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**The Dissertation Committee for Brian Francis Dalton Certifies that this is the approved version of the following dissertation:**

**ENROLLMENT AND FISCAL HEALTH OF SMALL,  
TUITION-DEPENDENT PRIVATE COLLEGES  
WITH NEW FOOTBALL PROGRAMS**

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**by**

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## **Dedication**

There are many people who have played a supportive role in helping me achieve this undertaking, but no one has matches the encouragement, love and perseverance of my best friend, companion, cheerleader, supporter, mother of our children, and wife: Diana Marie. The first semester when I first began this undertaking, my oldest son Shawn was born. He's now 16. I take no satisfaction in being one of longest-standing students in history of the doctoral program at U.T. Austin. I'm looking forward to having my Sunday nights back, not being enrolled in school and spending more time with my soul mate.

I also dedicate my work to my children Abby, Shawn, and Ian. All they have ever known since they were born is that "dad is working on his dissertation." Now it's done. I hope they one day appreciate the perseverance it took to get to this place, but don't take as long to accomplish the important things in life.

I dedicate this work as well to my parents Ronald and Joy Dalton as well as my "other dad" Simon Dubik. So too, siblings Mary Lynne Lewis; Doug, Mark, Kevin and Jeff Dalton – they're in for a lifetime of Hook 'Em!

Finally, to my friend the late John Baggs, I dedicate this to you. You were an incredible human being who touched so many lives. I'm glad mine was one of them. Just before you departed this world, you saved my wayward nephew Matt Lewis through the warm and empowering embrace of St. Scholastica Baseball. How I wish I could call you now and tell you the fine young man he has become. How I wish I could call you now just to talk like we used to.

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**ENROLLMENT AND FISCAL HEALTH OF SMALL,  
TUITION-DEPENDENT PRIVATE COLLEGES  
WITH NEW FOOTBALL PROGRAMS**

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The primary focus of this comparative research was to explore the impact of the addition of football programs on the enrollment and fiscal health of 530 small, tuition-dependent private U.S. colleges and universities from 1985 to 2000. The institutions studied represented a group of institutions that are increasingly challenged to manage or improve their enrollments and fiscal health at a time when competitive pressures raise questions as to their long-term viability.

In the analysis, institutions were separated into four groups. The first group consisted of 52 institutions that established intercollegiate football programs during that time period. The second group was comprised of six institutions that ended football programs during that time period. The third group involved 172 institutions that had football programs during the entire time span. The fourth group consisted of 300 institutions that had no football program during the entire time span of the

study. Data regarding enrollment and fiscal health for all 530 institutions were collected from publicly available sources to account for the 25 years of the study and the analysis was conducted.

This study incorporated an interrupted time series design, which allowed for a large series of observations made on the same variable consecutively over time.

The results of this study demonstrated that initiating a new football program produces a greater increase in undergraduate enrollment for initiating institutions than for those institutions not initiating a football program. Initiating a football program also produces a greater increase in fiscal health for initiating institutions than for those institutions not initiating a football program. In addition the study confirmed that initiating a football program increases the rate of growth of undergraduate enrollment of initiating institutions compared to those institutions that did not have a football program during the time span of the study. This was not the case for institutions that had a football program during the time span of the study. Finally, starting a football program increases the rate of improvement of the fiscal health of initiating institutions compared to those institutions not initiating a football program.

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## **Chapter One: Introduction**

Small, tuition-dependent private colleges have arrived at a crossroad with few attractive paths available to them. They are likely to experience escalating costs and diminishing revenues for the foreseeable future with increasingly diverse competition from larger and wealthier private institutions, public universities and for-profit institutions. This situation has resulted in “limited pricing flexibility and a need to make significant capital investments” (Moody, 1990, p. 7). To add complexity to the issue, it has been observed that per-student costs are approximately 50% higher in private institutions than in public institutions (Winston & Yen, 1995), with only half of this difference being attributed to factors such as faculty salaries, enrollment, and research intensity (Toutkoushian, 2001).

What was true over a decade ago is even truer today; external factors impacting these colleges include changes in demographics (Christensen, Anthony, & Roth, 2004; Hossler & Hoesee, 2005; NCES, 2006c; Snyder, Tan, & Hoffman, 2006), student demand (Hersh & Merrow, 2005; Moore, 2004; Newman, Couturier, & Scurry, 2004; Sora, 2001), stakeholder expectations, financial markets, and government regulations (Boverini, 2005; Hersh & Merrow, 2005; King, 2005; Kirp, 2004; Moore, 2004; Newman, Couturier, & Scurry, 2004). Therefore, small, tuition-dependent private colleges are forced to confront new realities that challenge their pricing and finance structures. For many, finding new ways to attract students is an imperative, not an option.

