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Community College Funding and its Association to Nontraditional Students

A Dissertation

Submitted to the Graduate Faculty of the
University of New Orleans
in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy
in
Educational Leadership, Counseling, and Foundations

by

Girard James Melancon

BA, Fort Lewis College, 1997
MPA, Southern University, 2003

August, 2010

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ABSTRACT

The funding of community and technical colleges has been a major topic of discussion in many states because community and technical colleges are critical for states' economic development and talent development strategies. The purpose of this study was to identify the relationship between the type of funding at community and technical colleges in southeastern states and their nontraditional student enrollment trends. The researcher investigated the growth of community and technical college enrollment by analyzing southeastern United States community and technical colleges' part-time 25 to 44 year-old undergraduate enrollment rates for the years of 1995, 2000 and 2005, and how the funding of these schools was associated with the states' enrollment of nontraditional students. It was found that community and technical colleges that received local appropriation revenue for the years of 1995, 2000, and 2005 had higher percentages of nontraditional students enrolled in their systems than community and technical colleges that did not receive local appropriation.

Community and technical college administrators and their governing boards can use these findings as additional justification to policy makers for support options to include the use of local appropriation revenues or maintain local appropriation revenues for community and technical colleges as an alternative to increasing tuition and fees.

Keywords: nontraditional students; community and technical college funding; community and technical college systems; student choice and persistence; community and technical college enrollment; local appropriation

CHAPTER ONE

INTRODUCTION

Human capital has been largely supported as a major contributor to economic prosperity (O'Gara & Hughes, 2008). Community and technical colleges play a key role in developing human capital for local communities and employers because they are the primary training providers for low income students and part-time adult students (Cohen & Brawer, 2003). Therefore, community and technical college funding has been a major topic of discussion in many states as these colleges become more critical to their states' economic development (O'Gara & Hughes, 2008). Despite the significance of continued funding of community and technical colleges for economic development, administrators of these academic institutions must be armed with evidence to justify their continued financial support. Additionally, the evidence must be more compelling than the evidence of other recipients of state funding as there is increasing pressure to fund other societal obligations also deemed critical to states' overall competitiveness.

The majority of these societal obligations are funded by taxpayers, who in general, have not been open to new or increased taxes regardless of the justification (Castellano & Overman, 2009). However, in light of the growing awareness of these pressures, community and technical college administrators and state legislators are discussing which resources are most effective in funding community and technical colleges (College Board, 2005; John & Parsons, 2005; SREB, 2006). Not surprisingly, these policy discussions are often based upon political ideologies and limited peer reviewed research (St. John & Parsons, 2005).

In the absence of sound research to back policy discussions, funding for community and technical colleges has been inadequate and students have not received sufficient subsidies to offset the costs of their education (Castellano & Overman, 2009). Though they make up 68% of the community college student population (GAO, 2003), part-time, adult public community college students (referred to in this study as "nontraditional students") receive the lowest percentage of state and federal subsidies compared to all post secondary students (*The Chronicle of Higher Education [Almanac]*, 2007). Nontraditional students in all postsecondary institutions receive 20.6 % in federal financial aid, 13.5% in federal grants, 11.9% in federal loans, 1.1% in work study programs, 5.6% in state financial aid, 5.0% in state grants, 5.4 % in institutional grants, and 4.8% in other institutional grants (*Almanac, 2007*). Therefore, as a whole, these students are paying significantly more of the full cost of the charged tuition and fees because they are receiving a considerable less percentage of the state and federal subsidies, which can offset the full cost of tuition and fees.

In addition to the impact of limited subsidies on nontraditional students, community and technical college systems are also impacted because they do not receive any additional state and federal appropriation to provide services to nontraditional students, who require more educational resources than typical students. Educating nontraditional students is more challenging because these students tend to take more developmental courses and require more alternative forms of tutoring services (Cohen & Brawer, 2003; GAO, 2003). Community college enrollment services also have to invest more resources to provide supportive services for these students to increase student retention (Cohen & Brawer; GAO). However, community and technical

college campuses do not receive sufficient funding to offset the additional cost to adequately prepare these students in a timely manner (GAO, 2003), therefore, they are forced to increase their tuition and fees and/or delay improvements needed to foster learning outcomes (Cohen & Brawer, 2003). Nontraditional students are extremely price-sensitive to any increases in tuition and fees because proportionally more of their income is going towards their education (Dowd, 2006; NCHEMS, 2007; Paulsen & Smart, 2001; St. John & Parsons, 2005; St. John & Starkey 1995a, 1995b).

Over and above increasing tuition and fees to offset the lack of funding, community and technical college administrators have struggled to balance resource constraints by: creating larger class sizes for all students; utilizing more web based courses; employing more part-time teachers; deferring or eliminating maintenance, repairs, and facility upgrades; limiting offered courses; and creating policies to limit the overall enrollment growth of academically challenged students or the opportunity to expand high demand classes. Not only do the majority of these practices have a detrimental effect on the campuses, these practices have a detrimental effect on the growth of their local workforces by decreasing access to human capital for nontraditional students (Cohen & Brawer, 2003).

Purpose Statement

The purpose of this study was to identify the relationship between the type of funding at community and technical colleges in southeastern states and nontraditional student enrollment trends. Specifically, the study examined the relationship between available funding streams and the states' percentages of nontraditional students enrolled in their community/technical colleges.

There are other studies that have monitored state's practices of maintaining and increasing affordability. In particular, one well known study is the *State by State National Measuring Up* report (The National Center for Public Policy & Higher Education, 2007). However, the aim of my research differed from the *State by State National Measuring Up*: 2002-2006 reports in three ways. First difference , the method for my study only included information regarding undergraduates' enrollment, whereas the *State by State National Measuring Up* report included all post secondary enrollment by combining data on undergraduate and graduate enrollment. According to the National Center for Public Policy and Higher Education (2002), in the next ten years, the vast majority of the high growth and high demand careers will require at least two years of post secondary education or industry based certification rather than non-terminal college degrees or graduate degrees. The increasing reliance on two year degrees drives the need for research, such as my study, which focuses on the first two years of post secondary education. Second difference, my research examined the states' enrollment of 25 to 44-year-olds with or without high school credentials. This dissertation addresses a limitation in the *State by State National Measuring Up* report which only included the ages of 25 to 49 with high school credentials. It should be noted that non-high school graduates can still enroll at a community and technical college without high school credentials. Typically, these students enroll in non-credit courses (e.g., GED, industry-based programs, apprenticeships, developmental courses, etc). Third difference, the *State by State National Measuring Up* report weighed the affordability rating on a "high aid and high tuition" framework (e.g., state sponsored scholarships, subsidized loans, and institutional financial aid) and this framework is not

an appropriate indicator of what states are doing to maintain or increase affordability of community colleges because public community and technical colleges are low aid and low tuition enterprises (Cohen & Brawer, 2003). Furthermore, some states have local appropriation funding their community colleges which is not weighted in the *State by State National Measuring Up* report. There is evidence to show that local appropriations have proven to be very effective for stabilizing potential increases in tuition and fees at public community and technical colleges (Cohen & Brawer; Kenton et al., 2005).

Overview of the Conceptual Framework

The conceptual framework for this study was based on the two theories of resource dependency (Preffer, 1982; Preffer & Salancik, 1978) and student choice and persistence (Philibert, Allen, & Elleven, 2008; Bean & Metzner, 1987; St John, Paulsen, & Starke, 1996).

Resource dependency. Resource dependency is a social organizational theory that investigates how actors try to manage their resources in a way that prevents them from being completely reliant upon these resources (Preffer, 1982). Resource dependency also attempts to explain how organizations try to manage their resources in way that they are able to survive during difficult economic times (Preffer, 1982; Preffer & Salancik, 1978). According to Preffer and Salancick (1978) when environments change, firms must quickly adapt or they will not survive. Therefore, the biggest environmental change for community and technical colleges occurs in times of proposed state budget cuts. During these times of economic-instability, community and technical colleges strive to find ways to cope with these challenges by leveraging other

funding streams to be able to effectively manage their projected cuts of state appropriation. The scope of this dissertation was to investigate how community and technical colleges in southeastern United States are leveraging their funding streams and adjusting to their economic environment change during the years of 1995, 2000, and 2005. These years were selected for inclusion in the study to examine trends over time and to utilize current datasets.

Student choice and persistence. An individual's access to capital is a factor that affects students' choice and completion of post secondary education. This notion is supported by St John, Paulsen, and Starke (1996). They have stated that student finance can impact both the college choice and their retention at the college. Through the *Persistence Nexus Model,* they further argued that student finance is the "nexus" for researching college choice and persistence as one continues the educational process, instead of two separate isolated variables regarding how a student transitions throughout his or her educational pathway. This premise is also consistent with Bourdieu's (1973) theory that one's optimization of existing capital results in the accumulation of greater shares of economic and cultural capital later in life. It has also been noted that one's perception of his/her ability to afford tuition is a key variable in choosing a college (Paulsen & St. John, 1997). St John, Paulsen, and Starke's (1996) research aimed to identify the financial reasons for selecting a college and the effects of the advertised tuition and fees. Specifically, they investigated the variables in college selection (e.g., high tuition, high aid, proximity to home, or opportunity to work) as important factors to the initial commitment process. St. John et al. discovered that a student's financial circumstance influences the initial commitments for selecting a

college. It has also been discovered if students feel that their aid is inadequate, they eventually take fewer courses and begin to work full time. These activities hamper social and academic integration in Tinto's models (1993). Vincent Tinto is highly recognized for his research on student departure and he believes that there are primary reasons for a student's departure from a college campus, which center around academic difficulties, the lack of occupational goal alignment, and the lack of integration into the social context of the campus. Tinto stated that a student must be integrated with the formal context of the campus (e.g., the relationship with the teacher and course work) while connecting with the informal context of the campus (e.g., healthy relationships with peers, embracing the culture of the campus).

Other national studies have noted that finances also play a major role with a student's departure from campus (Paulsen & St. John, 1997; St. John, Paulsen, & Starkey, 1996). It has also been supported that affordable tuition significantly affects college recruitment and retention (Habel & Selingo, 2001; Hovey 1999; St. John, 2003). Therefore, St John, Paulsen, and Starke's (1996) frameworks provide a rationale for nontraditional student persistence.

As mentioned, theories of resource dependency and student choice and persistence will also help this research contribute to a comprehensive understanding of the complexities of managing community and technical colleges while maintaining the enrollment of nontraditional students.

Affordability of Higher Education

College tuition rose 110% from 1981 to 2001 while the average family income only rose 27% in that same timeframe (The College Board cited in Educational

Commission of the States, 2005). This rise in tuition has put a burden on potential students. These potential students- particularly part-time nontraditional community college students have addressed the burden of going to college by obtaining college loans and working while enrolled in college. According to The College Board, 56% of all students take out loans because of limited financial aid (The College Board as cited in Educational Commission of the States).

In funding community and technical college systems, further use of local property taxes should be explored (Kenton et al., 2005). Local property tax is not the sole solution; however, it could be a viable funding alternative as state community colleges experience decreases in state appropriations (Jackson & Glass, 2000; Kenton et al.; Watkins, 2000). According to other studies, most institutions will directly offset the void caused by decreases in state appropriation by increasing tuition and fees (Collins et al., 1994; Hyde & Augenblick, 1980; Wattenbarger & Vander, 1986). Also, in Kenton et al.'s study of 11 State Community College Systems (SCCS), when eight SCCS saw a decrease in state funds six increased tuition and fees and the other two SCCS were able to increase their appropriation at the local level. The majority of community and technical college systems received their local appropriation from regional property taxes.

According to a special Ohio legislative committee, which was formed to research the effects of state and local taxes, local property tax is a more reliable revenue stream than sales tax because it is mainly a derivative of home and business property and these assets rarely depreciated or dramatically fluctuated over time (Ohio Department of Taxation, 2003).

In order to gain a better understanding of how the above trends affect the relationship between the type of funding sources at community/technical colleges in southeastern community and technical college systems and their states' nontraditional enrollment trends and to help develop an understanding of some effective options that community colleges can use to help the enrollment and retention of nontraditional students during times of dwindling state and federal revenue streams, the following questions were addressed:

Research Questions

The primary research question for this study was: What is the relationship between the type of funding sources at community/technical colleges in southeastern community and technical colleges and their states' nontraditional enrollment trends? In addition, two sub questions were addressed:

1. Were there significant differences in states' community and technical colleges funding sources between the years of 1995, 2000, and 2005?
2. Did southeastern community and technical colleges' state systems with local appropriation have a higher percentage of nontraditional students enrolled in community and technical colleges than states without local appropriation?

Significance of the Study

Community college administrators must find creative ways for dealing with the pressures of decreases in state and federal appropriation while balancing quality education for their students. However, the majority of community college students are extremely price sensitive and any increases to their tuition and fees will further alienate

them from attending and staying enrolled at community colleges (St. John & Starkey,1995a, 1995b). States and local communities cannot afford this kind of lost opportunity for human capital development.

"Campuses that effectively engage their communities reap dividends in the form of taxpayer support for capital funding and annual operating budgets" (Diamond & Adam, 2002, p. 300). It is important for community and technical college administrators to consider the appropriate mix of funding sources that benefit not only the institutions, but the communities they serve. Therefore, the this study helps to bridge a gap in the literature by examining community and technical college revenue streams and their effect on the enrollment of nontraditional students.

Definitions of Terms

Appropriations. Money set aside by formal legislative action for a specific use.

Actual Tax Revenue ATR. General revenue derived from taxation by state and local government [State Higher Education Executive Officers (SHEEO) and State Higher Education Finance (SHEF), 2007].

Educational Appropriation. Net state support plus local tax appropriation minus research, agricultural, and medical (RAM) appropriation.

Effective Tax Rate (ETR). Actual Tax Revenue per capita divided by the Total Taxable Revenue per capita expressed as a percentage. In Fiscal year 2000, the national average effective ETR was 7.8 % or 3, 086 divided by 39,579. An indexed value is derived by dividing the state's effective tax rate by the national average ETR. Sources: Population and Actual Tax Revenue from the U.S. Census Bureau Total

Taxable Resources from the Bureau of Economic Analysis, Office of Economic Policy, U.S. Department of Treasury (SHEEO & SHEF, 2007).

Full-Time Equivalent Enrollment (FTE). A measure of enrollment equal to the one student enrolled full time for one academic year, based on all credit hours (including summer session). The SHEF data captures FTE enrollment in public institutions of higher education in those credit or contact hours associated with courses that apply to a degree of certification, excluding non-credit continuing education, adult education, or extension courses. If courses meet the "formal award potential" criterion, they may include vocational-technical, remedial, and other program enrollment at two year community college and state- approved vocational-technical centers. Medical school enrollments are reported but set aside from the net FTE used in "funding per FTE" calculations because states vary widely in the extent of medical school funding. The calculation differs with type and level of instruction:

- Contact hour courses: One annual FTE is the sum of total contact hours divided by 900.
- Undergraduate credit hour courses: One annual FTE is the sum of credits divided by 30 (for semesters based calendar systems) or 45 (for quarter systems).
- Graduate and first-professional credit hour courses: One annual FTE is the sum of the total l credits divided by 24 (for semester systems) or 36 (for quarter systems) (SHEEO & SHEF, 2007).

Gross State Support. The sum of State Tax Appropriation Plus:

- Funding under state auspices for appropriated non-tax state support (e.g., lotteries, casinos, and tobacco settlement funds) set aside for higher education.
- Funding under state auspices for non-appropriation state support (e.g., monies for receipts of lease income, cattle grazing rights, and oil/mineral extraction fees on land) set aside for higher education;
- Sums destined for higher education by appropriation to some other state agency (e.g., administered funds or funds intended for faculty/ staff fringe benefits that are appropriated to the state treasury).
- Interest or earnings received from state-funded endowments' pledge to public sector institutions; and portions of multi-year appropriation from previous years (SHEEO & SHEF, 2007).

IPEDS –The Integrated Postsecondary Education Data Systems (IPEDS) replaced HEGIS in 1989. IPEDS is the instrument that is used by the U.S. Department of Education to collect a wide rage data on higher education institutions in the United States. IPEDS revenue categories:

- *Tuition and Fees*. Revenue from students' payments for educational activities. Federal Appropriation– Revenue appropriation that sends appropriation directly to institutions from the federal government.
- *State Appropriation Revenue*. Appropriation directly to institutions through acts of a state legislative body.

- *Local Appropriation*. Revenue appropriated directly to institutions from local government. This revenue stream is generally created by local property taxes.
- *Federal Grants and Contracts*. Grants and contract revenues from federal government. Pell Grant revenues have been subtracted from the total reported to IPEDS. The federal total does not include FDSL loans.
- *State Grants and Contracts*. Grant and contract revenues from state government
- *Local Grants and Contracts*. Revenue from local governments
- *Private Gifts, Grants, & Contracts*. Revenue received from private donors for activities relating to the teaching, research, and service missions of the institution. Does not include endowment income.
- *Endowment Income*. Revenue earned from the appreciation of the institution investments trust fund.
- *Sales and Services of Educational Activities.* Revenue received from other educational activities.
- *Auxiliary Enterprises*. Revenue received from the operation of auxiliary activities.
- *Hospitals*. Revenue from hospitals services.
- *Independent Operation*. Revenue received from the operation of independent entities within colleges and universities.

Local Tax Appropriation. Annual appropriation from local government taxes for public higher education institution operation expenses (SHEEO & SHEF, 2007).

Net Tuition and Fees. Tuition and fees revenue minus scholarship and fellowships expenditures.

Net State Support. State support for public higher education annual operation expenses. The difference resulting from Gross State Support less:

- Appropriation returned to the state
- State-appropriated funds derived from federal resources;
- Portions of multi-year appropriations to be distributed over subsequent years;
- Tuition and fees used for capital debt service and capital improvement (other than paid students of auxiliary enterprises debt services).
- State funding for students in non-credit continuing or adult education courses and non-credit extension courses.
- The sum of the appropriation to independent institutions for capital outlay or operating expenses;
- Allocation of appropriation for financial aid grants to students attending in-state independent institutions; and
- Allocation of appropriation for financial aid grant to student attending out-of-state institutions (SHEEO & SHEF, 2007).

Nontraditional Student. A nontraditional student is 25 or older and shares the following characteristics:

- Nontraditional students live off campus and commute to school.
- Nontraditional students, for the sake of this paper, are enrolled as part-time students at community and technical colleges.

Participation. The state's ability to provide opportunity for its residents of varying ages and income to enroll in postsecondary education (Measuring Up, 2006).

Personal Income. The income received by all persons from participation in production, from government and business transfer payments, and from government interest. Personal income is the sum of net earnings by place of residence, rental income, personal income, personal interest income, and transfer payments.

State Tax Appropriation. Appropriation from state government taxes for public and private higher education institutional and agency annual operating expenses, excluding capital outlay (for new construction or debt retirement) and revenue from auxiliary enterprises. These sums are largely the same as those reported as part of the annual Grapevine survey of the Center of the Study of Higher Education Policy at the Illinois State University. Source "Grapevine" and reported to SHEEO (SHEEO & SHEF, 2007).

State Higher Education Allocation. Measure of total state support and local appropriation to higher education as a percentage of state's general fund plus local appropriation Sources: SHEEO calculation from SHEF and U.S. Census data. (SHEEO & SHEF, 2007).

CHAPTER TWO

REVIEW OF LITERATURE

This chapter is a review of literature related to the variables of interest in this study, including a detailed perspective of how property taxes help fund community colleges. The chapter includes a discussion of the following topics: the community college allocation process, community college trends regarding tuition and fees, enrollment trends at community colleges, issues with nontraditional students, and an in-depth analysis of community college financing.

Community College Allocation Process

All public community colleges have to participate in an annual budget allocation process that is based on student enrollment. However, according to Cohen and Brawer (2003), there are different funding allocation processes beyond enrollment which include: negotiated budget, unit-rate formula, minimum foundation, and cost-based programs. The following is a discussion of how these different processes for funding community colleges are generally implemented in states.

Negotiated Budget. Negotiated budgets are arranged annually with the state legislators or the state boards of education. This is common practice for the majority of state programs that receive all of their funding from the state's general fund- allocation formula, which is based on the previous year's allocation. Examples of states that use a negotiated budget include: New Jersey, Tennessee, and Kentucky.

