Tables 6a and 6b). That the top four factors were strikingly similar for White and minority students did not support findings in the literature (Freeman 1999; Perna 2000) that minority students employ a different college choice paradigm than White students. The percentage of students indicating their intentions to pursue postsecondary education was similar as well (88.9% of minorities, 87.2% of whites). The college participation decision did not vary significantly by race.

This survey was designed to collect statewide data for high school seniors on the eve of graduation when perceptions and attitudes on college choice are the most lucid. The sample population size as well as design parameters that ensured a representative sample across region and type of high school allowed for sound, powerful conclusions. The results pertaining to the influence of cost, academic ability and parents' education were consistent with the literature. The findings did, however, contradict other research that concluded African-Americans navigate by a different college choice paradigm than white students.

These results inform the national discourse on college choice as well as offer great utility for state policy makers in crafting strategies for increasing education attainment levels. The fact that cost consistently carried great weight in the college choice process and that its importance has ballooned since the execution of the 1968 survey is a clear and unambiguous signal to legislators and higher education officials that the financial impact of postsecondary education is the driving force behind students' college decisions. Troubling, though is that even with over 87% of respondents indicating plans to continue their education past high school, state-wide graduation rates struggle to pass 50%. Students have indicated a desire and a willingness to pursue higher education and position themselves to achieve greater social mobility and economic prowess, so it would behoove the higher education community to investigate what forces conspire to decrease so severely the number of students who do attain higher education from those who indicate plans to do so. Within the college decision process, students responded to

conditions that affected their chosen career and their economic condition in terms of either future earnings or their present ability to pay for college. The college decision process seemed to be more a function of those variables than it did race, location, national rankings, religious affiliation, etc.

Because of the lack of research at the statewide level on college choice patterns, this research is potentially important to planning bodies and social science researchers. This valuable statewide survey will share with K-12 and higher education researchers a better sense of that bridge between the two worlds. Identifying the potential applicant pool's predisposition toward higher education will point to potential policy levers that can meet the goal of raising the participation rates in postsecondary education.

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