Higher education is perhaps the last industry to be affected by changes within its markets and small tuition-dependent colleges remain the most vulnerable, their very existence being threatened in many cases (Kirp, 2003; Roach, 2004; Townsley, 2002). If these institutions do not identify new strategic directions and take calculated risks, they may face the same fate as the 29 small, tuition-dependent private colleges that closed their doors in 1990s, and the three that have closed since 2000 (Brown, 2008).

Although the forces of change within the marketplace that can threaten the survival of many small institutions increasingly present new challenges to attract and retain students (Christensen, Anthony, & Roth, 2004; Townsley, 2002), many small private institutions remain focused on competing with each other (Bok, 2006; Goldman, Gates, & Brewer, 2002). Christensen et al. (2004) noted that in order to survive, colleges must take action to mitigate the threat of disruptive innovation, and they must do it soon.

As these colleges seek ways to attract more students they often heavily rely on co-curricular offerings such as athletics. Adding a new athletic program, however, requires a significant outlay of funds for its initiation and maintenance. Understandably, college administrators are hesitant to use the institution's scarce funds or limited bonding capacity to support co-curricular activities, no matter how promising the proposed result may be.

Higher education enrollment management is concerned with the annual and long-term enrollment goals of the institution. The field of enrollment management is fairly

new, having been first conceptualized in the early 1980s and is now an integral theoretical and functional part of college and university administration (Hossler, 2006).

Hossler, Bean, and colleagues defined Enrollment Management as

... an organizational concept and a systematic set of activities designed to enable educational institutions to exert more influence over their student enrollments. Organized by strategic planning and supported by institutional research, enrollment management activities concern student college choice, transition to college, student attrition and retention, and student outcomes. These processes are studied to guide institutional practices in the areas of new student recruitment and financial aid, student support services, curriculum development, and other academic areas that affect enrollments, student persistence, and student outcomes from college. (1990, p. 5)

This definition is grounded in the idea of “exerting influence/control” over the long-term enrollment and fiscal health of the institution. While leaders of many colleges and universities have committed themselves to incorporating “best practices” in recruiting, admitting, and financing the students, however, enhancement of image, publications, campus visits, scholarships, and alumni outreach will have a limited effect unless the institutions focuses on its core mission. Unfortunately, solutions found in the past – new majors, non-traditional, on-line and other types of innovative academic programming – are being or have been exhausted with few untapped niches remaining.

For the last 30 years or so, co-curricular programming has emerged as a creative offset for tuition-dependent private colleges and, for 52 private colleges and universities, one answer to meeting these challenges has been the initiation of intercollegiate football. For some time, “the sport was recognized for its ability to excite alumni and provide valuable marketing and recruiting advantages for the colleges” (Rudolph, 1990, p. 385).

Given the tremendous expense associated with creating and supporting intercollegiate football, those colleges that opted to start the sport engaged in considerable risk.

However, the benefits of long-term increased enrollment and revenue theoretically would ultimately benefit those who were successful. This study sought to determine whether this venture improved the enrollment and fiscal health of those 52 institutions that took this action.

### **Purpose of the Study**

The purpose of this study was to determine if the addition of a football program in selected small, tuition-dependent private colleges is related to an increase in the enrollment and an improvement in the fiscal health of these institutions.

### **Research Question**

Is there a statistically significant relationship between the addition of a football program in selected small, tuition-dependent private colleges and their enrollment and fiscal health?

### **Significance of the Study**

In 2006, the U.S. Department of Education projected enrollment at private institutions to increase by 14% between 2004 and 2015 (NCES, 2006e). The low-growth rate of small private institutions combined with an increasing demand for higher education creates the general problem of diminished student access to unique, traditional higher education opportunities (Bok, 2006; Koblik & Graubard, 2000; Townsley, 2002). Competitive pressures include changing demographics, market forces, and innovative



disruptions created by new types of education providers around the world offering distance education opportunities (Christensen et al., 2004; Clotfelter, 1999; Folkers, 2005; Kirp, 2004).

It is hoped that this study will make a noteworthy contribution to the higher education literature regarding institutional initiatives to increase the enrollment and improve the fiscal health of small, tuition-dependent private colleges. The absence of evidence about which strategies work diminishes the ability of leaders of private institutions to respond effectively to the annual pressures they experience to ensure the fiscal health of their institutions. Instead they are left with trial-and-error strategic options that many small private colleges cannot afford (Newman, Couturier, & Scurry, 2004). In short, there is no evidence that strategic changes made by small colleges have an effect on their financial performance. The field of enrollment management will also benefit from this study if the use of athletics and other co-curricular activities in long range enrollment and fiscal planning is better understood as a potential tool to enhance institutional sustainability.