Unit-Rate Formula. With the unit-rate formula, allocation is based on the number of full time student equivalents (FTSE) from the prior year and the number of students in

a certain program. The majority of the states use this process (e.g., Louisiana and Georgia).

The Minimum Foundation Plan. The minimum foundation plan is a hybrid of the unit-rate formula and negotiated budget. The main difference is the use of local tax revenue such as property tax. This allocation process attempts to balance the disparities between jurisdictions with higher assessments against jurisdictions with lower assessments. Since community colleges typically serve regions that are made up several communities, the formula automatically balances out the inequities of different property assessments so that one community is not bearing the full cost of supplementing the local revenue for a regional community college service area. However, according to Dowd (2005), across the nation community colleges located outside urban areas receive revenues close to 13% to 18% higher than community colleges located in large inner city communities, controlling for enrollment size and part-time enrollment. Furthermore, as published in the *Chronicle of Higher Education* (2007), three community colleges in Oregon have filed suit against the state of Oregon because they believed they were fiscally penalized for being located in communities with higher property assessments since the state did not appropriate them the full agreed upon state appropriation. These community colleges do not want the Oregon State Department of Education to shift their state formula funding to community colleges that are in districts with lower property values. The colleges eventually lost their suit against Oregon, now they are working with the state to slowly redistribute their funding to other schools within the Oregon Community College System (2007).

The Cost-Based Funding Formula. The cost-based funding formula process provides support based on actual expenditures (e.g., prior year's enrollment, building maintenance, prior year's operational costs, etc.) and targeted program functions (e.g., developing and maintaining key training programs, supporting special populations, etc.). Alabama, Wyoming, and Montana operate on a cost-based funding formula.

Overall, these different allocation processes for community colleges can significantly impact community college tuition.

Community College Tuition and Fees

Tuition and fees are another major source of funding for community and technical colleges. Yet, the majority of the students attending community and technical college systems are low-income students (Braxton, Milem, & Sullivan, 2004; Hossler, Braxton, & Coopersmith, 1989). According to Collins, Leitzel, Morgan, and Stalecup (1994), in a study of 27 community college campuses using a financial survey, 24 campuses (88.9%) increased their tuition because of declines in state funding. One can infer from this result that southeastern community and technical college systems are not immune to this national trend, because the majority of their funding for post-secondary education is allocated by formula funding. However, as mentioned previously, formula funding annual revenue appropriation had declined significantly during 1990 and 2000 (Watkins, 2000).

The cost of college tuition has been shown to play a critical role in the college choice process for low income students (*Measuring Up: The State by- State Report Card for Higher Education,* 2006). Low income citizens in the southeastern states spend on average more than 20% of their income at the lowest cost institution (e.g.,

community colleges) (NCHEMS, 2007). Therefore, socioeconomic status (SES) and other variables related to accessibility, such as net cost, have some association with the number of citizens attaining post-secondary education.

Community College Enrollment Trends

Community and technical college systems across the nation receive the majority of their funding allocation from Full Time Student Equivalent (FTSE) funding generated from the states' General Funds. The community college FTSE allocation is based on the enrollment numbers the previous year, however because enrollment numbers tend to increase each year, rapidly growing campuses are under-funded (Glass & Jackson, 2000; Tambrino, 2001; Watkins, 2000). According to the College Board, "…appropriations for Full Time Student Equivalent (FTSE) have declined by 9% in constant dollars between 2000-01 and 2002-03" (College Board, 2005, p. 4). Typically, this kind of decline in appropriation has resulted in an increase in student fees and tuition as a result of states' struggling economies (Watkins, 2000).

Prior to 1987, limited research had been conducted regarding nontraditional student enrollment at community and technical colleges (Bean & Metzner, 1987). However, policy makers within state and the federal government programs have realized the importance of these nontraditional students now that there are not enough traditional age students available to meet the demand of high growth and high demand workforce occupations. Also, in recent history, nontraditional students have had some difficulty navigating the post secondary system (U.S. Department of Education, 2007).

Conceptual Framework.

The student choice and persistence conceptual framework for my study is based on the *Persistence Nexus Model* which was created by St. John, Paulsen, and Starke (1996). This conceptual framework was chosen after reviewing several frameworks that include factors that influence student choice and college persistence. The following sections review various frameworks and concludes with the Persistence Nexus Model.

Federal financial aid has increased significantly from the 1960's when it was only a $557 million government allocation to a $55.7 billion allocation in 1996-1997 (NCHEMS, 2002). With this amount of investment from taxpayers, researchers have asked predominately one question: What role do financial subsidies play with student choice and persistence (St. John, 1994)? Fundamentally, this is an economic research question regarding how financial assistance provides opportunities to help students persist in college- especially those students who need financial support (Cabrera, Nora, & Castaneda, 1992; St. John, Paulsen, & Starkey, 1996). There are also researchers who take a more inclusive worldview of economic persistence frameworks by examining the interaction of other departure variables that have been proven to influence college persistence (Cabrera, Nora, & Castaneda, 1992; St. John, Paulsen & Starkey, 1996).

Frameworks of persistence. Research of student persistence has focused on two primary frameworks: theory development of economic frameworks and theories of how the student and the institution interact, also known as sociological frameworks. Both of these theories have been proven to be effective in understanding why students stay in college; however, these theories are often viewed as competing theories of student persistence.

Recently, for traditional age college students, the more sociological persistence frameworks have become dominate in higher education research, and these frameworks have focused more on student and institutional fit (Pascarella, 1985).

The economic frameworks of student persistence have included the effects of financial need, student aid packages, tuition costs, and other student financial aid strategies. These economic frameworks are not as prominent as sociological frameworks of student persistence.

Economic Frameworks. The price sensitivity of students and other complementary theories of targeted student subsidies are the foundational theories of student persistence frameworks with an economic focus (Manski, 1989; Manski & Wise,1983; St. John,1990; St. John, Kirshstein, & Noell, 1991). These price-response approaches have provided a way for higher educational policy makers to target subsidies that can influence student behavior. Subsidies have been proven to play a critical role for improving college access. Typically, subsidies for tuition reduction happen through direct grants, student loans, and subsidized work (e.g., work study programs). These strategies lower the upfront and ongoing cost for non-traditional college students. These strategies are also used to bring down the cost of tuition in a high aid and high tuition framework (Cabrera, Stampen, & Hansan, 1990). Further, these financial aid policies have reduced the price sensitivity of non-traditional college students and positively impacting their persistence (Nora,1990; St. John 1990, 1994; St. John, Kirshstein, & Noell,1991; Voorhees, 1985).

Several studies specifically focused on the actual impact of student aid rather than determining if these students respond to their perceptions of college affordability

(Nora, 1990; St. John 1990, 1994; St. John, Kirshstein, & Noell,1991; Voorhees, 1985). However, it was later discovered by Voorhees (1985), Moline (1987), and Nora (1990) that these prior studies were inadequate for developing a comprehensive understanding of how economic variables can interact with non-economic variables.

Sociological frameworks. As mentioned previously, institutions play a major role in the student persistence literature. It has been noted that variables of student support, interactions with faculty, and other sociological aspects of a campus can significantly influence student persistence (Pascarella, 1985; Pascarella & Tenrenzini, 1991).

Researchers that look through a sociological lens believe that a student persists at a college because the student feels welcome by the campus (Bean 1980; Tinto 1987, 1993, 1997). These sociological persistence frameworks stress the importance of institutional fit (Tinto 1987, 1993, 1997). Tinto (1987) has stated that a student's access to capital is only relevant when a student is selecting a college. Once a student enrolls in college, finances should not be considered as a predictor variable in a student's decision to stay or leave a college (Tinto, 1987). Tinto further believed that a student will only select a school that is affordable and the student's financial need is addressed in his or her college choice process (1987).

However, Tinto changed his perspective in 1993 after mounting evidence from other researchers stating that financial aid is extremely important in the role of student persistence (Cabera, Nora, & Castaneda, 1992; St. John, 1989; St. John, Kirshstein, & Noell,1991; Voorhees, 1985). Therefore, in the late 90s Tinto revised his model to include the financial variables within his integration model. As of recent, more contemporary institutional fit frameworks include the importance of student finances.

It is very important to understand each prominent theory and to determine how these frameworks can be blended to support my study, which is to understand some of the reasons why non-traditional students enroll and depart from community and technical colleges.

Integrated Frameworks of Student Persistence. The utilization of integrated college persistence frameworks is not a new phenomena; it is just that it has not been replicated as often as economic and sociological student persistence studies. A few leading researchers of the earlier integrated frameworks were Voorhees (1985), Moline (1987), and Nora (1990). These researchers set out to prove the importance of coupling the effects of financial variables and other non-financial variables of student persistence. Overall, these researches discovered that financial aid has an effect on student persistence. The results from these earlier studies led to the development of the ability-to-pay frameworks (Cabrera, Stampen, & Hansen, 1990; Cabrera, Nora, & Castaneda, 1992) and the development of college choice/persistence nexus frameworks by St. John, Paulsen, and Starkey (1996).

Early integrative frameworks. Since 1985, Voorhees has researched the coupling of federal student aid and the persistence of financial needy first year college students. His framework focused on a two stage framework that includes variables of the student's access to financial capital, student demographics, and the student's academic ability. Voorhees then researched how these variables interact with the student's performance and persistence at college and found all of these variables must be addressed to help support low income first year college students. Two years after Voorhees study, Moline (1987) researched the impact of students' access to financial

capital at community colleges. Moline discovered that financial aid has a significant positive impact on community college students' grades and their persistence to stay enrolled at community colleges (1987) and later supported by Philibert, Allen, and Elleven (2008).

Ability-to-pay frameworks. In 1990, Cabrera, Stampen, and Hansen discovered that one must develop a comprehensive view of student persistence and the importance of decoupling the indirect and direct effects of financial aid on student learning and student institutional fit. Cabrera et al. (1990) were able to decouple the indirect and direct effects of student persistence by including organizational theory, the application of cost/benefit theory, and institutional fit theory. With the inclusion of these theories, Cabrera and associates developed a theory of student persistence. However, they realized the student's perception of college affordability has a significant moderating effect on the student's institutional fit (Cabrera et al., 1990). As a result, the ability-to-pay framework becomes a precondition for the attainment of learning and campus student integration (Cabrera et al., 1992). They further tested their theory on a sample of college students from the National Center for Educational Statistics (NCES) High School and Beyond 1980 Senior Cohort. By utilizing this sample population, it was found that students who have the ability to pay for college also have higher aspirations to go to college and persist in college than the students who are not satisfied with their ability to pay for college. As a result, finances have a twofold impact on how a student aspires to go to college and persist at his/her college of choice. Cabrera et al.'s model realized the importance of talking to students and developing an understanding of their ability to pay for college. As highlighted in their study, student persistence frameworks

must include financial and non-financial variables to fully understand why a student leaves a college; however, they discovered that finances play a significant role in the persistence framework.

The College Choice – Persistence Nexus framework. St. John, Paulsen, and Starkey (1996) noted a gap in the literature of college choice and persistence. The researchers noted the complexity in understanding the effects of financial aid had on student matriculations and persistence in college. In a response to this research gap, they created the "nexus" framework of college choice and student persistence. St. John's nexus framework has three distinct stages:

1. The first stage includes students' access to financial resources and academic ability as being important while including other factors in a student's background.

2. The second stage includes how a student applies a cost benefit analysis by investigating how financial aid or the lack of affordable tuition plays a key role in the second stage of the model.

3. The third stage includes how a student enrolls at his/her chosen school and the student's sociological experience with the campus.

Within the St. John model, financial aid plays a crucial role with the student's persistence because a student's access to capital has a way of bridging the gap of the forgone cost of attending college and the long term benefits of having a degree. More importantly, tuition increases can affect the students' rationalization when they apply

their cost benefit analyses for staying enrolled (St. John et al., 1994). St. John, Paulsen, and Starkey (1996) further discovered that half of the total variance in student persistence in college could be explained by tuition, financial aid, food and travel, housing, and other living costs (St. John, Paulsen & Starkey, 1996).

Issues with Nontraditional Students

Limited research has been conducted about nontraditional student enrollment at community and technical colleges (Bean & Metzner, 1987). I n the 1999-2000 academic year there were 7.1 million nontraditional students enrolled as undergraduate students. According to Sandler (1988), nontraditional students are students that are over the age of 24. However, according to Bean and Metzner (1987), nontraditional students can be from any part of the country, live in the city or live in rural communities, rich or poor, black, white, or some other race, 18 years old or older; employed or not employed, working full time or part time, retired; male or female; with children or no children; married or single; and enrolled in credit or noncredit certificate programs. Due to the lack of a clear definition of a what nontraditional students should look like, for sake of this study, I used the classification that is set in place by the GAO, NCHEMS, Census Bureau, and Bean and Metzner (1987), which describe a nontraditional student as being 25 or older and is financially self reliant. These studies further noted that nontraditional students share the following characteristics:

- Nontraditional students live off campus and commute to school-which has a tremendous impact on their socialization (Chickering, 1974).
- Nontraditional students typically enroll as part-time students, and according to Pascarella (1985), part-time enrollment can significantly

affect one's ability to build relationships with faculty and in turn, class participation.

Currently, this target group is 40% of all undergraduate students and the majority of them are enrolled in community colleges, at least 68% (GAO, 2003). The vast majority of these adult students are working more than 35 hours a week, married with children, and are lacking proper post-secondary preparation. Further, these students are more likely to be enrolled in certificate and GED programs. There is a key difference between the attrition process of traditional and nontraditional students. This main difference is that nontraditional students are more affected by external factors than traditional age students who are more affected by social integration variables (Bean & Metzner, 1987).

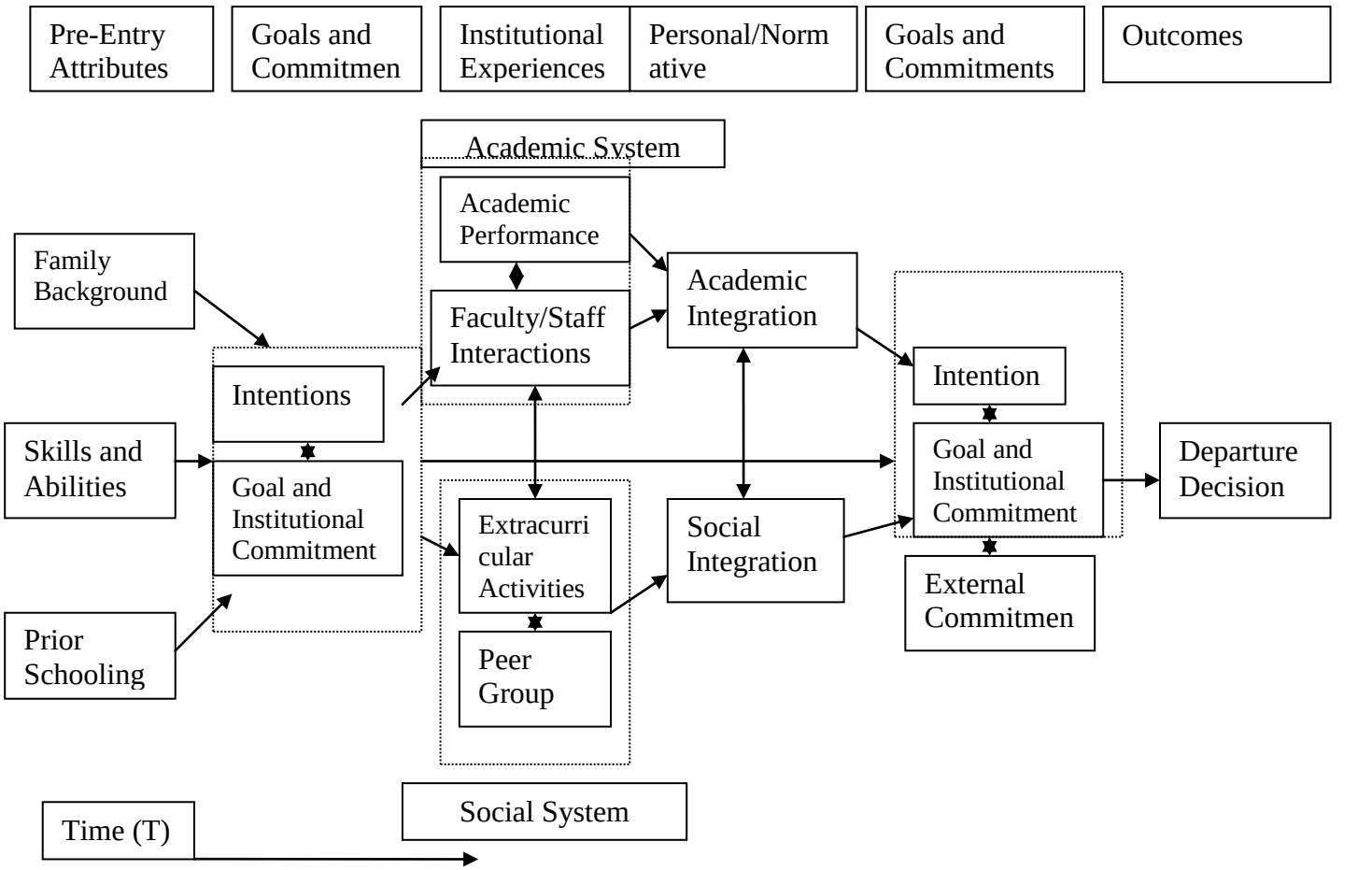
The demand for more skilled workers has increased the enrollment of non-skilled adult students at community and technical colleges. It has further been noted that since World War II the role of women in the workforce has significantly change the enrollment pattern at community and technical colleges because women have proven to be a competent technical skill worker. Therefore, adult women have also increased their enrollment at community and technical colleges (Bean & Metzner, 1987). The further acceptance and promoting of learning from "K – Gray" has further increased the enrollment at community and technical college for a vocational reasons, especially for older, part-time, and non-residential students (Sandler, 1998). Regardless of the enrollment growth of nontraditional students, retention of this target population still lags behind traditional age students (1987).

By analyzing Tinto's model, which is a highly recognized and utilized model for understanding student departure (see diagram below), the environmental variables have a substantial direct effect on nontraditional students (1987). This claim was originally supported by Tinto (1975) and supported later by (Pascarella, 1985). However, it was later discovered by Philibert, Allen, and Elleven (2008) the environmental variables are presumed to be more important for the nontraditional student than the academic variable for traditional students. It is further supported that when a nontraditional student does not experience academic problems, but their environmental status is poor, the nontraditional student typically leaves the campus. This situation is very common for nontraditional students because nontraditional students struggle with their environmental pulls, because these environmental pulls are typically based on their family survival (Brown, 2002). This finding highlights why nontraditional students depart a campus even when they are excelling with their academic progress (1987). The traditional student, who typically has a stronger relationship with the school, has a significantly higher probability of staying in school (Tinto, 1975). However, this experience is not true as it relates to nontraditional students. Nontraditional students do not interact with the school as frequently as traditional students. Thus, Tinto would support that this relationship variable would have a negative impact with their school retention status regardless of the student's situation (Tinto, 1975). It has been further discovered by Bean and Metzner (1987) and Philibert, Allen, and Elleven (2008) that types of family responsibilities are reasons why nontraditional students depart their college of choice. It has been further noted that the number of children can severely derail a student's persistence in college.

Family pressures and obligations are known as strong environmental pulls for a nontraditional community college student (GAO, 2003; Philibert, Allen, & Elleven, 2008). Again, opposite from traditional students, college grades is not a strong predictor for nontraditional student persistence in college (Brown, 2002).

Therefore, with all of the above factors that affect nontraditional student differently from traditional age students, Tinto's Institutional Departure Model, as shown in Figure 1, is not as appropriate a conceptual framework as the Persistence Nexus Model by St. John and Paulsen. Therefore, a revision to Tinto's Institutional Departure Model is needed to address the pressures of nontraditional students, by incorporating the Persistence Nexus Model.

Figure 1. Tinto's institutional departure model.