### **Nature of the Study**

This is a quantitative study. Although it is possible to determine the relationships between changing strategies and external factors and changing financial performance through qualitative methods, a qualitative approach would constrain the study in terms of participants, data, time, and the ability to generalize the results of the investigation (Leedy & Ormond, 2005; Simon, 2005). A quantitative research design provided an

objective means to collect and analyze a wider range of longitudinal data across a larger population than would be possible with qualitative methodology (Cooper & Schindler, 2003; Simon, 2005).

### **Definition of Terms**

Several terms are used repeatedly throughout this research. For the purposes of this study, they were defined as follows:

*Enrollment*: the institution's full-time undergraduate student headcount.

*Fiscal Health*: the financial strength of an institution as measured by the ratio of the institution's current funds revenue and its current funds expenditures.

*IPEDS*: The Integrated Postsecondary Education Data System (IPEDS): a Web-based data collection system that compiles key institutional data from all educational institutions. It is mandated by the U.S. Department of Education through the National Center for Educational Statistics (2006c).

*Small private college*: institutions of higher education that enroll fewer than 2,500 full-time undergraduate students and are under the control of private citizens, usually a Board of Trustees.

*Tuition-dependent colleges*: private institutions that receive more than 60% of their revenues from tuition (KPMG, 1999, p. 45).

*Tuition discounting*: the use of institutional funds to provide scholarships or internal grants that cover a portion of tuition to reduce the total financial burden carried by the student (Ruterbusch, 2004). Institutions report average tuition discount as a

percentage of their total tuition dollar amount (NCES, 2006c). Unfunded tuition discounts represent a liability when an institution no longer has the financial resources to cover the discounted dollars (Shedd & Daulton, 2005; Townsley, 2002). Institutions report net tuition (actual dollars received by the institution) as revenue to IPEDS (NCES, 2006d).

### **Assumptions**

For the purposes of this study, the following assumptions were made.

1. Small, tuition-dependent private colleges provide an important alternative part of the higher education landscape, and therefore must remain viable.
2. Public data about the enrollment and financial health of the colleges included in this study are reasonably accurate.
3. Part-time undergraduate enrollment does not affect and is not affected by the addition of a football program at small, tuition-dependent private colleges.
4. There is a relationship between full-time undergraduate student enrollment in small, tuition-dependent private colleges and their fiscal health.

### **Limitations**

The results of this study cannot be generalized to the entire population of small, tuition-dependent private colleges. However, they should be useful to those institutions that do not have intercollegiate football, but could initiate such a program if the decision

was made to do so. Further, the data used in this study reflected changes in accounting standards over the past three decades. Changes in standards are not unusual in most industries, but they do make in-depth comparative longitudinal research difficult. However, every effort was made to minimize the effect of these changes by limiting the analyses to data that had been collected consistently over time.

### **Summary**

This study was conducted to contribute to the literature on initiatives undertaken by small, tuition dependent private colleges in an effort to improve their enrollment and fiscal health. These institutions are experiencing increasing costs and diminishing revenues and must find innovative ways to grow their enrollment and improve their fiscal health. One strategy may be the introduction of an inter-collegiate football program.

This study posed the following research question: Is there a statistically significant relationship between the addition of a football program in selected small, tuition-dependent private colleges and their enrollment and fiscal health? The field of enrollment management is concerned with strategic decisions, such as the one studied here that are intended to position an institution in ways that advance its long-term enrollment and fiscal health. The conceptual approach for analyzing the addition of intercollegiate football was within the commonly accepted principles that guided enrollment management at the time of this study. Those concepts are discussed in the next chapter.

## **Chapter Two: Review of the Literature**

The intention of this literature review is to survey three types of literature related to this study: 1) the history of college football, 2) the history and financial challenges of private small, tuition-driven institutions, and 3) enrollment management history and theory. This review provides context to this study, which seeks to determine whether there is a statistically significant relationship between the addition of a football program in small, tuition-dependent private colleges and their enrollment and fiscal health.