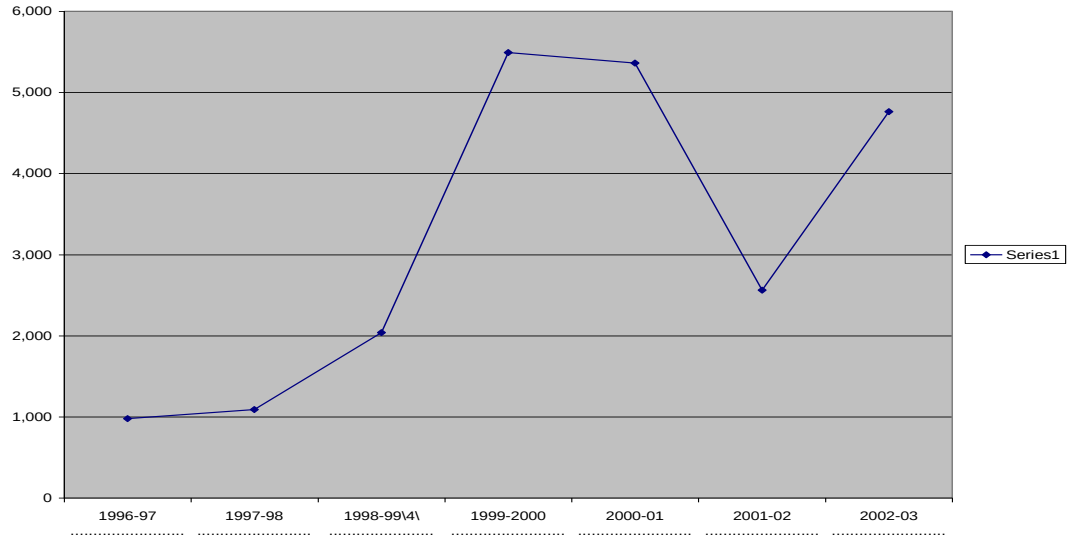
Source: Tinto 1987, p.114 (C) 1987 by the University of Chicago. All rights reserved.

Local Property Tax

Given that nontraditional students have more financial obligations that traditional students and that they are more sensitive to tuition and fees, researchers have explored methods to offset the costs for attending community and technical colleges (Jackson & Glass, 2000; Kenton et al., 2005; Watkins, 2000). One source of revenue that has helped to offset the cost of tuition and fees is local property tax (Collins et al., 1994; Hyde & Augenblick, 1980; Kenton et al., 2005; Wattenbarger & Vander, 1986). In general, with legislative approval, property taxes provide about 70% of public local K-12 school systems revenue and about 25% of local community college systems revenue. Local property tax is not the sole solution, but it should be considered because state community colleges are experiencing a decrease in federal and state appropriations (Jackson & Glass, 2000; Kenton et al., 2005; Watkins, 2000). According to other studies, most institutions will directly offset the void caused by decreases in state appropriation by increasing tuition and fees (Collins et al., 1994; Hyde & Augenblick, 1980; Wattenbarger & Vander, 1986). Typically, states that fund their community colleges without local property tax must go before the legislature to increase their tuition and fees, which is uncommon to states that fund community and technical colleges with local property taxes (e.g., Texas and California). Community college systems, like those in Texas, have more system autonomy from state legislatures to increase appropriation for other revenues like property taxes before increasing tuition and fees (Cohen & Brawer, 2003). Also, in Kenton and Associates' study of 11 State Community College Systems (SCCS), eight SCCS saw a decrease in state funds. Of that eight, six of the SCCS increased fees and the other two were able to increase their appropriation from

property taxes resulting in savings for their students and the ability to maintain current level of enrollment. The trend of local appropriation is presented in Figure 2. The recent increase in revenue from this funding stream is evident. This increase is relative to increases in home values, the decrease in student state and federal aid, and the increase in operational cost (Paulsen & Smart, 2001). To help control tuition increases at community and technical colleges, the further use of local property taxes should be explored for community college policy.

Figure 2. IPEDS financial nationwide survey of local appropriation funding.



Local property tax is a progressive tax, which shifts the burden onto people with more assets (Ohio Department of Taxation, 2003). The use of local property taxes are augmenting the support of some community and technical college systems (such as Texas) resulting, presumably, in a more equitable educational system because the cost of attendance is much lower than states that fund community colleges without local property taxes (Krist & Veneza, 2004; SREB, 2006).

However, there are some entrenched legal ramifications for using local property taxes. According to many court rulings, education is an overall public good, but not a

U.S. Constitutional Right (Alexander & Alexander, 2005). Furthermore, state legislators are less likely to impose excessive taxes on state's residents (Alexander & Alexander; Cruz, 2001).

The majority of K-12 local school boards do not have local taxing authority; however, some community and technical colleges do (e.g., Texas). This taxing authority depends on each system's creation and legislative authorization (through state constitutions). The rule of thumb is that legislators may choose how they wish to fund their educational providers (Alexander & Alexander, 2005; Cohen & Brawer, 2003; Paulsen & Smart, 2001; SREB, 2006). When the taxing authority is given to a local school district, the state constitution must clearly state that all funding must follow the intent of the legislation. However, this differs significantly when laws are written vaguely and are left open for interpretation. It has been challenged that people are taxed too much and areas with less property taxes are more competitive to neighboring states with less property tax liabilities. However, according to a committee that was formed by the Ohio state legislature to study the effects of property taxes, property tax charges do not impact the states' ability to attract outside industry investment. It has been noted that states that have higher effective real property tax, which includes Florida, Georgia, and Texas, are still very competitive to their neighboring states with lower property taxes (Ohio Department of Taxation, 2003).

The following section includes a detailed explanation regarding how local appropriation is applied in a community college context in the state of Texas. The Texas community college system is one of the largest community and technical college

systems that provides services for a very expansive student body and provides a good example for how a system utilizes local property tax revenue.

Community College Operation with Local Property Tax

Texas Community College System. The Texas community college system has its funding processed through a formula matrix created by the Texas Legislature in 1969 (TACC, 2007). The Texas formula funding is contingent upon each community college district completing an All Fund Expenditure Report (AFER) which is an estimate of the campus instructional and administrative cost regarding 26 disciplines. The Texas Higher Education Coordinating Board then brings together these 50 or more individual districts' requests AFER, and develops a median cost per contact hour for each of the identified 26 funding categories (TACC).

Once the median price is determined, this cost estimation is sent to the state Legislature and the Legislature in return funds a percentage of the community college formula (TACC). The majority of the state formula revenue comes from state appropriation that is designated for instruction related expenses. Then, formula funding revenue from local taxes and tuition and fees are matched and designated for capital improvement, maintenance, and other non instructional related expenses. According to the Texas Legislative Budget Board, the actual breakout for state formula funding is 80% of the allocation for instruction-related expenses and 20% for non-instructional expenses (Bell, 2006).

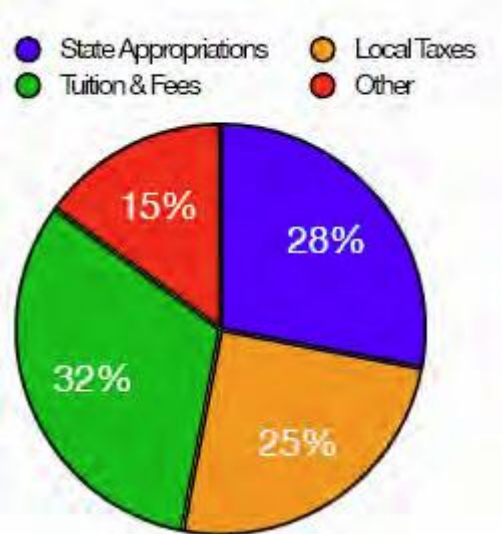
Summary of the Texas Community College Formula:

1. The formula model is heavily weighted upon the total number of contact hours.

2. Each college has to develop an All Funds Expenditure Report (AFER) based on 26 funding disciplines.
3. After the AFFER is completed by each campus, the Texas Higher Education Coordinating Board compiles the results of 50 AFERS and creates a median cost per student based on contact hours for the 26 instructional fields.
4. The formula is then created by multiplying the median cost per contact hours (MCPCH) of the 26 educational fields with the total number of contact hours (TNCH) generated for each field. Then the legislature funds a percentage of the total (%Leg) Formula: MCPH x TNCH x %LEG = Total Texas Community College state annual appropriation. The other revenue is then matched by tuition and fees, local appropriation, and other sources to fund the operation of campus and maintenance of facilities (TACC).

Texas has seen significant gaps occur with its funding formula. The largest gap was created during 1992-2001 when Texas decreased its state appropriation by 15.6%. The community college system responded to this decrease in funding by increasing tuition and fees by 37.3% and local appropriation by 53.2%. As presented in Figure 2, the overall revenue for Texas' community colleges is made up of 25% local appropriation, 28% state appropriation, 32% tuition and fees, and 15% from other resources (Bell TACC).

Figure 3. Community college funding for Texas (Bell, 2006).



Source: Bell 1987, p.16 (C) 2006 by the Texas State University-San Marcos Dept. of Political Science, Public Administration All rights reserved.

Texas's community college system is one of 26 state community college systems that use local property taxes as part of their overall revenue stream (ECS, 2005). Texas's local appropriation funding stream is dedicated to non-instructional costs (e.g., construction and maintenance). Funding with local appropriation may become more problematic because 20% of Texas's campuses are at their statutory local appropriation tax cap (TAAC, 2007). For those campuses that are at or near their statutory cap, they may have to balance their budgets from pending future declines by: delaying capital improvements and maintenance, increasing tuition and fees or generating revenue by leasing and utilizing their facilities for various entrepreneurial endeavors.

The Texas funding methodology is an inclusive process in that each campus has to compile its AFER which is based on each campus' recent expenditures regarding 26 disciplines. The benefit of having a formula funding model is that the allocation is driven by data and not by political pressure. The Texas funding formula is also comprised of current enrollment and enrollment by various age groups (Cruz, 2002). Therefore, each

campus leader has a chance to influence revenue by improving the front end measure and retention. The more students, the more funding one can get for all campuses. According to some Texas community college leaders, this is the preferred funding allocation method over other methods, because they believe the formula is easier to budget for and it eliminates the turf struggles with other campuses (Bell, 2006).

The Texas community college system was created to utilize local tax funding and prior to 1940 this system had enough revenue to provide tuition free community and technical college education. Texas community colleges are also more affordable compared to other states with limited revenue streams Texas also realized that for every tax dollar invested in community colleges the state receives back $18, in broad terms, over the next 30 years (TACC, 2007).

The Texas economy has a stronger middle class compared to other southern states (U.S. Census, 2005). Perhaps much of Texas' economic strength is from the earlier investment of providing free to low-cost postsecondary opportunities for its citizens. However, Texas community and technical college administrators will have to justify the need for taxpayer resources, given that 20% of their 50 community college districts are at their local appropriation mandated cap. As a result, these campuses will not be able to increase their revenue from the property tax revenue stream when they experience future declines from other revenue streams. Texas administrators also have to deal with the unrest of property owners who believe that they are paying too much property tax. However, according to the Tax Foundation 2009, Texas' state and local tax burden has been consistently below the national average for the past three decades. Estimated at 8.4% of income, Texas's state and local tax burden percentage

ranks 43rd highest nationally, which is well below the national average of 9.7%. Each year, Texans pay $3,580 per capita in state and local taxes.

Given that the Texas formula for funding community colleges is so heavily weighted by input numbers and contact hours, the leadership is driven to only address their quantitative measures. Texas formula funding does not reward a campus for how well it is helping the students to become lifelong learners. According to Bell (2006), there are some additional disadvantages of Texas formula funding:

- Formula funding does not provide money for start-up training programs; however, Texas has recently developed several innovation funds to bridge this gap.
- There is too much focus on fundable units and not how well students are learning.

The formula matrix actually gives some discretion for projecting enrollment growth; however, in the past, there had been little success in accurately predicting future demand according to (Bell). Additionally, as the Cruz survey indicated, the majority of the respondents (community college administrators) felt frustrated with the formula model because it does not reward innovation (Cruz, 2002).

According to the SREB, Texas community colleges have the second to lowest percentage of its revenue coming from tuition and fees (SREB, 2006). When tuition and fees remain affordable, there is more accessible higher education for Texas citizens (Mumpers, 2001). As a result of low tuition, enrollment at Texas community colleges remains strong and growing.

Texas having access to a separate funding stream to fund non-instructional costs from local appropriation leaves more money to fund instructional costs, student services, and non-credit programs.

Community College Operation with No Local Appropriation

Community and Technical Colleges funded with non-local appropriation have limited funding flexibility and are heavily reliant upon state appropriation (Cohen & Brawer, 2003; Kenton et al., 2005; Paulsen & Smart, 2001). These state appropriations are obligated through General Fund, or General Revenue Funds. Sales and income taxes make up the majority of the General Fund or General Revenue funds (minus taxes for food and utilities) (Lee & Johnson,1998; Paulsen & Smart, 2001).

According to Lee and Johnson (1998), the sales tax is regressive tax. A regressive tax affects the poor, because higher income individuals have proportionally less of their income being spent on sales taxes. Therefore, the General Fund, which is made up of a significant percentage of sales taxes, is not equitable, particularly in southeastern states, which have some of the largest percent per capita living below the poverty level in the nation (MDC, 1998).

The following section is a more detailed demonstration regarding what a state (e.g., Georgia) does when legislation has not approved funding its community college with local property taxes.

Georgia Community College System. Georgia's Community and Technical College System has less institutional autonomy than the Texas Community College System, because Georgia must obtain legislative approval to increase any of its revenues to meet the fiscal needs for its campuses, resulting in turf battles for state

appropriation and competition for FTE with four-year institutions. Georgia has a non-local property tax funding stream where the majority of its funding comes from tuition and fees and state appropriation. Other community college systems with local property taxes (e.g., Texas and Missouri) do not have to deal with this issue, because they receive their funding in thirds: one third from tuition and fees; one third from state appropriation, and roughly one third from local appropriation.

The majority of State Community College Systems are able to raise their tuition to a point without legislative approval. Also, systems with local property tax funding can increase their local appropriation, if there is a decline in state appropriation. The result is sheltering the students from increased tuition and fees to fill the gap of reduced state appropriation. However, most state agencies in Georgia have strong state administrative and legislative control because they receive the majority of their funding from state legislation (SREB, 2006). Even though Georgia's Community College System has a limited mix of funding streams compared to other Community College Systems, Georgia is still able to help students to be able to go to colleges and community colleges through their state sponsored, scholarship program called the HOPE scholarship.

Hope grants/scholarships. The Georgia system of post secondary education attempts to educate every Georgian who strives to excel in their education through the HOPE scholarship, which is a merit-based student aid program implemented in 1993. The HOPE Scholarship is funded by its state's lottery system. Georgia's citizens must have achieved at least a B average to be eligible for the scholarship. However, if they fail to meet the set criteria for the HOPE Scholarship, Georgia citizens may be eligible

for a Hope Grant. The Hope Grant is a one-time payment of $500 award that can be applied toward all education costs at an eligible post secondary institution (GA College 411, 2010; K. Trahan, personal communication, November 18, 2004).

Overall Georgia has provided funding opportunities for its citizens to be able to afford postsecondary education, without local property taxes. It is to be noted that Georgia's Community College System's tuition is about $400.00 more per-semester than the Texas Community College System's tuition (NCHEMS, 2007). However, the enrollment percentage of nontraditional students is higher in Georgia than Texas (NCHEMS, 2007).

The Current State of Community College Funding

Community and technical colleges across the nation are changing. The typical community college has changed from simply providing remediation services, to training for high demand occupations. A large percentage of college graduates are going back to school to get training for high demand occupations, and they are seeking community and technical institutions much more often to receive these types of training (Dagget, 2004; NCHEMS, 2007). Therefore, the community and technical colleges are placed at the hub of the community to meet these critical demands for their local economies. According to the report, "Measuring Up," which is partially presented in Table 1, all southeastern states failed the affordability indicator and only the state of California received a grade of C (2006). California also has local property tax revenue and at $718.00 per semester, its community college tuition is one of the lowest in the nation. The U.S. community college tuition average is nearly $1,900.00 (NCHEMS, 2005). The affordability indicator in Table1 displays the states rating based on a composite score

reflecting student debt, states' strategies for campus aid, and federal aid. The affordability indicator is trying to grade a high-aid and high-tuition campus revenue framework. In my opinion, the Measuring Up report's affordability indicator does not provide a good measure for how affordable community colleges are because their rating does not weigh local property tax and how well these systems are enrolling and graduating nontraditional students. Thus, the aim of my study was to investigate how well southeastern community colleges are doing in enrolling 25 to 44-year-old part time community college students and if their funding streams impact the enrollment of this target group.

Table 1

Measuring Up: 2006: Community and Technical Colleges Affordability Grade, States' Community Colleges Tuitions, and the Percentage of States' Low Income Population's Income Being Spent on Tuition and Fees

State	Affordability Grade	State Community College Tuition and Fees and the % of Income to Pay
Alabama (2006)	F	$2763 24%
Arkansas (2006)	F	$1768 20%
Delaware (2006)	F	$2240 24%
Florida (2006)	F	$1845 26%
Georgia (2006)	F	$1645 22%
Kentucky (2006)	F	$2407 26%
Louisiana (2006)	F	$1513 20%
Maryland (2006)	F	$2832 24%
Mississippi (2006)	F	$1666 22%

(Table 1, Continued)		
		$1295
North Carolina (2006)	F	23%
		$2108
Oklahoma (2006)	F	22%
		$2931
South Carolina (2006)	F	27%
		$2395
Tennessee (2006)	F	23%
		$1282
Texas (2006)	F	22%
		$2051
Virginia (2006)	F	21%
	F	$2471
West Virginia (2006)		30%
	C-	$714
California (2006)		26%

Note. From "Affordability:
Share of Income Poorest Families Need to Pay for Tuition at Lowest Priced College," by NCHEMS, 2007. "Measure Up State Grades 2000-2006: National Report Card for Higher Education," by National Center for Public Policy and Higher Education

Table 2

Measuring Up: 2006 Completion Grade, States Per-capita funding of state local appropriation and 1st year persistence percentage

State	Completion Grade & Per-capita funding from state& local appropriation	Students Returning after 1st year (Persistence)
Alabama (2006)	B- (State Grade for Completion)	
	$305 (per-student)	
Arkansas	C	
	$264	53%
Delaware	A-	
	$257	
Florida	A	
	$185	59%
Georgia	A	
	$229	52%
Kentucky	C+	
	$289	51%
Louisiana	C-	
	$292	49%
Maryland	B	
	$224	50%
Mississippi	B	
	$268	58%

(Table 2, Continued)

North Carolina	B+ $337	48%
Oklahoma	C $236	47%
South Carolina	B+ $180	49%
Tennessee	B $188	58%
Texas	C+ $229	49%
Virginia	B+ $211	53%
West Virginia	C+ $176	59%
California	B $266	57%

Note. From "State & Local Government Support for Higher Education General Operating Expenses Per Capita ($)Gross State & Local Government Support for the General Operating Expenses 2006 Population, Indexed to 2006 Dollars, Adjusted for Inflation," by NCHEMS, 2006. "Measure Up State Grades 2000-2006: National Report Card for Higher Education," by National Center for Public Policy and Higher Education, Persistence: 1st year community college students returning their 2nd year National Center for Higher Education Management Systems' special analysis based on Enrollment Survey Fall 2003, Enrollment Retention Rate 2004, Institutional Characteristics 2004, IPEDS Peer Analysis System, National Center for Education Statistics, 2006; ACT, "Institutional Data Questionnaires 1990," unpublished state-level data tabulation provided by the ACT, 2004. Technical Guide for Measuring Up 2006: Documenting Methodology, Indicators, and Data Sources September 2006.

Summary

In summary, there is a relationship between community and technical college funding streams and tuition and fees. This chapter reviewed the historical and contemporary context of community college finance, allocation, and the educational pressures that nontraditional students face. Federal appropriation, state appropriation, and local appropriation have been shown to have an impact on tuition and fees. Yet, it is unclear if this constant increase in tuition and fees has an impact on the states' enrollment of nontraditional students.

CHAPTER THREE

METHODOLOGY

The purpose of this study was to identify the relationship between the type of funding at community and technical colleges in southeastern United States and these states' enrollment of nontraditional students. Specifically, the study examined the relationship between available funding streams and the state's percentages of nontraditional students enrolled in their community/technical colleges.

This chapter is an overview of the methodological framework for this study. In the sections that follow, the research questions, sample, data collection, and data analysis techniques used in the study are discussed. Since the study did not involve human subjects, an exemption was granted from the University of New Orleans Institutional Review Board.

Research Questions

The primary research question for this study was: What is the relationship between the type of funding sources at community/technical colleges in southeastern community and technical colleges and their states' nontraditional enrollment trends? In addition, two sub questions were addressed:

1. Were there significant differences in states' community and technical colleges funding sources between the years of 1995, 2000, and 2005?
2. Did southeastern community and technical colleges' state systems with local appropriation have a higher percentage of nontraditional students enrolled in community and technical colleges than states without local appropriation?

Population

The target population for this study was community and technical college systems in the southeastern the United States. Community and technical college systems for the following states were of interest in this study: Alabama, Arkansas, Florida, Georgia Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. These states are also defined in the Integrated Postsecondary Education Data Systems (IPEDS) data cutting tool as the "Southeastern Region." Once again, Kentucky was eliminated from the study because its community and technical colleges did not complete surveys for 1995 and 2000.

Data Collection

The data for southeastern states' funding of community colleges were obtained from the National Center for Education *Statistics (NCES) Annual Finance Survey (Dataset Cutting Tool, 1995, 2000*, 2005). The following variables of interest are explained in the following sections: Revenue Sources, Enrolled Population data, and General Population data.

Revenue Sources

Community and technical colleges have many revenue streams that fund the operation of the system. IPEDS tracks higher education activities with the authority of the Title IV of the Higher Education Act of 1965 and the following twelve sources of funding for community and technical colleges: 1) tuition and fees; 2) federal appropriations; 3) state appropriations; 4) local appropriations; 5) federal grants; 6) state grants; 7) local grants; 8) private gifts; 9) endowments income;10) sales and services of educational activities;11) auxiliary enterprises and 12) other sources not

covered by a separate, specific source (IPEDS, 2005). States examined for this study included: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia for the years of 1995, 2000, and 2005. The IPEDS data included all two year and four institutions; however, this study only investigated 345 public two year Associated of Arts degree granting institutions in 11 southern states. Once again, Kentucky was eliminated from the study because this state only reported data for the year of 2005.

Enrolled Population Data

The information for the percentage of nontraditional students by states for 1995, 2000, and 2005 came from the National Center for Education Statistics (NCHEMS) Fall Enrollment Survey for 2003 and 1993. Fall 2003 state-level data were provided by the Research Triangle Institute (2006). Fall 1993 state level data were provided by Pinkerton Consultants (2004 in NCHEMS, 2007).

General Population Data

The general population data were provided by the United States Bureau of the Census Current Population Survey (*The Supplement*, October 2002, 2003, & 2004; *Supplements*, October 1992, 1993, & 1994). Washington D.C. state level data for 2002-04 were provided by the Research Triangle Institute (2006). Data for 1990 to 1992 were provided by Pinkerton Computer Consultants (2004; NCHEMS, 2007).

The nontraditional student enrolment rate data were downloaded from the NCHEMS website in a percentage format.

Data Analyses

Quantitative research methods were chosen to replicate and extend the prior research by Kenton, Huba, Schuh, and Shelly (2005). Kenton et al. researched the effects of resource dependency on 11 Midwestern states' community and technical college systems. Both my study and theirs focused on the same12 funding streams, however, my study differed from theirs by examining whether states receiving local appropriation had higher enrollment of nontraditional students in comparison to states that did not receive local appropriation revenue. Additionally, Kenton et al.'s study focused on the years 1990, 1995 and 2000, whereas my focus was on more recent data from the years 1995, 2000 and 2005.

The Statistical Package for the Social Sciences (SPSS) software version 18.0 was used to analyze all data. The mean proportion of total current funds revenue attributed to each of the 12 resources of current funds revenue were computed for each institution in each state and year to be studied. The mean percent of 12 community college revenue streams were computed for each institution (N = 345) in each state (N = 11) and for each year of: 1995, 2000, and 2005 in a similar manner to that completed by Kenton et al. (2005). In order to address research sub question 1 (Were there significant differences in states' community and technical colleges funding sources between the years of 1995, 2000, and 2005?), one way analyses of variance (ANOVA) were used to determine if there were significant differences between the states for each of the 12 funding streams: 1) tuition and fees; 2) federal appropriations; 3) state appropriations; 4) local appropriations; 5) federal grants; 6) state grants; 7) local grants; 9) endowments income;10) sales and services of educational activities;11)

auxiliary enterprises and 12) other sources (IPEDS, 2005). In addition, ANOVA was used to determine if there were significant differences between the years 1995, 2000, and 2005 for each of the funding streams. The apriori level of significance or alpha was set at .05. According to Gall, Borg, and Gall (1996), "Generally, educational researchers choose to reject the null hypothesis if the value [of the statistic] researches a significance level of $p < .05$" (p.183). At an alpha level of .05 there is one chance in twenty that the null hypothesis will be rejected when it is correct, resulting in a Type I error" (Gall et al., p.183). It was expected that no serious effects would cause a Type I error, therefore, a more stringent alpha level of $p < .01$ was not necessary for this study (Kenton et al., 2005).

Tukey's post hoc multiple comparison tests were used to follow up the significant findings to determine specifically which groups were different.

In order to address research sub question 2 (Did southeastern community and technical colleges' state systems with local appropriation have a higher percentage of nontraditional students enrolled in community and technical colleges than states without local appropriation?), an ANOVA was conducted to determine if there were significant differences between the states in enrollment of nontraditional students. Tukey post hoc follow up tests were conducted for statistically significant findings in order to determine which states had higher percentages of nontraditional student enrollment.

CHAPTER FOUR

FINDINGS

The purpose of this study was to ascertain the relationship between the type of funding sources at southeastern community and technical colleges and their states' nontraditional student enrollment trends. Data were collected through the National Center for Education *Statistics (NCES) Annual Finance Survey (Dataset Cutting Tool, 1995, 2000*, 2005) for community and technical colleges in 11 southeastern states (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia) for the years of 1995, 2000, and 2005 on 12 sources of funding: 1) tuition and fees; 2) federal appropriations; 3) state appropriations; 4) local appropriations; 5) federal grants; 6) state grants; 7) local grants; 8) private gifts; 9) endowments income; 10) sales and services of educational activities;11) auxiliary enterprises and 12) other sources not covered by a separate, specific source (IPEDS, 2005).

This study addressed the following research questions:

The primary research question for this study was: What is the relationship between the type of funding sources at community/technical colleges in southeastern community and technical colleges and their states' nontraditional enrollment trends? In addition, two sub questions were addressed:

1. Were there significant differences in states' community and technical colleges funding sources between the years of 1995, 2000, and 2005?

2. Did southeastern community and technical colleges' state systems with local appropriation have a higher percentage of nontraditional students enrolled in community and technical colleges than states without local appropriation?

Research Sub Question One

The first research question was: Were there significant differences in states' community and technical colleges funding sources between the years of 1995, 2000, and 2005? The answer to this question is presented in two separate sections: 1) An explanation of the dependent variables that are major sources of funding for community and technical colleges and 2) An explanation of the dependent variables that are minor sources of revenue for community and technical colleges. A detailed explanation of whether there were differences between the states in each of the funding sources and whether there were differences between the years in each of the funding sources is provided.

A listing of mean percentages of the funding received by the community and technical colleges in each southeastern state for 1995, 2000, and 2005 (tuition and fees, state appropriation, local appropriation, federal grants, nontraditional enrollment) is presented in Table 3.

Table 3

Percentage of Major Funding Received for 1995, 2000, and 2005 by State

	Mean	AL	AR	FL	GA	KY	LA	MS	NC	SC	TN	VA	WV
Tuition/Fees													
1995	17%	23%	15%	17%	16%	0%	16%	15%	10%	21%	20%	30%	23%
2000	19%	21%	15%	21%	17%	0%	17%	14%	14%	22%	23%	36%	24%
2005	22%	27%	18%	25%	25%	30%	21%	18%	13%	13%	28%	20%	20%
State Appropriation													
1995	42%	47%	50%	35%	51%	0%	33%	40%	62%	43%	52%	46%	42%
2000	45%	44%	52%	48%	49%	0%	52%	39%	47%	40%	50%	60%	53%

(Table 3, Continued)

2005	64%	64%	69%	62%	65%	58%	74%	48%	64%	64%	67%	69%	69%
Local Appropriation													
1995	3%	0%	0%	1%	2%	0%	2%	8%	10%	8%	0%	0%	0%
2000	3%	0%	2%	1%	1%	0%	0%	8%	11%	8%	0%	0%	0%
2005	4%	0%	6%	1%	0%	0	0%	17%	13%	13%	0%	0%	0%
Federal Grants													
1995	14%	21%	17%	10%	12%	0%	12%	16%	8%	18%	21%	15%	17%
2000	14%	25%	19%	16%	10%	0%	21%	18%	11%	17%	19%	0%	15%
2005	22%	31%	14%	5%	18%	30%	30%	32%	25%	26%	7%	19%	31%

Tuition and fees ranged from 13% of total funding revenue in North Carolina and South Carolina to 30% of total funding revenue in Kentucky. The range for state appropriations was from 48% in Mississippi to 74% in Louisiana. The range for local appropriations was from less than 5% in most southeastern states to 17% in Mississippi. Federal grants ranged from 5% in Florida to 32% in Mississippi. It is further displayed in Table 3 that southeastern states did not see a large increase from the funding streams between the years of 1995 and 2000. However, more revenue was sent to southeastern community and technical colleges between years of 2000 and 2005 (NCES, 2005).

Major Sources of Funding for Community and Technical Colleges

Tuition and Fees. NCES (2000) gives the following definition for institutions to utilize while completing their Finance Survey for how to report their tuition and fees revenue “Report all tuition and fees (including student activity fees) assess against students for educational purposes. Include tuition and fees remissions or exemptions even though there is no intention of collecting from the student. Include here those tuitions and fees that are remitted to the state as an offset to the state appropriation” (see Appendix A for the complete definition for tuition and fees).

As presented in Table 4, the mean proportion of current funds revenue, defined as student tuition and fees by state, ranged from .120 (*SD* = .020) in North Carolina to .288 (*SD* = .082) in Virginia. The mean proportion by year ranged from .187 (*SD* = .055) to .207 (*SD* = .051).

Table 4

Means and Standard Deviations for Proportion of Current Funds Revenue from Tuition and Fees by State and Year

State	Number of Institutions in study	1995	2000	2005	Mean Across Years	*SD*
Alabama	25	.229	.205	.266	.234	.030
Arkansas	20	.155	.154	.185	.165	.017
Florida	46	.172	.213	.248	.202	.038
Georgia	36	.158	.173	.248	.193	.048
Louisiana	41	.163	.174	.213	.183	.027
Mississippi	17	.145	.143	.182	.157	.021
North Carolina	55	.097	.135	.129	.121	.020
South Carolina	20	.213	.219	.129	.187	.050
Tennessee	37	.202	.232	.283	.239	.041
Virginia	23	.304	.363	.199	.288	.082
West Virginia	5	.225	.237	.199	.220	.019
Mean Across States		.187	.204	.207	.200	.056
SD		.055	.633	.051		

An analysis of variance (ANOVA) was conducted to determine if there were significant differences between each of the states for tuition and fees. A significant *F* value was found, indicating at least one significant difference existed between the

states, $F(10, 22) = 3.841$, $p = .004$. The results of the ANOVA summary table for tuition and fees are presented in Table 5.

Table 5

Analysis of Variance for Tuition and Fees by States

Source	*df*	*MS*	*F*	*P*
Between Groups	10	.006	3.841	.004*
Within Groups	22	.002		
Total	32			

**p < .05.*

Tukey's post hoc multiple comparison test was used to follow up the significant *F* to determine specifically which groups were different. Virginia was found to receive significantly more tuition and fees revenue than Arkansas ($p = .034$), Mississippi ($p = .020$), and North Carolina ($p = .002$). All other comparisons of states were not significant. The mean proportions of tuition and fees revenue and the significant comparisons are presented in Table 6.

Table 6

Tukey's Test Result for Tuition and Fees for States

State	State	Mean Difference	*P*
Arkansas	Virginia	-.124	.034
Mississippi	Virginia	-.132	.020
North Carolina	Virginia	-.167	.002

As displayed in Table 3, southeastern states' community and technical college revenue streams have changed dramatically within each state that was studied. All states are reliant upon tuition and fees and their reliance on tuition and fees funding has increased from 17% of total revenue in 1995 to 22% of total revenue in 2005. Some states were more reliant upon tuition and fees than others (e.g., Florida at 20%, Georgia at 19%, and Tennessee at 23%). However, other states like Arkansas, Louisiana, Mississippi, North Carolina, South Carolina, Virginia, and West Virginia were able to spread their financial resource dependency across more revenue streams rather than relying heavily upon the tuition and fees as their primary revenue resource.

An ANOVA was conducted to determine if there were differences between the years of 1995, 2000, and 2005 for tuition and fees. The ANOVA, presented in Table 7, did not result in significant findings. Therefore, there were no significant differences between the years of 1995, 2000, and 2005 for tuition and fees. That is, within each state there were no differences in proportions of funding from 1995 to 2000. There were also no differences in proportions of funding from 2000 to 2005. Therefore, funding proportions remained constant across years.

Table 7

Analysis of Variance for Tuition and Fees by Year

Source	*df*	*MS*	*F*	*P*
Between Groups	2	.001	.393	.679
Within Groups	30	.003		
Total	32			

State Appropriation. The state appropriation category of current funds revenue is defined by NCES as "…all amounts received by the institution through acts of [state legislation], except grants and contracts. These funds are meeting current operating expense, not for specific projects or programs" (see Appendix A).

The number of institutions, means and standard deviations for state appropriation are presented in Table 8. The means across years for proportion of current funds reported as state appropriation ranged from .488 (*SD* = .130) for South Carolina to .584 (*SD* = .114) for Virginia. The range of the mean for across states proportion of state appropriations by year was from .454 (*SD* = .084) to .650 (*SD* = .066).

Table 8

Means and Standard Deviations for Proportion of Current Funds Revenue from State Appropriation by State and Year

State	Number of Institutions in study	1995	2000	2005	Mean Across Years	*SD*
Alabama	25	.467	.437	.643	.516	.111
Arkansas	20	.495	.520	.687	.567	.104
Florida	46	.346	.484	.624	.483	.139
Georgia	36	.511	.489	.655	.551	.090
Louisiana	41	.325	.520	.743	.530	.209
Mississippi	17	.399	.391	.482	.424	.051
NorthCarolina	55	.623	.471	.638	.577	.092
SouthCarolina	20	.426	.401	.638	.488	.130
Tennessee	37	.524	.498	.672	.565	.094
Virginia	23	.462	.603	.686	.584	.114
West Virginia	5	.422	.535	.686	.548	.134

(Table 8,Continued)

Mean Across States	.454	.486	.650	.530	.111
SD	.084	.060	.065		

An ANOVA found no significant differences between the states in state appropriations, $F(10, 22) = .475$, $p = .888$. The ANOVA summary for state appropriations is presented in Table 9.

Table 9

Analysis of Variance for State Appropriation by Groups of States

Source	*df*	*MS*	*F*	*P*
Between Groups	10	.007	.475	.888
Within Groups	22	.015		
Total	32			

An ANOVA conducted to determine if there were significant differences between the years yielded at least one significant difference between the years, $F(2,30) = 24.576$, $p < .001$. The ANOVA summary is presented in Table 10.

Table 10

Analysis of Variance for State Appropriation by Years

Source	*df*	*MS*	*F*	*P*
Between Groups	2	.123	24.576	.000*
Within Groups	30	.005		
Total	32			

*$p < .05$.

Tukey's post hoc multiple comparison test was used to follow up the -significant *F* to determine specifically which groups were different. There were significantly more state appropriations as a proportion of total revenues in 2005 than there were in 1995 (*p* = .000). There were more state appropriations as a proportion of total revenues funding in 2005 than there were in 2000, however, 2000 was not significantly different from 2005. The mean proportions of state appropriations revenue and the significant comparisons are presented in Table 11.

Table 11

Tukey's Test Result for State Appropriation by Years

Year	Year	Mean Difference	*p*
1995	2005	-.019	.000
2005	2000	.0598	.053

*$p < .05$.

Local Appropriation. The local appropriation category of current funds revenue is defined by NCES as "… all amounts received by the institution through acts of [local legislation], except grants and contracts. These funds are for meeting the current operating expenses, not for specific projects or programs" (see Appendix A).

The overall means and standard deviations for proportions of current funds revenue designated as local appropriation ranged from .002 (*SD* = .003) for Alabama to .111 (*SD* = .055) for Mississippi (see Table 12). Virginia, Tennessee, and West Virginia did not have local appropriations. The mean proportion for the years ranged from .040 (*SD* = .084) in 1995 to .104 (*SD* = .064) in 2005.

Table 12

Means and Standard Deviations for Proportion of Current Funds from Local Appropriation by State and Year

State	Number of Institutions in study[a]	1995	2000	2005	Mean Across Years	*SD*
Alabama	25	.005	.004	-	.002	.003
Arkansas	20	.003	.016	.064	.028	.032
Florida	46	.007	.014	.014	.011	.004
Georgia	36	.020	.012	-	.011	.010
Louisiana	41	.018	-	-	.006	.103
Mississippi	17	.084	.076	.174	.111	.055
NorthCarolina	55	.104	.106	.134	.105	.017
SouthCarolina	20	.083	.079	.134	.098	.031
Tennessee	37	-	-	-	-	-
Virginia	23	-	-	-	-	-
West Virginia	5	-	-	-	-	-
Mean Across States		.041	.038	.065	.060	.111
SD		.042	.041	.073		

Note. Dashes represent non-reported data.
[a]Some states did not report funding for local appropriation.

An ANOVA was used to determine if there were significant differences between the states with mean local appropriation. A significant *F* was found, indicating at least one significant difference between the states, $F(7,16) = 11.27$, $p = .000$. The ANOVA summary table is presented in Table 13. The states of Tennessee, Virginia, and West Virginia were excluded from the analysis because they did not have local appropriation funding.

Table 13

Analysis of Variance for Local Appropriation by States

Source	*df*	*MS*	*F*	*P*
Between Groups	7	.008	11.835	.000*
Within Groups	16	.001		
Total	23			

*$p < .05$.

Tukey's post hoc multiple comparison test was used to follow up the significant *F* to determine which groups were different. Mississippi, North Carolina, and South Carolina all received significantly more local appropriations than the other states. The mean proportions of local appropriations revenue and the significant comparisons are presented in Table 14.

Table 14

Tukey's Test Result for Local Appropriation for State

State	State	Mean Difference	*P*
Alabama	Mississippi	-.109	<.001
Alabama	North Carolina	-.113	<.001
Alabama	South Carolina	-.097	.001
Arkansas	Mississippi	-.083	.005
Arkansas	North Carolina	-.087	.003
Arkansas	South Carolina	-.071	.025
Florida	Mississippi	.-099	.001

(Table 14, Continued)

Florida	North Carolina	-.103	.000
Florida	South Carolina	-.087	.003
Georgia	Mississippi	-.100	.001
Georgia	North Carolina	-.104	.000
Georgia	South Carolina	-.087	.003
Louisiana	Mississippi	-.105	.000
Louisiana	North Carolina	.018	.000
Louisiana	South Carolina	-.092	.002

An ANOVA did not result in significant findings among years for local appropriations. Therefore, there were no significant differences between the years of 1995, 2000, and 2005 in local appropriations. The ANOVA summary is presented in Table 15. The states of Tennessee, Virginia, and West Virginia were excluded from the analysis because they did not receive local appropriation funding.

Table 15

Analysis of Variance for Local Appropriation by Year

Source	*df*	*MS*	*F*	*P*
Between Groups	2	.002	.615	.550
Within Groups	21	.003		
Total	23			

Federal Grants. The NCES definition of federal grants is "…revenues from [federal] governmental agencies that are for specific research projects or other type of programs. Examples are research projects, training programs, and similar activities for which amounts are received or expenditures are reimbursable under the terms of a government grant or contract." This definition includes Pell Grants, but not the Federal Direct Student Loan Program (see Appendix A).

As presented in Table 16, the states of Florida (*M* = .104, *SD* = .058) and Alabama (*M* = .254, *SD* = .049) represent the range of the overall mean proportion of current funds revenue derived from federal grants. The mean proportion range by year is .150 (*SD* = .041) in 1995 to .215 (*SD* = .097) in 2005.

Table 16

Means and Standard Deviations for Proportion of Current Funds Revenue from Federal Grants by State and Year

State	1995	2000	2005	Mean Across Years	*SD*
Alabama	.209	.246	.307	.254	.049
Arkansas	.169	.189	.144	.168	.022
Florida	.104	.162	.047	.104	.058
Georgia	.115	.103	.176	.132	.039
Louisiana	.115	.208	.295	.206	.090
Mississippi	.158	.182	.321	.220	.088
NorthCarolina	.083	.112	.252	.148	.089
SouthCarolina	.175	.168	.261	.201	.051
Tennessee	.208	.189	.073	.155	.076
Virginia	.151	.004	.192	.116	.030

(Table 16, Continued)

West Virginia	.173	.147	.307	.209	.085
Mean Across States	.150	.171	.215	.174	.076

An ANOVA was conducted to determine if there were significant differences between the states in the amount of federal grants revenue. As indicated in Table 17, no significant differences were found between the states in mean proportion of federal grants revenue across the 10 years of interest.

Table 17

Analysis of Variance for Federal Grants by States

Source	*df*	*MS*	*F*	*P*
Between Groups	10	.007	1.306	.287
Within Groups	22	.005		
Total	32			

An ANOVA, presented in Table 18, resulted in no significant differences between the years of interest in this study on proportion of federal grants.

Table 18

Analysis of Variance for Federal Grants by Year

Source	*df*	*MS*	*F*	*P*
Between Groups	2	.014	2.765	.079
Within Groups	30	.005		
Total	32			

State Grants. The NCES definition of state grants is "… revenues from [state] governmental agencies that are for specific research projects or other types of programs. Examples are research projects, training programs, and similar activities for which amounts are received or expenditures are reimbursable under the terms of a government grant or contract" (see Appendix A).

All 11 states in the study reported funding from state grants. As shown in Table 19, the overall means and standard deviations for proportion of current funds designated as state grants ranged from .012 (*SD* = .021) in Virginia to .110 (*SD* = .097) in Florida. The mean proportion for the years ranged from .017 (*SD* = .017) in 2005 to .082 (*SD* = .090) in 1995.

Table 19

Means and Standard Deviations for Proportion of Current Funds Revenue from State Grants by State and Year

State	Number of Institutions in study[a]	1995	2000	2005	Mean Across Years	*SD*
Alabama	25	.013	.016	.009	.011	.003
Arkansas	20	.112	.050	.006	.056	.053
Florida	46	.222	.047	.060	.110	.097
Georgia	36	.108	.154	.020	.094	.068
Louisiana	41	.266	.031	.002	.100	.144
Mississippi	17	.087	.083	.004	.058	.047
NorthCarolina	55	.004	.087	.020	.037	.044
SouthCarolina	20	.004	.037	.020	.021	.016
Tennessee	37	.007	.019	.015	.014	.001
Virginia	23	.031	.002	-	.012	.021

(Table 19,Continued)

West Virginia	5	.046	.033	-	.026	.009
Mean Across States		.082	.051	.014	.049	.064
SD		.090	.043	.017	.049	.064

Note. Dashes represent non-reported data.
[a]Some states did not report funding for state grants.

An ANOVA was conducted to determine if there were significant differences between the states in the amount of state grants. As shown in Table 20, no significant differences were found.

Table 20

Analysis of Variance for State Grants by States

Source	*df*	*MS*	*F*	*P*
Between Groups	10	.004	1.058	.432
Within Groups	22	.004		
Total	32			

An ANOVA was conducted to determine if there were differences between the years for state grant revenue. A significant *F* was found, indicating at least one significant difference existed between the years. The ANOVA summary is displayed in Table 21. As shown in Table 22, there was significantly less state grant revenue as a proportion of total funding in 2005 than in 1995 ($p = .029$). The mean proportions of state grants revenue and the significant comparisons are presented in Table 22.

Table 21

Analysis of Variance for State Grants Revenue by Year

Source	*df*	*MS*	*F*	*P*
Between Groups	2	.013	3.671	.037*
Within Groups	30	.003		
Total	32			

*$p < .05$.

Table 22

Tukey's Test Result for State Grants by Year

State	State	Mean Difference	*P*
1995	2000	-.0314	.044
2000	2005	-.036	.324
2005	1995	-.067	.029

Private Gifts. Private gifts are defined by NCES (2000) as " … revenues from private donors [including foreign governments] for which no legal consideration is involved and private contracts for specific goods and services provided to the further as stipulated for receipt of the funds" (see Appendix A). Only those gifts, grants, and contracts that were directly related to instruction, research, public service, or other institutional purposes are included in this category of current funds revenue.

The means and standard deviations for proportion of current funds described as private gifts are shown in Table 23 by state and by year. Not all institutions reported funding from private gifts revenue, so the number of institutions in each state that

received this funding is displayed. In Table 23, the range of the overall mean proportion for states is .002 (*SD* = .004) in Alabama to .018 (*SD* = .012) in Tennessee. The mean proportion for year ranged from .005 (*SD* = .004) in 1995 to .001 (*SD* = .003) in 2005. The states of Alabama, Florida, Tennessee, and Virginia reported increases in the proportion of current funds coming from private gifts during the years of the study. Most states reported less than one percent of their current funds as a proportion of their total revenues as being private gifts.

Table 23

Means and Standard Deviations for Proportion of Current Funds Revenue from Private Gifts by State and Year

State	Number of Institutions in study[a]	1995	2000	2005	Mean Across Years	*SD*
Alabama	15 of 25	.004	.003	.001	.002	.004
Arkansas	12 of 20	.008	.004	.008	.007	.004
Florida	23 of 46	.007	.014	.016	.012	.008
Georgia	16 of 36	.005	.004	.002	.003	.002
Louisiana	4 of 41	.002	.005	.002	.003	.003
Mississippi	10 of 17	.006	.010	.003	.006	.006
North Carolina	51 of 55	.011	.014	.008	.010	.003
South Carolina	13 of 20	.003	.006	.008	.006	.004
Tennessee	12 of 37	.016	.017	.021	.018	.012
Virginia	23 of 23	.009	.010	.021	.013	.006
West Virginia	0 of 5	-	.-	-	-	-

(Table 23, Continued)

Mean Across States	.005	.007	.001	.004	.005
SD	.005	.0017	.003	.004	.005

Note. Dashes represent non-reported data.
[a]Some schools did not report that they received funding from private gifts.

An ANOVA was conducted to determine if there were significant differences between the states in the amount of private gifts. As displayed in Table 24, no significant differences were found.

Table 24

Analysis of Variance for Private Gifts by States

Source	*df*	*MS*	*F*	*P*
Between Groups	10	.000	1.012	.466
Within Groups	21	.000		
Total	31			

An ANOVA conducted to determine if there were significant differences between the years yielded at least one significant difference between the years $F(2,31) = 3.655$, $p = .038$. The ANOVA summary is presented in Table 25. As shown in Table 26, the proportion of private gifts was significantly less in 2005 than in 2000 ($p = .032$). However, there were no significant differences between 1995 and 2000 nor were there significant differences between 1995 and 2005. Tukey's post hoc multiple comparisons are presented in Table 26.

Table 25

Analysis of Variance for Private Gifts by Year

Source	*df*	*MS*	*F*	*p*
Between Groups	2	.000	3.655	.038*
Within Groups	29	.000		
Total	31			

*$p < .05$

Table 26

Tukey's Test Results for Private Gifts, Grants, Contracts by Year

State	State	Mean Difference	*p*
1995	2000	-.002	.609
2000	2005	-.005	.032*
2005	1995	-.067	.241

*$p < .05$.

Auxiliary Enterprise. NCES (2000) defines auxiliary enterprises as "… revenues generated by the auxiliary enterprise operations that exist to furnish a service to students, faculty, or staff, and that charge a fee that is directly related to the cost of the service. Examples are resident halls, food services, college unions, college stores, and movie theaters." The means and standard deviations for auxiliary enterprise revenue are presented in Table 27. The range of the overall mean proportions was from .021 (*SD* = .002) for Tennessee to .107 (*SD* = .034) for Mississippi. The mean proportion by year ranged from .052 (*SD* = .024) in 1995 to .070 (*SD* = .036) in 2005.

Table 27

Means and Standard Deviations for Proportion of Current Funds Revenue from Auxiliary Enterprise by State and Year

State	Number of Institutions in study[a]	1995	2000	2005	Mean Across Years	*SD*
Alabama	25 of 25	.050	.059	.063	.057	.006
Arkansas	15 of 20	.040	.038	.045	.041	.041
Florida	22 of 46	.042	.035	.045	.041	.043
Georgia	16 of 36	.040	.037	.074	.051	.009
Louisiana	5 of 41	.035	.044	.036	.040	.005
Mississippi	14 of 17	.089	.085	.147	.107	.034
NorthCarolina	55 of 58	.055	.053	.065	.054	.007
SouthCarolina	20 of 20	.071	.066	.065	.067	.003
Tennessee	13 of 37	.023	.020	.021	.021	.002
Virginia	23 of 23	.026	.026	.105	.052	.046
West Virginia	3 of 5	.095	.028	.105	.076	.042
Mean Across States		.052	.045	.070	.055	.029
SD		.024	.020	.036	.055	.029

[a]Some schools did not report funding from auxiliary enterprise revenue.

An ANOVA was conducted to determine if there were significant differences between the states in the amount of auxiliary enterprise revenue. As shown in Table 28, a significant *F* was found, indicating at least one significant difference existed among the group of states, $F(10,22) = 3.003$, $p = .015$. The ANOVA summary table for auxiliary enterprise is presented in Table 28.

Table 28

Analysis of Variance for Auxiliary Enterprise by States

Source	*df*	*MS*	*F*	*p*
Between Groups	10	.002	3.003	.015*
Within Groups	22	.001		
Total	32			

**p<.05.*

Tukey's post hoc multiple comparison test was used to follow up the significant *F* to determine specifically which groups were different. Mississippi had significantly more auxiliary enterprise revenue as a proportion of total revenues than Florida (*p*= .049) Louisiana (*p* = .039), and Tennessee (*p* = .005). The mean differences of auxiliary enterprise revenue and the significant comparisons are presented in Table 29.

Table 29

Tukey's Test Result for Auxiliary Enterprise by States

State	State	Mean Difference	*p*
Florida	Mississippi	-.066	.049
Louisiana	Mississippi	-.068	.039
Mississippi	Tennessee	.085	.005

A separate ANOVA did not result in a significant finding for differences between years in auxiliary enterprises. The ANOVA summary for auxiliary enterprise by year is shown in Table 30.

Table 30

Analysis of Variance for Auxiliary Enterprise by Year

Source	*df*	*MS*	*F*	*p*
Between Groups	2	.002	2.521	.097
Within Groups	30	.001		
Total	32			

Minor Revenue Sources for Community and Technical Colleges

Southeastern community and technical colleges received little revenue from federal appropriation, endowment income, sales and services of educational activities, and local grants. The findings for these variables are provided below. These findings are consistent with Kenton et al.'s (2005) study of 11 Midwest State Community College Systems (SCCS). Particularly the states in this study failed to diversify their funding streams by developing their endowment income for their community and technical college; however, the states in Kenton and Associates' (2005) study also failed to develop this revenue stream. *Federal Appropriation*. The NCES definition of federal appropriation is: "… all amounts received by the institution through acts of [federal legislations], expect grants and contracts. These funds are for meeting current operating expenses, not for specific projects or programs" (see Appendix A). The means and standard deviations for federal appropriations are presented in Table 31. The largest overall mean proportion of federal appropriation among states was .025 (South Carolina). Three states (Alabama, Tennessee, and Virginia) showed mean proportions of .000. The mean proportion by year ranged from .002 to .007.

Table 31

Means and Standard Deviations for Proportion of Current Funds Revenue from Federal Appropriation by State and Year

State	Number of Institutions in study[a]	1995	2000	2005	Mean Across Years	*SD*
Alabama	0	-	-	-	-	-
Arkansas	1 of 20	.0003	-	-	<.000	<.001
Florida	2 of 46	.001	.003	-	.002	.002
Georgia	1 of 36	.001	-	-	.001	.001
Louisiana	2 of 41	-	-	.036	.006	.005
Mississippi	7 of 17	.001	.001	<.000	.007	.006
North Carolina	27 of 55	.01	.007	-	.006	.005
South Carolina	2 of 20	-	.076	-	.025	.044
Tennessee	0	-	-	-	-	-
Virginia	0	-	-	-	-	-
West Virginia	1of 5	-	.0002	-	.016	.014
Mean Across States		.002	.012	.003	.006	.014
SD		.004	.022	.007	.006	.014

Note. Dashes represent non-reported data.
[a]Some schools did not report funding from federal appropriation.

Endowment Income. According to NCES (2000) endowment income is the unrestricted income and the restricted income (to extent expended for current operating purposes) of endowment and similar funds. It includes income from irrevocable trusts held by others (see Appendix A).

The means and standard deviations for proportion of current funds revenue designated as endowment income are displayed in Table 32. The amounts reported were very minimal for each state and each year. The means for proportion of current funds revenue for endowment income remain consistent from .0001 (*SD* = less than .00) in Arkansas, Georgia, and West Virginia to .0016 (*SD* = .003) in Louisiana. Florida, Mississippi, and Virginia did not receive endowment income. The mean proportion by year ranged from .0007 (*SD* = less than .00) in 1995 to .0004 (*SD* = less than .00) in 2005.

Table 32

Means and Standard Deviations for Proportion of Current Funds Revenue for Endowment Income by State and Year

State	Number of Institutions in study[a]	1995	2000	2005	Mean Across Years	*SD*
Alabama	6 of 25	.0004	.0003	.0002	.006	<.001
Arkansas	2 of 20	.0003	-	.0001	<.001	<.001
Florida	0 of 46	-	-	-	-	-
Georgia	5 of 36	.0002	.0002	.0001	<.001	<-001
Louisiana	5 of 41	.004	.0001	.0016	.003	.002
Mississippi	0 of 17	-	-	-	-	-
North Carolina	30 of 55	.0008	.0008	.0005	.0005	<.001
South Carolina	2 of 20	.0001	.0002	-	<.001	<.001
Tennessee	1 of 37	-	-	-	.0001	-
Virginia	0 of 23	-	-	-	-	-
West Virginia	4 of 5	-	-	.0001	<.001	<.001
Mean Across States		.0007	.0004	.0002	.0002	.001

(Table 32, Continued)

SD	.001	.0003	.001	.0002	.001

Note. Dashes represent non-reported data.
[a]Some schools did not report funding from endowment income.

An ANOVA was conducted to determine if there were significant differences between the states in endowment income. As indicated in Table 33, the states did not differ significantly from each other in the proportion of endowment income.

Table 33

Analysis of Variance for Endowment Income by States

Source	*df*	*MS*	*F*	*P*
Between Groups	10	.000	1.268	.306
Within Groups	22	.000		
Total	32			

An ANOVA was conducted for endowment income to determine if significant differences existed between years and a significant *F* was not found. Therefore, there were no significant differences between the years in the proportion of endowment income. The ANOVA summary for endowment income is presented in Table 34.

Table 34

Analysis of Variance for Endowment Income by Year

Source	*df*	*MS*	*F*	*P*
Between Groups	2	<.000	1.692	.201

(Table 34, Continued)

Within Groups	30	<.000
Total	32	

Sales and Service of Educational Activities. According to NCES (2000) the sales and services of educational activities category includes "… revenues derived from the sales of goods or services that are incidental to the conduct of instruction, research or public services. Example includes film rentals, scientific and literary publications, testing services, university presses, and dairy products." The mean proportion of sales and services of educational activities is presented in Table 35. The mean proportion by year and ranged from .0036 (1995) to .004 (2005).

The means and standard deviations for proportions of sales and services of educational activates for each state for each year in the study are shown in Table 35. The majority of the states reported revenue from sales and services of educational activities for every year, except Louisiana and Virginia. No state reported more than .01 of its current funds revenue as being attributed to the sales and services of educational activities. The overall mean proportion for sales and services of educational activities increased steadily over the years of the study. The means ranged from .002 (*SD* = <.001) in Arkansas to .009 (*SD* = .01) in Georgia. For the years in the study, the means ranged from .004 for both 1995 (*SD* = .002) and in 2000 (*SD* = .003) to .010 (*SD* = .001) in 2005.

Table 35

Means and Standard Deviations for Proportion of Current Funds Revenue from Sales and Service of Educational Activities by State and Year

State	Number of Institutions in study[a]	1995	2000	2005	Mean Across Years	*SD*
Alabama	14 of 25	.003	.003	.000	.002	.001
Arkansas	11 of 20	.002	.002	.000	.001	.001
Florida	21 of 46	.005	.006	.000	.004	.003
Georgia	29 of36	.006	.010	.010	.006	.01
Louisiana	1 of 41	-	-	.001	.001	.001
Mississippi	11 of 17	.006	.006	.010	.007	.002
North Carolina	16 of 55	.002	.002	.000	.001	.001
South Carolina	17 of 20	.006	.004	.000	.003	.001
Tennessee	10 of 37	.010	.003	.003	.007	.003
Virginia	1 of 23	.001	-	-	.001	.002
West Virginia	2 of 5	.007	.003	.003	.004	.002
Mean Across States		.004	.004	.003	.005	.003
SD		.002	.003	.003		

Note. Dashes represent non-reported data.
[a]Some schools did not report funding from sales and service of educational activities.

An ANOVA was conducted to determine if there were significant differences between the states in sales and services of educational activities. A significant *F* value was found, indicating at least one significant difference existed between the states, $F(10,22) = 3.218$, $p=.011$. The ANOVA summary is presented in Table 36.

Table 36

Analysis of Variance for Sales and Services of Educational Activities by States

Source	*df*	*MS*	*F*	*P*
Between Groups	10	.000	3.218	.011*
Within Groups	22	.000		
Total	32			

*$p < .05$.

While the ANOVA resulted in significant findings, as indicated in Table 37, Tukey's post hoc multiple comparison test was unable to detect which groups were significantly different.

Table 37

Tukey's Test Result for Sales and Services of Educational Activities by States

State	State	Mean Difference	*P*
Mississippi	Louisiana	.007	.086
Mississippi	Virginia	.007	.067

The ANOVA to detect differences between years for sales and services of educational activities did not result in significant findings. The ANOVA summary for sales and services of educational activities by year is presented in Table 38.

Table 38

Analysis of Variance for Sales and Services of Educational Activities by Year

Source	*df*	*MS*	*F*	*P*
Between Groups	2	.000	.936	.403
Within Groups	30	.000		
Total	32			

Local Grants. A local grant is defined by NCES as " …revenues from [local] governmental agencies that are for specific research projects or other types of programs. Examples are research projects, training programs, and similar activities for which amounts are received or expenditures are reimbursable under the terms of a government grant or contract" (see Appendix A).

The overall mean proportion of current funds designated as local grants is given in Table 38. The range of mean proportions for states was .002 (*SD* = .002) in Georgia to .007 (*SD* = .005) in West Virginia. The range for the overall mean proportion of local grants during the years was .002 (*SD* = .003) in 1995 to .009 (*SD* = .004) in 2005.

The low mean proportion for local grants, shown in Table 39, may be explained by the small number of institutions in each state that reported local grants as a source of current funds revenue (see Table 16).

Table 39

Means and Standard Deviations for Proportion of Local Grants as a Source of Current Funds Revenue

State	Number of Institutions in study[a]	1995	2000	2005	Mean Across Years	*SD*
Alabama	6 of 25	.002	.002	.016	.007	.008
Arkansas	2 of 20	-	.004	.013	.006	.006
Florida	11of 46	-	.004	.008	.004	.004
Georgia	10 of 36	.003	.002	.002	.002	.001
Louisiana	1 of 41	-	.006	.005	.002	.004
Mississippi	3 of 17	.002	.003	.011	.005	.005
North Carolina	18 of 55	.001	.003	.005	.003	.002
South Carolina	5 of 20	.002	.005	.005	.004	.002
Tennessee	4 of 37	.001	.002	.008	.004	.004
Virginia	5 of 23	-	.002	.009	.004	.005
West Virginia	2 of 5	.001	.001	.010	.007	.005
Mean Across States		.002	.003	.009	.004	.004
SD		.003	.002	.004		

Note. Dashes represent non-reported data.
[a]Some schools did report funding from local grants.

An ANOVA was conducted to determine if there were significant differences between the states in the amount of state grants. As displayed in Table 40, no significant differences were found.

Table 40

Analysis of Variance for Local Grants by States

Source	*df*	*MS*	*F*	*P*
Between Groups	10	.000	.348	.956
Within Groups	22	.000		
Total	32			

Significant differences were found to exist between the years for local grants, $F(2,30) = 10.305$, $p < .001$. As shown in Table 41, there were significantly more local grants revenue proportions reported in 2005 than there were in 1995 ($p = .001$). There were also significantly more local grants revenue proportions reported in 2005 than there were in 2000 ($p = .004$). The post hoc comparisons are presented in Table 42.

Table 41

Analysis of Variance for Local Grants by Year

Source	*df*	*MS*	*F*	*p*
Between Groups	2	.000	10.305	.000*
Within Groups	30	.000		
Total	32			

*$p < .05$.

Table 42

Tukey's Test Result for Local Grants, Contracts by Year

State	State	Mean Difference	*p*
1995	2000	-.001	.756

(Table 42, Continued)

2000	2005	-.004	.004*
2005	1995	-.005	.001*

*$p < .05$.

Other Sources of Current Funds Revenue. Other sources of current funds revenue is a catch all for income that is not categorized under the other NCES (2000) definitions. It includes sales that typically are not a byproduct of instruction or training, such as the sale of surplus equipment (see Appendix A). The means and standard deviations for other sources of revenue are presented in Table 43. As shown in Table 43, the overall mean proportion across states ranged from .009 (*SD* = .002) in North Carolina to 1995 to .064 (*SD* = .004) in Tennessee. The means for the years ranged from .015 in both the years of 2000 (*SD* = .006) and 2005 (*SD* = .007) to .029 (*SD* = .028) in 1995.

Table 43

Means and Standard Deviations for Proportion of Current Funds Revenue from Other Sources by State and Year

State	Number of Institutions in study[a]	1995	2000	2005	Mean Across Years	*SD*
Alabama	24 of 25	.017	.0259	.030	.024	.007
Arkansas	19 of20	.016	.026	.020	.020	.004
Florida	24 of 46	.093	.019	.020	.044	.043
Georgia	32 of 36	.032	.015	.020	.022	.009
Louisiana	5 of 41	.071	.010	.010	.030	.035
Mississippi	15 of 17	.012	.011	.010	.011	.001

(Table 43, Continued)

North Carolina	55 of 55	.016	.015	.010	.009	.002
South Carolina	13 of 20	.012	.018	.010	.014	.003
Tennessee	14 of 37	.012	.018	.020	.064	.004
Virginia	23 of 23	.013	.013	.010	.052	.002
West Virginia	3 of 5	.022	.014	.010	.015	.006
Mean Across States		.029	.015	.015	.055	.029
SD		.024	.020	.036		

[a]*Some schools did not report funding from other sources.*

An ANOVA was conducted to determine if there were significant differences between the states in other sources of revenue, but no significant differences were found. The ANOVA summary is presented in Table 44.

Table 44

Analysis of Variance for Other Sources of Revenue by State

Source	*df*	*MS*	*F*	*P*
Between Groups	10	.000	1.068	.425
Within Groups	22	.000		
Total	32			

An ANOVA conducted to determine if there were significant differences between years for other sources of revenue did not result in significant findings. The ANOVA summary for other sources of revenue by year is presented in Table 45.

Table 45

Analysis of Variance for Other Sources of Revenue by Year

Source	*df*	*MS*	*F*	*P*
Between Groups	2	.001	2.221	.126
Within Groups	30	.000		
Total	32			

Summary of Findings for Research Sub Question One

The first research sub question was: Were there significant differences in states' community and technical colleges funding sources between the years of 1995, 2000, and 2005? Analyses of variance (ANOVA) were conducted to determine if there were significant differences between the states on the 12 sources of revenue. The Statistical Package for the Social Sciences (SPSS) software, version 18.0 was used to analyze all data. The mean proportion of total current funds revenue attributed to each of the 12 resources of current funds revenue were computed for each institution in each state and year to be studied. The mean percent of 12 community college revenue streams were computed for each institution (N = 345) in each state (N = 11) and for each year of: 1995, 2000, and 2005 in a similar manner to that completed by Kenton et al. (2005). The key findings were as follows:

- Virginia was found to receive significantly more proportion in tuition and fees revenue than Arkansas, Mississippi, and North Carolina.
- Mississippi, North Carolina, and South Carolina all received significantly more proportion of local appropriations than the other states.

- Mississippi had significantly more proportion of auxiliary enterprise revenue than Florida, Louisiana, and Tennessee.

ANOVAs were also conducted to determine if there were significant differences between the years of 1995, 2000, and 2005 for the mean proportion of the 12 sources of revenue. The following was found:

- There were significantly more state appropriations by proportion in 2005 than there were in 1995 and there were more state appropriations in 2005 than there were in 2000.
- There was significantly less state grant revenue by proportion in 2005 than in 1995.
- The proportion of private gifts was significantly less in 2005 than in 2000.
- There were significantly more local grants revenue by proportion reported in 2005 than there were in 1995.
- There were also more local grants revenue reported in 2005 than there were in 2000.

Research Sub Question Two

1. The second research sub question was: Did southeastern community and technical colleges' state systems with local appropriation have a higher percentage of nontraditional students enrolled in community and technical colleges than states without local appropriation?

Nontraditional Students

As presented in Table 46, states have different percentages of their nontraditional students enrolled in community and technical colleges and these ranges

of enrollment were from 4% to 5% in states like Alabama, Arkansas, Georgia, Louisiana, Mississippi, South Carolina, and Tennessee.

Table 46

Nontraditional Enrollment with Major Funding Streams by State and Year

	Mean Percentage	AL	AR	FL	GA	KY	LA	MS	NC	SC	TN	VA	WV
Nontraditional Enrollment													
1995	4%	5%	4%	7%	3%	4%	4%	3%	5%	4%	4%	6%	4%
2000	5%	5%	5%	7%	4%	4%	4%	4%	5%	4%	4%	6%	4%
2005	5%	5%	5%	7%	4%	6%	4%	4%	6%	5%	4%	6%	4%
Local Appropriation													
1995	3%	0%	0%	1%	2%	0%	2%	8%	10%	8%	0%	0%	0%
2000	3%	0%	2%	1%	1%	0%	0%	8%	11%	8%	0%	0%	0%
2005	4%	0%	6%	1%	0%	0	0%	17%	13%	13%	0%	0%	0%
Tuition/Fees													
1995	17%	23%	15%	17%	16%	0%	16%	15%	10%	21%	20%	30%	23%
2000	19%	21%	15%	21%	17%	0%	17%	14%	14%	22%	23%	36%	24%
2005	22%	27%	18%	25%	25%	30%	21%	18%	13%	13%	28%	20%	20%

(Table 46, Continued)

State Appropriation													
1995	42%	47%	50%	35%	51%	0%	33%	40%	62%	43%	52%	46%	42%
2000	45%	44%	52%	48%	49%	0%	52%	39%	47%	40%	50%	60%	53%
2005	64%	64%	69%	62%	65%	58%	74%	48%	64%	64%	67%	69%	69%
Federal Grants													
1995	14%	21%	17%	10%	12%	0%	12%	16%	8%	18%	21%	15%	17%
2000	14%	25%	19%	16%	10%	0%	21%	18%	11%	17%	19%	0%	15%
2005	22%	31%	14%	5%	18%	30%	30%	32%	25%	26%	7%	19%	31%
State Grants													
1995	8%	1%	11%	22%	11%	0%	27%	9%	0%	0%	1%	3%	5%
2000	5%	2%	5%	5%	15%	0%	3%	8%	9%	4%	2%	0%	3%
2005	2%	1%	1%	6%	2%	3%	0%	0%	2%	2%	2%	0%	0%
Auxiliary													
1995	5%	5%	4%	4%	4%	0%	4%	9%	5%	7%	2%	3%	10%
2000	4%	6%	4%	3%	4%	0%	4%	9%	5%	7%	2%	3%	3%

(Table 46, Continued)

2005	6%	6%	5%	4%	7%	0%	4%	15%	7%	7%	2%	11%	11%

The states receiving local appropriation were Arkansas, Georgia, Florida, Mississippi, North Carolina and South Carolina. An ANOVA was used to determine if those states that received local appropriation had significantly more nontraditional students than those states that did not receive local appropriation. A significant *F* was found, indicating at least one significant difference between the states, $F(10, 22) = 13.85$, $p < .001$. The ANOVA summary table is presented in Table 47.

Table 47

Analysis of Variance for Proportion of Nontraditional Student Enrollment by State

Source	*df*	*MS*	*F*	*P*
Between Groups	10	.000	23.602	<.001*
Within Groups	22	.000		
Total	32			

**p < .05.*

Tukey's post hoc multiple comparison test was used to follow up the significant *F* to determine which groups were different. North Carolina, another state receiving local appropriation, had higher enrollment percentages for nontraditional students than the states of Louisiana, Tennessee and West Virginia, neither of which received local appropriation. Florida, a state that received local appropriation, had significantly higher percentages of nontraditional students enrolled in community and technical colleges than all other states in the southeast, except Virginia. Virginia, which did not have local appropriation revenue, had significantly more nontraditional students enrolled than Arkansas, Georgia, Mississippi, and South Carolina, all of which did have local

appropriation. The mean proportions of nontraditional enrollment and the significant comparisons are presented in Table 48.

Table 48

Tukey'sTest Result for Nontraditional Student Enrollment by States with Local Appropriation Funding and Without Local Appropriation Funding

State	State	Mean Difference	*p*
Alabama	Florida	-.020	.000
Alabama	Mississippi	-.014	.005
Alabama	West Virginia	.011	.043
Arkansas	Florida	-.020	.000
Arkansas	Mississippi	-.012	.017
Arkansas	Virginia	-.011	.037
Florida	Alabama	.020	.000
Florida	Arkansas	.022	.000
Florida	Georgia	-.031	.000
Florida	Louisiana	.031	.000
Florida	Mississippi	.034	.000
Florida	North Carolina	.016	.001
Florida	South Carolina	.024	.000
Florida	Tennessee	.028	.000
Florida	West Virginia	.031	.000
Georgia	North Carolina	.015	.002

(Table 48, Continued)

Georgia	Virginia	-.020	.000
Louisiana	North Carolina	-.014	.004
Louisiana	Virginia	-.019	.000
Mississippi	North Carolina	-.187	.000
Mississippi	Virginia	-.024	.000
North Carolina	Tennessee	.013	.013
North Carolina	West Virginia	.057	.001
South Carolina	Virginia	-.013	.008
Tennessee	Virginia	-.018	.000
Virginia	West Virginia	.021	.000

**p < .05.*

Summary of Findings for Research Sub Question 2

The second research sub question was: Did southeastern community and technical colleges' state systems with local appropriation have a higher enrollment of nontraditional students, by proportion, enrolled in community and technical colleges than states without local appropriation? The states receiving local appropriation were Arkansas, Georgia, Florida, Mississippi, North Carolina and South Carolina. An ANOVA was conducted to determine if there were significant differences between the southeastern states in mean enrollment of nontraditional students. The following was found:

- North Carolina, another state receiving local appropriation, had higher enrollment percentages for nontraditional students than the states of Louisiana, Tennessee and West Virginia.
- Florida had significantly higher percentages of nontraditional students enrolled in community and technical colleges than all other states in the southeast.
- Virginia, which did not have local appropriation revenue, had significantly more nontraditional students enrolled than Arkansas, Georgia, Mississippi, and South Carolina, which did have local appropriation.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER STUDY

The purpose of this study was to examine the relationship of revenue sources at 11 southeastern community and technical colleges and these states' enrollment of nontraditional students.

Human capital has been largely supported as a major contributor to economic prosperity (O'Gara & Hughes, 2008). Community and technical colleges play a key role in developing human capital for local communities and employers because they are the primary training providers for nontraditional students (Cohen & Brawer, 2003). Therefore, community and technical college funding has been a major topic of discussion in many states as these colleges become more critical to their states' economic development (O'Gara & Hughes, 2008). Despite the significance of continued funding of community and technical colleges for economic development, administrators of these academic institutions must be armed with evidence to justify their continued financial support. Additionally, the evidence must be more compelling than the evidence of other recipients of state funding as there is increasing pressure to fund other societal obligations also deemed critical to states' overall competitiveness.

The majority of these societal obligations are funded by taxpayers, who in general, have not been open to new or increased taxes regardless of the justification (Diamond & Adam, 2002). However, in light of the growing awareness of these pressures, community and technical college administrators and state legislators are discussing which resources are most effective in funding community and technical

colleges (College Board, 2005; SREB, 2006; St. John & Parsons, 2005). Not surprisingly, these policy discussions are often based upon political ideologies and limited peer reviewed research (St. John & Parsons, 2005**).**

In the absence of sound research to back policy discussions, funding for community and technical colleges has been inadequate and nontraditional students have not received sufficient subsidies to offset the costs of their education (GAO, 2003; Philibert, Allen, & Elleven, 2008). Though nontraditional students make up 68% of the community college student population (GAO, 2003) these students also received the lowest percentage of state and federal subsidies compared to all post secondary students (*The Chronicle of Higher Education [Almanac]*, 2007). Nontraditional students received 20.6 % in federal financial aid, 13.5% in federal grants, 11.9% in federal loans, 1.1% in work study programs, 5.6% in state financial aid, 5.0% in state grants, 5.4 % in institutional grants, and 4.8% in other institutional grants (*Almanac, 2007*). Therefore, as a whole, these students are paying significantly more of the full cost of the charged tuition and fees because they are receiving a considerable less percentage of the state and federal subsidies, which can offset the full cost of tuition and fees.

This study included 345 public community and technical colleges in Alabama, Arkansas, Florida, Georgia Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia that had completed the IPEDS Finance Survey for the years 1995, 2000, and 2005. These states are also defined in the Integrated Postsecondary Education Data Systems (IPEDS) data cutting tool as the “Southeastern Region.” Originally, 12 states were considered; however, Kentucky was eliminated from

this study because its community and technical colleges did not complete the surveys for 1995 and 2000.

Quantitative research methods were chosen to replicate and extend the prior research by Kenton, Huba, Schuh, and Shelly (2005). Kenton et al. researched the effects of resource dependency on 11 Midwestern states' community and technical college systems. Both my study and theirs focused on the same12 funding streams, however, my study differs from theirs by examining whether states receiving local appropriation had higher enrollment of nontraditional students in comparison to states that did not receive local appropriation revenue. Additionally, Kenton et al.'s study focused on the years 1990, 1995 and 2000, whereas my focus was on more recent data from the years 1995, 2000 and 2005.

The mean proportion of total current funds revenue attributed to each of the 12 resources of current funds revenue were computed for each institution in each state and year to be studied. The mean proportion of 12 community college revenue streams were computed for each institution (N=345) in each state (N=11) and for each year of 1995, 2000, and 2005 in a similar manner that was completed by Kenton et al. (2005). In order to address research sub question 1 (Were there significant differences in states' community and technical colleges funding sources between the years of 1995, 2000, and 2005?), 12 one way analyses of variance (ANOVAs) were used to determine if there were significant differences between the states for each of the 12 funding streams: 1) tuition and fees; 2) federal appropriations; 3) state appropriations; 4) local appropriations; 5) federal grants; 6) state grants; 7) local grants; 8) private gifts; 9) endowments income;10) sales and services of educational

activities;11) auxiliary enterprises and 12) other sources not covered by a separate, specific source (IPEDS, 2005). In addition, ANOVA was used to determine if there were significant differences between the years 1995, 2000, and 2005 for each of the funding streams. The a priori level of significance or alpha was set at .05. According to Gall, Borg, and Gall (1996), "Generally, educational researchers choose to reject the null hypothesis if the value [of the statistic] researches a significance level of p<. 05" (p.183). At an alpha level of .05 there is one chance in twenty that the null hypothesis will be rejected when it is correct, resulting in a Type I error" (Gall et al., p.183). It is expected that no serious effects will cause a Type I error, therefore, a more stringent p< .01 was not necessary for this study (Kenton et al., 2005). Tukey post hoc follow-up tests were conducted to determine whether statistically significant differences existed among the groups. This study indentified differences of the proportions of current revenue funds for the 11 states for the years of 1995, 2000, and 2005. Explanations of the causes of these revenue differences were not the focus of this study. In order to address research sub question 2 (*Did southeastern community and technical college state systems with local appropriation have a higher percentage of part-time adult students enrolled in community and technical colleges than states without local appropriation?*), an ANOVA was conducted to determine if there were significant differences between the states in their enrollment of nontraditional students. Tukey post hoc follow up tests were conducted for statistically significant findings in order to determine which states had higher percentages of nontraditional student enrollment. This study did identify differences of the proportions of nontraditional enrollment for the 11 states for the years of 1995, 2000, and 2005. Beyond utilizing these data to support

my theoretical framework, I made no attempt to explain the causes of these enrollment differences within each state

Summary of Findings

Research Sub Question 1: Were there significant differences in states' community and technical colleges' funding sources between the years of 1995, 2000, and 2005?

As presented in Chapter 4, revenue streams for funding community and technical colleges have changed dramatically within each state that was studied: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

All states are reliant upon tuition and fees revenue and their reliance has increased from a grand mean of 17% of the total revenue in 1995 to a grand mean of 22% of the current total revenue in 2005. Some states (e.g., Florida, Georgia, and Tennessee) were more reliant upon tuition and fees revenue than others. There was a significant difference between the states for tuition and fees, $F(10, 22) = 3.841$, $p = .004$. Virginia was found to receive a significantly higher proportion of tuition and fees revenue than Arkansas, Mississippi, and North Carolina. This means that Virginia's community and technical college system receives a larger proportion of revenue from tuition and fees than the other revenue streams and Virginia's community and technical college systems are more reliant upon tuition and fees. This significant difference also suggests that these states have a significantly different worldview regarding how they view education. States that support lower revenue charges that come from tuition and fee charges (e.g., North Carolina and Mississippi) tend to support the worldview that the

education is a public good and the entire community benefits when one is educated. States that charge higher tuition and fees view education as an individual good.

From 1995 to 2005, the total amount of tuition and fee revenue increased by approximately 60% for the southeastern schools – from $704,718,060 to $1,184,584,720. During this same time period, national charges in tuition and fees, as reported by the Higher Education Price Index (HEPI) increased by approximately 42%. Yet, percent of personal income grew by only 5% for the selected southern states (Civitas Institute, 2010).

Southeastern community and technical college systems also differed in the utilization of state appropriations. State appropriations made up 48% of the overall revenue for Mississippi's community and technical college system while this same revenue stream provided about 74% of the overall revenue for Louisiana's community and technical college system. There were no significant differences between the states in state appropriations, $F(10, 22) = .475$, $p = .888$. However, there were significant differences between the years, $F(2,30) = 24.576$, $p < .001$. Specifically, there were significantly more state appropriations as a proportion of total revenues in 2005 than there were in the years 1995 and 2000. This result seems to be somewhat paradoxical because it was expected that one revenue stream would respond inversely to the other revenue streams (e.g., state appropriation goes down, tuition and fee charges would increase). Historically, this trend has been supported. Researchers saw an increase from state appropriation with an increase in tuition and fees charges in previous studies (Medsker & Tillery, 1971; National Center for Education Statistics, 2001; Starrak & Hughes, 1954).

Yet, according to Collins, Leitzel, Morgan and Stalecup (1994), in a financial survey of 27 community college campuses, 24 of those campuses (88.9%) increased their tuition because of declines in state funding during 1990 and 2000. It should be noted that this survey was conducted during times of several economic slowdowns. Also, in the Kenton et al. study of 11 Midwestern State Community College Systems (SCCS), eight SCCS saw a decrease in state funds during the 1990s. Six of the SCCS increased tuition and fees, while the other two increased their appropriation at the local level, resulting in savings for their students and the ability to maintain current levels of enrollment. Therefore, it appears that local appropriation can assist in controlling pressure for increasing tuition and fees when state appropriation declines.

Local appropriation revenue for southeastern community and technical colleges had a range of 0%, to 17% in Mississippi. The states differed in the amount of local appropriation, $F(7, 16) = 11.27$, $p = .000$. Mississippi, North Carolina, and South Carolina all received higher proportions of local appropriations than the other states, but not from each other. Local property tax is not the sole solution, but it could be an alternative source of funding when state community colleges are experiencing a decrease in federal and state appropriations (Jackson & Glass, 2000; Kenton et al., 2005; Watkins, 2000). Back in 1918, local property tax revenue stream provided 98% of the funding for community colleges but had decreased to less than 50% by around 1959 (Starrak & Hughes, 1954, Medsker & Tillery,1971; National Center for Education Statistics, 2001). Since 1995, states are again seeing local property tax as an alternate revenue stream. In particular, Florida, Mississippi, North Carolina, and South Carolina saw an increase in this revenue stream from 1995 to 2005.

The trend of local appropriation is presented in Chapter 2 in Figure 2. The recent increase in revenue from this funding stream is evident. This increase is relative to increases in home values, the decrease in student state and federal aid, and the increase in operational cost (Paulsen & Smart, 2001). To help control tuition increases at community and technical colleges, the further use of local property taxes should be explored for community college policy.

Most states reported less than one percent of their current funds as being private gifts. The range of the overall mean percentage for private gifts for states was from .23% (Alabama) to 1.8% (Tennessee). The grand mean proportion for year ranged from .005 (1995) to .008 (2005). The states of Alabama, Florida, Tennessee, and Virginia reported increases in the proportion of current funds coming from private gifts during the years of the study. There was a significant difference between the years in private gifts, $F(2, 31) = 3.655$, $p = .038$, in that there were significantly less private gifts in 2005 than in 2000.

Revenue from federal grants for the states' community colleges varied from between 5% in Florida to 32% in Mississippi. However, no significant difference was found for state or for year, $F(10, 22) = 1.306$, $p = .287$. It is expected that this revenue stream will grow with the new policies being developed and funded by the federal government (e.g., US Department of Labor for green workforce development initiatives and new unemployment rules to allow recipients of unemployment insurance to continue to receive their benefits while they are enrolled in school for career development or new career training).

The auxiliary enterprise revenue stream provided between 4% (Louisiana) to15% (Mississippi) of community and technical college revenue. Mississippi had a significantly higher proportion of auxiliary enterprise revenue than Florida, Louisiana, and Tennessee, $F(10, 22) = 3.003$, $p = .015$, but these groups did not differ significantly from each other. Kenton et al. also found this variation in their 2005 study and contributed that the majority of this variation to the fact that some states had housing dorms and student centers at their community colleges that generated additional revenue for the system.

Community and technical colleges in the southeastern states studied received minimal revenue from sales and services of educational activities, federal appropriation, local grants, and endowment income.

Overall, these findings are consistent with the Kenton et al. (2005) study of 11 Midwestern state community college systems. Kenton et al. (2005) showed that states' community and technical college funding did not vary significantly in the utilization of their revenue streams. This lack of resource utilization was also identified in earlier studies that found community and technical colleges across the nation did not fully utilize their revenue streams (Hyde & Augenblick, 1980; Martorana, 1978; Richard & Leslie, 1980, Wattenbarger, 1994; Wattenbarger & Starnes, 1976). This study found that southeastern community and technical colleges are still heavily dependent on tuition and fees, state appropriations, and if they have it, local appropriations.

Research Sub Question 2: Did southeastern community and technical college state systems with local appropriation have a higher percentage of part-time adult students enrolled in community and technical colleges than states without local appropriation?

The states receiving local appropriation were Arkansas, Georgia, Florida, Mississippi, North Carolina and South Carolina. It was believed that these states that fund their community and technical colleges with local appropriations would have higher percentages of nontraditional students enrolled at community and technical colleges than states without local appropriation. This belief was strongly supported.

North Carolina, a state receiving local appropriation, had higher enrollment proportions for nontraditional students than the states of Louisiana, Tennessee and West Virginia. Florida had significantly higher proportions of nontraditional students enrolled in community and technical colleges than all other states in the southeast, except Virginia. Virginia, which did not have local appropriation revenue, had significantly more nontraditional students enrolled than Arkansas, Georgia, Mississippi, and South Carolina. Virginia, therefore, was the only state without local appropriation that had higher percentages of nontraditional students enrolled than some of the states receiving local appropriation.

The overall importance of answering research sub question 2 is that community colleges educate the vast majority of a state's nontraditional students. According to the GAO (2003), nontraditional students make up 68% of the community college student population, and according to the *Chronicle of Higher Education*, part-time public community college students receive the lowest percentage of state and federal subsidies compared to all post secondary students (*Almanac*, 2007). Therefore, as indicated in Table 3, states that have local funding revenue streams as a proportion of total revenues and lower tuitions and fees will likely have higher enrollment of part-time

adult students. Across the nation, with legislative approval, property taxes provide about 25% of a local community college system's revenue.

Local property tax is not the sole solution, but could be a valuable revenue stream for community colleges that are experiencing a decrease in federal and state appropriations (Jackson & Glass, 2000; Kenton et al., 2005; Watkins, 2000). As stated previously, according to other studies, most institutions will directly offset the void caused by decreases in state appropriation by increasing tuition and fees (Collins et al., 1994; Hyde & Augenblick, 1980; Wattenbarger & Vander, 1986). Typically, states that fund their community colleges without local property tax must go before the legislature to increase their tuition and fees, which is uncommon to states that fund community and technical colleges with local property taxes (e.g., Texas and California). Community college systems, like those in Texas, have more system autonomy from state legislatures to increase appropriation from other revenues like property taxes before increasing tuition and fees (Cohen & Brawer, 2003). Also, in Kenton et al. study of 11 State Community College Systems (SCCS), eight SCCS saw a decrease in state funds with six increasing fees and the other two were able to increase their appropriation from property taxes. The increase in property taxes resulted in savings for their students and the ability to maintain current levels of enrollment.

Significance

Several researchers (e.g., Braxton, Sullivan, & Johnson, 1997; Braxton, Milem & Sullivan, 2004) have successfully tested Tinto's model (1987) on the merits of including financial variables in student departure models, in addition to some of Tinto's variables of academic integration and social integration. Braxton, Sullivan and Johnson (1997)

and Braxton, Milem and Sullivan (2004) have further investigated the results of these prior tests which led them to support the inclusion of financial variables coupled with college-related variables (1997, 2004). The inclusion of the financial variable has also been supported (Cabrea, Nora, & Castaneda 1992, 1993; Cabrea, Stampen, & Hasen, 1990; Philibert, Allen, & Elleven, 2008; St. John, Paulsen, & Starkey, 1996) as researchers have noted that the financial variables play a dual role by affecting the college adjustment stage and the college persistence stage. It has also been noted that one's perception of cost can affect one's college choice. As presented in these findings, community and technical colleges in the southeastern United States that received local appropriation from tuition revenue had higher enrollments of nontraditional students (e.g., North Carolina and Florida).

Perception of College Cost

According to Cabera et al. (1992), the advertised tuition price affects how the student makes an initial commitment to his or her chosen college because many of these students are not aware of financial aid that may be available for them. The advertised price also adds additional barriers to complete one's cost benefit analysis for selecting that school. Further, according to St. John, Paulsen, and Starkey (1996) the perception of aid and the actual price subsidies the student receives affect college choice. St. John et al. also discovered that students make early decisions about which schools they will select based on a cost benefit analysis during their college choice transition. St. John et al. also discovered that student retention is contingent upon the student's ability to pay the tuition. Finances have also been shown to affect social integration with the campus (St. John et al.). It has also been noted that if a student is

struggling to pay for college, his or her college grades may suffer (Cabrera, Nora, & Casteneda, 1992). However, financial-aid packages can influence one's integration with one's campus, while supporting the student's ability to stay in college (Paulsen & St. John, 1997; Philibert, Allen, & Elleven, 2008; St. John et al.). Therefore, the financial variable is a very important component in the student choice and retention frameworks. This is also discussed in greater detail in the implications for theory section of this chapter.

The student's perception of his or her ability to pay is important in three ways:

1. It has been strongly supported that one's perception to pay for college can influence one's college grades and the ability to integrate into the campus.

2. One's perception of the ability to pay for college influences the college choice process and can affect retention.

3. Comprehensive persistence models should include the resources a student may need to possess in order to fully understand a student's institutional commitment.

As presented in Chapter 4, Table 3, Tennessee saw a decrease with their enrollment when they increased their revenue from tuition and fees, which resulted in an approximated 1% decrease in nontraditional enrollment. The opposite was found for Virginia's enrollment of nontraditional students, which increased when their community and technical colleges decreased their revenue from tuition and fees. Therefore, community college administrators must find creative ways to address the pressures of decreases in state and federal appropriation while balancing quality education for their

students. The majority of community college students are extremely price sensitive and any increases to their tuition and fees will further alienate them from attending and staying enrolled at community colleges (Philibert, Allen, & Elleven, 2008; St. John & Starkey, 1995a, 1995b). States and local communities cannot afford this kind of lost opportunity for human capital development. Therefore, it is important for community and technical college administrators to consider the appropriate mix of funding sources that benefit not only the institutions, but the communities they serve. This is especially important since financial aid packages for nontraditional students are not adequate.

Conclusions

The purpose of this study was to ascertain the relationship between the type of funding sources at southeastern community and technical colleges and their states' nontraditional student enrollment trends. This purpose was addressed by answering the primary research question for this study, which was: What is the relationship between the type of funding sources at community/technical colleges in southeastern community and technical colleges and their states' nontraditional enrollment trends? In addition to the following two sub questions:

Sub Question 1: Were there significant differences in states' community and technical colleges' funding sources between the years of 1995, 2000, and 2005?

As presented in Chapter 4, states' revenue streams for funding community and technical colleges have changed dramatically within each state that was studied. Some states (e.g., Florida, Georgia, Tennessee, and Virginia) were found to receive significantly more tuition and fees revenue than Arkansas, Mississippi, and North

Carolina, which means that Virginia's community and technical college system receives fewer revenues from the other revenue streams and Virginia's community and technical college systems are more reliant upon tuition and fees. This significant difference also suggests that these states have a significantly different worldview regarding how they view education - either education is an overall public good or education only benefits the individual. The states that support lower revenue charges from tuition and fee charges (e.g., North Carolina and Mississippi) support the aim that the community benefits when one is educated.

The states also differed in the utilization of state appropriation. State appropriation made up 48% of the overall revenue for Mississippi's community and technical college system while this same revenue stream provided about 74% of the overall revenue for Louisiana's community and technical college system.

Local appropriation revenue for southeastern community and technical colleges had a range of 0%, in most southeastern states, to 17% in Mississippi. The states differed in the amount of local appropriation as a proportion of total revenues. Mississippi, North Carolina, and South Carolina all received more local appropriations as a proportion of total revenues than the other states, but not from each other.

Research Sub Question 2

Research Sub Question 2: Did southeastern community and technical college state systems with local appropriation have a higher percentage of part-time adult students enrolled in community and technical colleges than states without local appropriation?

The states receiving local appropriation were Arkansas, Georgia (1995 and 2000 only), Florida, Mississippi, North Carolina and South Carolina. It was believed that these

states that fund their community and technical colleges with local appropriations would have higher percentages of nontraditional students enrolled at community and technical colleges than states without local appropriation. This belief was strongly supported.

As mentioned previously, North Carolina another state receiving local appropriation, had higher enrollment percentages for nontraditional students than the states of Louisiana, Tennessee and West Virginia. Florida had significantly higher percentages of nontraditional students enrolled in community and technical colleges than all other states in the southeast. Virginia, which did not have local appropriation revenue, had significantly more nontraditional students enrolled than Arkansas, Georgia, Mississippi, and South Carolina, which did have local appropriation. Virginia, which did not have local appropriation revenue, had significantly more nontraditional students enrolled than Arkansas, Georgia, Mississippi, and South Carolina.

The findings for the two above questions help to develop a more in-depth understanding of the primary question this study, which is to investigate the relationship between the type of funding sources at southeastern community and technical colleges and their states' nontraditional student enrollment trends. These results have implications for nontraditional students because these students are extremely price sensitive to any increase to tuition and fees. The cost of college tuition has been shown to play a critical role in the college choice process for low income students (*Measuring Up: The State by- State Report Card for Higher Education,* 2006). It has been recently supported by the federal government that if policy makers were able to decrease the cost of tuition across the nation by 1%, an additional 35,000 nontraditional students would be able to enroll across the nation (GAO, 2003) because nontraditional students

receive significantly less student aid than traditional full time students to offset the cost of their education *(The Chronicle of Higher Education [Almanac]*, 2007). Further, as indicated in Table 1, low income citizens in the southeastern states spend on average more than 20% of their income at the lowest cost institution (e.g., community colleges) (NCHEMS, 2007). Therefore, variables related to accessibility, such as net cost, has a major association with the number of citizens attaining post-secondary education, this will be explained more in implication for theory section below.

These results also have significant implications for community and technical college campuses because these campuses receive funding by the Full-Time Equivalent Enrollment (FTE) reimbursement. The harmful effects for community and technical colleges being funded at the FTE rate is that this reimbursement rate through state appropriation excludes reimbursements for non-credit continuing education, adult education, or extension courses (SHEEO & SHEF, 2007). Currently, the nontraditional student population is 40% of all undergraduate students and the majority (at least 68%) is enrolled in community colleges (GAO, 2003). The vast majority of these nontraditional students are working more than 35 hours a week, married with children, and are lacking proper post-secondary preparation. Further, these students are more likely to be enrolled in industry-based certificate or GED programs. Therefore, this research further supports the claim that if states are able to transform their revenue streams to be less dependent upon tuition and fees revenue, then more states would be able to increase the enrollment of nontraditional students at their community and technical colleges. As a result, if a community and technical college is not affordable due to a revenue structure that is heavily reliant upon tuition and fees to bridge the gap

for the lack of state and federal appropriation, then eventually these institutions will struggle for survival and seem irrelevant to the taxpayer. These colleges will eventually be put into a position where they cannot provide quality education that meets the current and future needs of high growth and high demand industries at an affordable price for nontraditional students. This conclusion is also discussed in greater detail in the Implications for Theory and Practice sections.

Implications for Theory

This research provides additional support for the limited theories of public community and technical college finance. This research also provides a different perspective for how to achieve and maintain affordable community and technical college systems in turbulent economic times rather than utilizing the high aid and high tuition models that are currently being utilized at many community and technical colleges (Castellano & Overman, 2009). This research further supports and adds to the theories of college choice, in particular the college choice of part-time adult students at community and technical colleges.

The College Choice – Persistence Nexus Model. St. John, Paulsen, Starkey (1996) have noted a gap in research for college choice and college persistence. The lack of research contributed to an inability to understand how financial aid impacted student matriculations and persistence in college. As a result, St. John et al. (1996) created the Nexus model to bridge the gap in the literature on college choice and student persistence:

1. The first stage includes a student's access to financial resources as well as academic ability as being important factors of a student's background that shapes college choice.

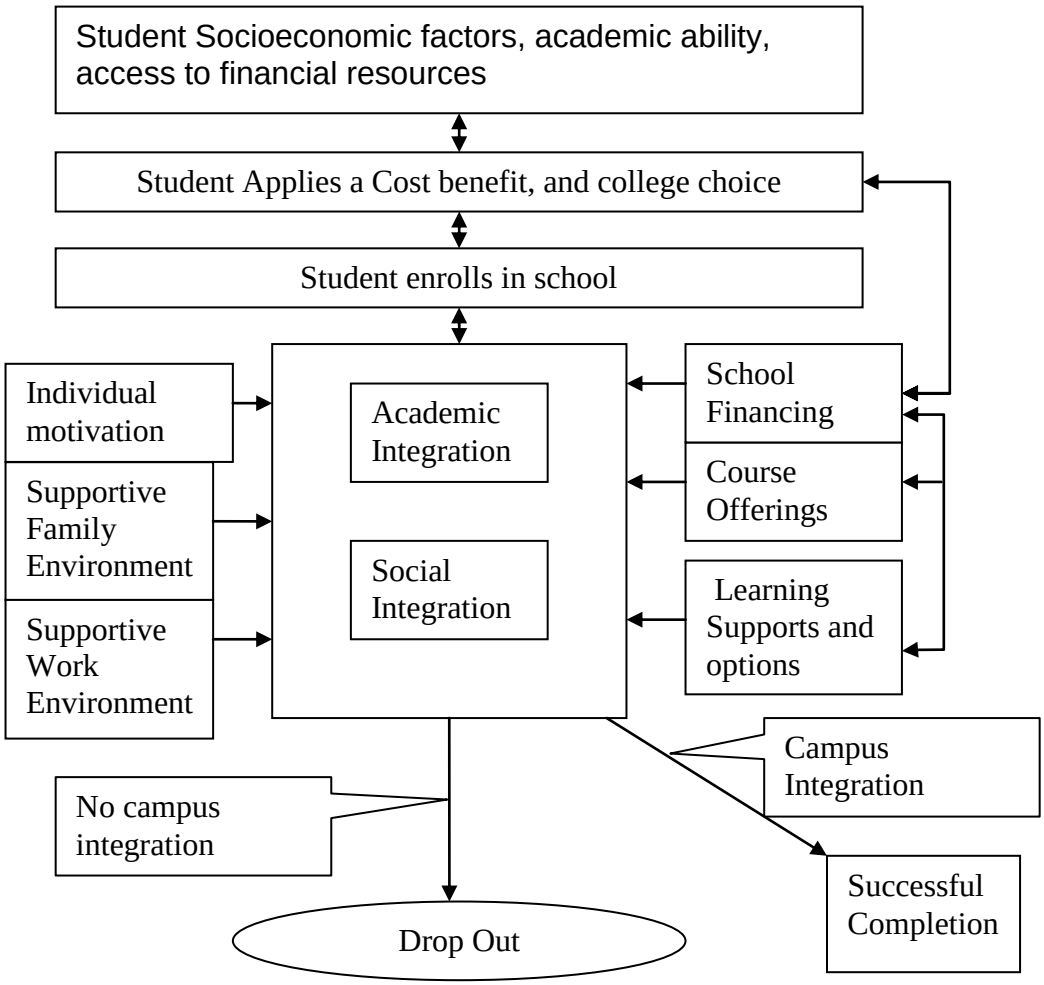
2. The second stage consists of a cost benefit analysis. The cost benefit analysis leads to college choice and retention. Financial aid or the lack of affordable tuition plays a key role in the second stage of the Nexus model.

3. The third stage is student enrollment and the manner in which the student develops a relationship with the campus.

With the support from the findings of this study, I created a student departure model that integrates Tinto's academic and social integration model with Paulsen and St. John's three stage persistence Nexus model for nontraditional students. As indicated in the Nexus model, the importance of campuses receiving adequate appropriation from other funding streams than tuition and fees has a direct influence on the students' cost benefit for staying enrolled in school. Adequate funding also determines how well the campus can provide academic and social supports for nontraditional students. As displayed in Figure 4, this research supports a revision to Tinto's model of student departure. This diagram reflects the three stage Nexus Model by St. John and Paulsen. The figure also supports the results of sub question 2 because states that have local appropriation have higher enrollment of nontraditional students and have the lowest revenue coming from tuition and fees (e.g., Georgia, Florida, Mississippi, North Carolina and South Carolina). In theory, local appropriation helps address some of the price sensitivity and cost perception of nontraditional

students by controlling costs of tuition of fees. Again, nontraditional students received significantly less support from aid programs than traditional college students (*Almanac*, 2007).

Figure 4. Revision of Tinto's Student Departure Model



Adapted from Tinto 1987, p.114 (C) 1987 by the University of Chicago. All rights reserved.

As a result of my research, Figure 4 demonstrates how the Nexus model by St. John, Paulsen, and Starkey (1996) and Tinto's (1987) institutional departure model can be integrated to better reflect how price sensitivity plays a crucial role in the nontraditional student's persistence. Nontraditional students' access to capital has a

way of bridging the gap of the forgone cost of attending college and the long term benefits of earning a degree. More importantly, a nontraditional student can encounter the negative experience of increases in tuition, which affects how a student rationalizes the cost versus the benefit of staying enrolled (St. John et al., 1994). St. John, Paulsen, and Starkey (1996) also discovered that half the total variance of student persistence in college was explained by tuition, financial aid, food and travel, housing, and other living costs. Their discovery further supports my finding that a low aid low tuition framework assists with the enrollment of nontraditional students, such as those in the states of Georgia, Florida, Mississippi, North Carolina and South Carolina. These states received the lowest proportion of their revenue from tuition and fees and they had the highest enrollment of nontraditional students compared to other states in my study.

Recommendations

Recommendation for Future Research

Based on the findings of this study, it is recommended that southeastern states explore opportunities for a more diverse funding mix to increase the number of part-time 25 to 44-year-old undergraduates. However, this recommendation is only based on data of 345 community and technical colleges in the southeastern region of the United States and further analysis is needed for other regions to make any broad national recommendations for how to increase enrollment for all nontraditional students in the United States. Further, the southeast region community and technical colleges do not widely use local appropriation as a primary funding source. Mississippi was the only state that received more that 15% from this revenue stream. Other states, like North Carolina and South Carolina received around 10% from this revenue stream. This is

unlike other states like California and Illinois that receive approximately 25% to 30% of their total revenue from these funding streams. Therefore, future research should examine other states not included in this sample. For example, further investigation of Kenton et al.'s 11 Midwestern states with current data and with analysis with nontraditional student could be conducted to investigate if similar results would occur to those in this study. Further investigation of appropriate quantitative methodologies should be utilized to more comprehensively understand the effects of funding pressures of states' community and technical colleges' revenue streams and tuition and fees. It would also be prudent to investigate the outlier of Florida's and Virginia's community and technical college enrollment of part-time adult students. This investigation could uncover the specific enrollment patterns of Florida's nontraditional students by course taking patterns, type of programs, etc. Also, future research could examine community college funding and the enrollment pattern of full time traditional age students.

Future studies could employ qualitative research methods to determine how nontraditional students actually respond to tuition increases, and how nontraditional students progress through completion in different states. It would be useful to interview community college administrators about how their funding revenues affect the education of nontraditional students in their communities and to determine what they have done to help recruit and train this population.

Since there are so many factors that control the enrollment of nontraditional students in a state, it may be useful to investigate the history and overall picture of each state and how their policies over time have helped or hindered the enrollment of nontraditional students. Beyond what was included in Table 2 (Measuring Up: 2006

Completion Grade, States Per-capita Funding of State Local Appropriation and Persistence Percentage) it would be useful to conduct a similar survey for only nontraditional students. The majority of the states in this table only had about a 49% persistence rate (the persistence rate measures the enrollment of the same student returning year after year, unlike the graduation rate that measures a student's successful completion of a certain amount of required credit hours), however some of the states with local appropriation had a higher rating than states without local appropriation.

This study only investigated revenue sources. In order to have a better understanding of the fiscal health of community and technical colleges, it would be useful to investigate their expenditure patterns, staffing patterns, program offerings, and the fiscal health of the state during the time of the investigation.

Recommendation for Practice

Community and technical college administrators and community and technical colleges' governing boards can use these findings as additional justification for policy makers to support options to include the use of local appropriation revenues or maintain local appropriation revenues for community and technical colleges instead of increasing tuition and fees. Also, policy makers may also need to scrutinize the policies that currently control how community and technical colleges are funded in their states. These policy makers should ask and challenge themselves with this question: Do these policies support the worldview that education benefits individuals or communities?

The results from the data also demonstrate that governing boards and administrators must diversify their funding streams. The majority of southeastern states

are only utilizing two revenue streams: state appropriation and federal grants. There are nine other revenue streams that could be developed- not including tuition and fees (federal appropriations, local appropriations, state grants, local grants, endowments income, sales and services of educational activities, auxiliary enterprises, and other sources not covered by a separate, specific source). For example, states' community and technical college administrators could explore ways to grow their funding options like growing their endowment funding by investment from local business partners. Community and technical colleges could also increase their funding from auxiliary revenue by discovering new opportunities to better serve their current student populations (for a fee) and other training related needs for their local citizens. Schools could also offer more customized training for industry that specifically meets their business needs and not merely those of the broader sector. The disappointing fact is that the failure to utilize these other funding streams has been a trend for more than thirty years.

The literature and data also supports the claim that community and technical college administrators need to reach out to their local stakeholders (e.g., small businesses, local companies, churches, homeowner associations, mayors, council people, and local state representative) and educate and empower them to be their ambassadors. These stakeholders must be empowered to hold these campuses accountable and have relationships with local campus leaders that are built on trust. When local campus leaders develop these kinds of relationships with stakeholders, adequate funding for nontraditional students may not be an issue.

The vast majority of nontraditional students are working more than 35 hours a week, married with children, and are lacking proper post-secondary preparation. Further, these students are more likely to be enrolled in non-credited certificate and GED programs, and as discussed before, these programs are considered non-credit and campuses do not receive any appropriation under the FTE reimbursements formulas for providing these highly demanded services. Across the United States, the workforce continues to demand workers who have up-to-date skills and non-skilled adults increasingly enroll into community and technical colleges for gainful employment. It has further been noted that since World War II, the role of women in the workforce has significantly changed the enrollment pattern at community and technical colleges because women have proven their technical skill competencies during this significant manufacturing time (Sadler, 1998). Therefore, adult women have also increased their enrollment at community and technical colleges (Bean & Metzner, 1987). The acceptance and promoting of learning from "K to Gray" has further increased the enrollment at community and technical colleges for vocational reasons, especially for older, part-time, and non-residential students (Sadler, 1998).

Regardless of the enrollment growth of nontraditional students, retention of this target population still lags behind traditional age students (1987). There is a key difference between the attrition process of traditional and nontraditional students. This main difference is that nontraditional students are more affected by external factors than traditional age students who are more affected by social integration variables (Bean & Metzner, 1987). If the United States of America were able to decrease student tuition by 1% nationwide, it is estimated that 35,000 additional adult part-time students would

be able to enroll at community colleges across the nation annually (GAO, 2003). Therefore, this study illuminates why it is important to be aware of what worldview appears to be driving the community and technical college fiscal policy decisions for how states are funding their community and technical colleges in southeastern United States. As indicated in this study, states that support the high aid and high tuition framework seem to negatively impact the enrollment of nontraditional students (e.g., Alabama and Tennessee). However, a few states that support lower revenue charges that are generated from tuition and fee charges (e.g., North Carolina and Mississippi) support the worldview of having a low-aid and low-tuition revenue model to assist with the community's development of human capital. The results from this study could shed light in areas where other studies do not weight the low-aid low tuition frameworks. In particular, one well known study is the *State by State National Measuring Up* report (The National Center for Public Policy & Higher Education, 2007). However, the aim of my research differed from the *State by State National Measuring Up*: 2002-2006 reports in three ways. First, the method for my study only included information regarding undergraduates' enrollment, whereas the *State by State National Measuring Up* report included all post secondary enrollment by combining data on undergraduate and graduate enrollment. According to the National Center for Public Policy and Higher Education (2002), in the next 10 years, the vast majority of the high growth and high demand careers will require at least two years of post secondary education or industry based certification rather than non-terminal college degrees or graduate degrees. The increasing reliance on two year degrees drives the need for research, such as my study, which focuses on the first two years of post secondary education.

Second, my research examined the states' enrollment of 25 to 44-year-olds with or without high school credentials. This dissertation addresses a limitation in the *State by State National Measuring Up* report, which only included the ages of 25 to 49 with high school credentials. It should be noted that non-high school graduates can still enroll at a community and technical college without high school credentials. Typically, these students enroll in non-credit courses (e.g., GED, industry-based programs, apprenticeships, developmental courses, etc).

Third, the *State by State National Measuring Up* report weighed the affordability rating on a "high aid and high tuition" framework (e.g., state sponsored scholarships, subsidized loans, and institutional financial aid) and this framework is not an appropriate indicator of what states are doing to maintain or increase affordability of community colleges because some public community and technical colleges are low aid and low tuition enterprises (Cohen & Brawer, 2003). Furthermore, some states use local appropriation to fund their community colleges, which is not included in the *State by State National Measuring Up* report. There is evidence to support that local appropriations have proven to be very effective for stabilizing potential increases in tuition and fees at public community and technical colleges (Cohen & Brawer; Kenton et al., 2005).

The data in Chapter 4 also challenge the claims of others like the researcher of the *State by State National Measuring Up* report who believe that community and technical colleges can become more affordable for part-time adult students based on the high aid and high tuition revenue model for higher education. However, as demonstrated in Chapter 4 states that have local appropriation also have lower tuition

costs than states without local appropriation (Heller, 1997; Leslie & Brinkman, 1988; NCHEMS, 2007; St. John, 2000).

As further indicated in the literature review, local funding revenue streams have been proven to be very effective for keeping tuition and fees charges more affordable than institutions that do not rely on local appropriation (Collins, Leitzel, Morgan, & Stalecup, 1994; Cruz, 2002; Dowd, 2006; Jackson & Glass, 2000;St. John & Parsons, 2005;Kenton et al., 2005; Mumpers, 2001; NCHEMS, 2007; Paulsen & Smart, 2001;Watkins, 2000). The use of local property taxes are augmenting the support of some community and technical college systems (such as Texas), resulting in a more accessible educational system because the cost of attendance is much lower than states that fund community colleges without local property taxes (Kirst & Venezia, 2004; SREB, 2006). In order for a community and technical college system to convert to using local appropriation as a revenue stream, legislation will have to be drafted and its state constitution will have to be amended (Alexander & Alexander, 2007).

Some community and technical colleges have local taxing authority (e.g., Texas, Mississippi). This taxing authority depends on each system's creation and legislative authorization (through state constitutions). The rule of thumb is that legislators may choose how they wish to fund their educational providers, which means state legislatures have much discretion regarding how they fund or do not fund educational priorities (Alexander & Alexander; 2007; Cohen & Brawer, 2003; Paulsen & Smart, 2001; SREB, 2006). When taxing authority is given to a local school district, the state constitution must clearly state that all funding must follow the intent of the legislation.

It has been challenged that people are taxed too much and areas with less property taxes are more competitive in relocating human capital while growing and attracting business development to neighboring states with less property tax liabilities. However, according to a committee that was formed by the Ohio state legislature to study the effects of property taxes, property tax charges do not impact the state's ability to attract outside industry investment. It has been noted that states that have higher effective real property tax, which includes Florida, Georgia, and Texas, are still very competitive in growing businesses and keeping residents, compared to their neighboring states with lower property taxes (Ohio Department of Taxation, 2003).

Local property tax revenues have some drawbacks and some oppose generating revenue from this funding source, but it should be considered because state community colleges are experiencing a decrease in federal and state appropriations (Jackson & Glass, 2000; Kenton et al., 2005; Watkins, 2000). According to other studies, most institutions will directly offset the void caused by decreases in state appropriation by increasing tuition and fees (Habel & Selingo, 2001; Hovey, 1999; St. John, 2003).

Katz and Murphy (1992) have stated, the delay in the rate of human capital accumulation will lead to a delay in economic growth for the economy as a whole, and will likely cause continuing upward stress on the earnings differentials between more and less educated workers. Therefore, policy makers must do everything within their power to control the rising cost of tuition and fees for all students.

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APPENDIX A

IPEDS DEFINITIONS OF VARIABLES

APPENDIX A

IPEDS DEFINITIONS OF VARIABLES

GENERAL INSTRUCTIONS — F-1

Please respond to each item on this report in the space provided. The Glossary provides definitions of terms used in this report. The categories of current funds revenues (part A), current funds expenditures (part B), and the statement of selected funds balances (part I) are designed to be consistent with an audited financial statement, with definitions in **Financial Accounting and Reporting Manual for Higher Education** (published in 1990 by the National Association of College and University Business Officers) and with **Audits of Colleges and Universities** (amended in 1975) by the American Institute of Certified Public Accountants.

Numbers in parentheses at the end of paragraphs refer to pages in **Financial Accounting and Reporting Manual for Higher Education.**

Include medical school revenues and expenditures as appropriate. Exclude hospital revenues and expenditures except as directed for part A, line 13; part B, lines 16–18; and part J.

Report all data in WHOLE DOLLARS only; omit cents. For any item on the report where exact data do not exist, give estimates. Items are cited by column and line number.

A blue form containing prior year data is included in your packet. The prior year data may have been adjusted by IPEDS processing staff to resolve errors detected during the edit process. If you did not respond to last year's survey, the prior year information may have been imputed based on data reported by similar institutions in your region.

Please do not return the prior year data section or the instructions with your FY 1999 report.

INSTITUTIONAL IDENTIFICATION

Make any necessary corrections to the preprinted address information in the space provided on the front page of this report. Enter the name, title, and area code and telephone number of the person responsible for completing the report.

COMBINED DATA FOR MORE THAN ONE CAMPUS OR INSTITUTION

If data for more than one campus or more than one institution are being reported on this survey form, use the table on page 4 of the survey form to list information which identifies all campuses and institutions which are included.

PERIOD OF THE REPORT

Report finances for the most recent complete fiscal year. Indicate the starting month (using 2 digits), starting year (4 digits), ending month (using 2 digits), and ending year (4 digits), of the fiscal year followed by your institution.

PART A — CURRENT FUNDS REVENUES BY SOURCE

Unrestricted current funds — Resources received by an institution that have no limitations or stipulations placed on them by external agencies or donors.(302)

Restricted current funds — Resources provided to an institution that have externally established limitations or stipulations placed on their use. Externally imposed restrictions are to be contrasted with internal designations imposed by the governing board on unrestricted funds.(209, 215, 302)

Current funds revenues — Include **(1)** all unrestricted gifts, grants, and other resources earned during the reporting period, and **(2)** restricted resources to the extent that such funds were expended for current operating purposes. Current funds revenues do not include restricted current funds received but not expended because these revenues have not been earned.(310)

Source of funds

Line 1 – Tuition and fees — Report all tuition and fees (including student activity fees) assessed against students for education purposes. Include tuition and fee remissions or exemptions even though there is no intention of collecting from the student. Include here those tuitions and fees that are remitted to the state as an offset to the state appropriation. (Charges for room, board, and other services rendered by auxiliary enterprises are not reported here, see line 12.)(311)

Lines 2–5 – Government appropriations — Include all amounts received by the institution through acts of a legislative body, except grants and contracts. These funds are for meeting current operating expenses, not for specific projects or programs. An example is federal land-grant appropriations (line 2). Pell Grants are not reported here, but on line 6, as they are grants, not appropriations. Federal appropriations received through state channels is a subset of line 2 and should be included on line 2 for federal appropriations, as well as reported separately on line 3.(312)

Lines 6–8 – Government grants and contracts — Report revenues from governmental agencies that are for specific research projects or other types of programs. Examples are research projects, training programs, and similar activities for which amounts are received or expenditures are reimbursable under the terms of a government grant or contract. Related indirect costs recovered should be reported as unrestricted revenues (column 1). Amounts equal to direct costs incurred should be recorded as charges against current restricted funds and reported as restricted current funds revenues (column 2). Include Pell Grants on line 6, column 2. Federal grants and contracts received through state channels should be reported on line 6.(313) **Do not include revenues from the Federal Direct Student Loan (FDSL) Program.**

Line 9 – Private gifts, grants, and contracts — Report revenues from private donors for which no legal consideration is involved and private contracts for specific goods and services provided to the funder as stipulation for receipt of the funds. Include only those

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APPENDIX A

IPEDS DEFINITIONS OF VARIABLES

GENERAL INSTRUCTIONS – F-1 — Continued

PART A — CURRENT FUNDS REVENUES BY SOURCE — Continued

gifts, grants, and contracts that are directly related to instruction, research, public service, or other institutional purposes. Monies received as a result of gifts, grants, or contracts from a foreign government should be reported here. Include the estimated dollar amount of contributed services on this line.(314,430)

Line 10 – Endowment income — Report **(1)** the unrestricted income of endowment and similar funds; **(2)** restricted income of endowment and similar funds to the extent expended for current operating purposes; and **(3)** income from funds held in trust by others under irrevocable trusts. Do not include capital gains or losses unless the institution has adopted a spending formula by which it expends not only the yield but also a prudent portion of the appreciation of the principal; in this case, the amount calculated by the total return concept would be reported. If any such gains are spent for current operations, these should be treated as transfers, not revenues. Exclude endowment income for hospitals. (315,359,360)

Line 11 – Sales and services of educational activities — Report revenues derived from the sales of goods or services that are incidental to the conduct of instruction, research or public service. Examples include film rentals, scientific and literary publications, testing services, university presses, and dairy products.(316)

Line 12 – Auxiliary enterprises — Report revenues generated by the auxiliary enterprise operations that exist to furnish a service to students, faculty, or staff, and that charge a fee that is directly related to the cost of the service. Examples are residence halls, food services, student health services, intercollegiate athletics, college unions, college stores, and movie theaters.(317)

Line 13 – Hospitals — Include a hospital operated by the institution and clinics associated with training. Include gifts, grants, appropriations, research revenues, and endowment income. Exclude clinics that are part of the student health services program. Include all amounts appropriated by governments (federal, state, local) for the operation of hospitals. (Sales and services revenues should be net of discounts and allowances. Hospital revenues included here should also be reported in part J.)(318) Exclude medical schools.

Line 14 – Other sources —Include all revenues not covered elsewhere. Examples are interest income and gains (net of losses) from investments of unrestricted current funds, miscellaneous rentals and sales, expired term endowments, and terminated annuity or life income agreements, if not material. Include revenues resulting from the sales and services of internal service departments to persons or agencies external to the institution (e.g., the sale of computer time). Such sales should not be confused with those on line 11, which are typically by-products of instruction or training.(319)

Line 15 – Independent operations — Include all revenues associated with operations independent of the primary missions of the institution. This category generally includes only those revenues associated with major federally funded research and development centers. Do not include the net profit (or loss) from operations owned and managed as investments of the institution's endowment funds.(320)

Line 16 – Total current funds revenues — Report here the sum of lines 1, 2, and 4 through 15, inclusive.

PART B — CURRENT FUNDS EXPENDITURES BY FUNCTION

Current funds expenditures and transfers — The costs incurred for goods and services used in the conduct of the institution's operations. They include the acquisition cost of capital assets, such as equipment and library books, to the extent current funds are budgeted for and used by operating departments for such purposes.(330)

Column 4 – Salaries and wages without employee fringe benefits — Report the amount of total expenditures for salaries and wages. Include the salaries and wages of all personnel, full- and part-time, paid through each functional account. Do not include any expenditures for College Work Study or for employee fringe benefits as part of salary expenditures. Expenditures for employee fringe benefits are to be reported on lines 24–26, column 4. Note that in part B the amounts reported for salaries and wages in column 4 are to be included in columns 1–3.

Employee fringe benefits — Excludes the employee's contribution. Employee fringe benefits include retirement plans, social security taxes, medical/dental plans, guaranteed disability income protection plans, tuition plans, housing plans, unemployment compensation plans, group life insurance plans, worker's compensation plans, and other benefits in-kind with cash options.

Functions of expenditures

Line 1 – Instruction — Expenditures of the colleges, schools, departments, and other instructional divisions of the institution and expenditures for departmental research and public service that are not separately budgeted should be included in this classification. Include expenditures for both credit and noncredit activities. Exclude expenditures for academic administration where the primary function is administration (e.g., academic deans). (Such expenditures should be reported on line 4.) The instruction category includes general academic instruction, occupational and vocational instruction, special session instruction, community education, preparatory and adult basic education, and remedial and tutorial instruction conducted by the teaching faculty for the institution's students.(332)

Line 2 – Research — This category includes all funds expended for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution. Do not report nonresearch sponsored programs (e.g., training programs).(333)

Line 3 – Public service — Report all funds budgeted specifically for public service and expended for activities established primarily to provide noninstructional services beneficial to groups external to the institution. Examples are seminars and projects provided to particular sectors of the community. Include expenditures for community services and cooperative extension services.(334)

VITA

Girard James Melancon was born in Kankakee, Illinois. He obtained his Bachelor's degree in sociology and human services from Fort Lewis College in Durango, Colorado in 1997. He completed his Masters in Public Administration with a concentration of finance at the Southern University Nelson Mandela's School of Public Policy and Urban Affairs in 2003. He joined the University of New Orleans graduate school to pursue a Ph.D. in higher educational leadership with a focus on community and technical college systems in 2004.

Melancon has worked in the fields of workforce development and juvenile justice in the states of Colorado and Louisiana. He currently holds the position of Assistant Secretary for the Louisiana Office of Juvenile Justice, where he is working to reform the juvenile justice system through workforce development and strategic partnerships with community and technical colleges.

He is married to Dr. Sylvia Melancon and they reside in Baton Rouge with their two children, Miles and Madeline. The degree of Doctor of Philosophy will be conferred upon him in August of 2010.