### **A Selective History of College Football**

American college sports are a historical accident. Nearly 2,000 institutions of higher learning sponsor teams in the United States, yet ours is the only country where academe and athletics are so closely linked. (Suggs, 2005, p. 59)

The earliest record of the game that was to become American football dates back to the 10<sup>th</sup> century, when a cow's bladder or a skull was kicked between villages in England and Scotland. What was primarily a game played in the farm-filled countryside grew to such popularity that it was soon viewed as a menace to societal order and outlawed by the kings of that time (Hawes, 1999). When the game invaded the streets of London in 1314, King Edward III declared that from the game "...many evils might arise, which God forbid" (Falla, 1993, p. 3) and participants faced imprisonment for engaging in its play. In successive centuries, the game was driven underground and played primarily in the countryside until the 16<sup>th</sup> century when James II lifted its ban (Falla, 1993). Not long after, Richard Mulcaster, Head of the Merchant Taylors School in England suggested that playing football was "good for young men as the game added

strength to the body and reinforced the masculine traits appropriate for the role of men in society.” (Falla, 1993, p. 4)

In 1828, Dr. Thomas Arnold, Headmaster at England’s Rugby School, advanced Mulcaster’s thinking by establishing a game separate from soccer, which primarily makes use of the feet. This game focused on the ability to possess the ball with one’s hands and run with it in an attempt to reach the opponent’s goal. The sport of rugby is most notable as it was incorporated into the Rugby school curriculum – thus attaching the “ideals of the sport into the desired [qualities] represented in a Rugby man” (Falla, 1993, p. 4).

The introduction of football in America dates to 1609 where it was similarly outlawed by local authorities. In reaction to the injuries caused, being caught playing the game in Boston in 1657 resulted in a fine of twenty shillings. By the 1820s, students at Harvard, Yale, and Princeton regularly engaged in intramural play with the most notorious occasion being “Bloody Monday,” where Harvard freshmen played against the sophomores on the first Sunday of the fall term (Falla, 1993, pp. 5-6).

The game they played called “football” bore little resemblance to the game that would be played at the turn of the 20<sup>th</sup> century – and that game little resembled the modern game played today. However, it is noteworthy to view the historical evolution of football in America with an eye to the overall evolution of American higher education as well. A game that was nascent prior to the Civil War – devoid of rules, standards and stature evolved in unison with American higher education. Nearly two centuries later,

we see the irony of the path taken by the early American colleges. Nearly all the colleges that engaged in the ruthless game of the late 19<sup>th</sup> and the first half of the 20<sup>th</sup> centuries have since downgraded their programs to shells of what they once were. The “Ivy League,” for example, which owes its name to the game of football – did not codify itself as a brand until 1960 – when the University of Pennsylvania abandoned its hopes of big-time college football to join its brethren in a purely academic-based athletic philosophy (Watterson, 2000, p. 253).

It is generally agreed that the first intercollegiate athletic contest occurred when Harvard and Yale rowed against each other in 1852. Following the rise in popularity of rowing in the mid-1800s, baseball and football teams began to spring up on campuses, such that “by the end of the century many of the country’s most prestigious institutions had hired full-time football coaches and begun promoting their games as major social events” (Suggs, 2005, p. 59).

The first football game played in America was between Rutgers and Princeton in 1869 and was more similar in style played seven years later between Harvard and Yale when the kicking or soccer style of play gave way to the running or rugby style of play (Reisman & Denny, 1951). Rules were decided at the beginning of each game, and could vary from one game to another. One game could look like soccer, while the other resembled rugby. In 1876, students from Harvard, Princeton and Yale met to establish a set of common rules for the sport. Those from Harvard convinced the others to adopt a more rugby-style of play (Hawes, 1999).

Shortly thereafter, the game grew in popularity. For purposes of time and economy, when the University of Michigan sent its team east to play Harvard, Yale and Princeton – the trip only took one week! Similarly, the University of the South at Sewanee sent its team north for a week of play in 1889, and the Connecticut Agricultural College at Storrs was the first to add the sport to its physical education curriculum (Stagg & Alonzo, 1927). In an evolutionary oddity, as eligibility issues had yet to be a problem, it wasn't unusual for faculty to play on college teams, as they did in 1884 at Miami University of Ohio (Rudolph, 1990).

The first notable attempt to clarify the rules of the emerging game and address growing trends of violence and injuries came on November 28, 1876, when representatives from Yale, Harvard, Princeton, and Columbia met in Springfield, Massachusetts to form the Intercollegiate Football Association (IFA). It was at this meeting the first of many incremental changes in the game over the next 40 years were made. In this case, the most noteworthy was the reduction of players on the field from 15 to 11. However, this reduction failed to address the violent reality of the game where whole groups of men sought to advance the ball at any cost. Punching, gouging, and dangerous tackling were all too common (Falla, 1993, pp. 7-8).

Perhaps as an ominous sign that would become part of the story of the modern day game, the Harvard Football Club in 1883 ignored the demand of the Harvard Committee on Athletics to disband, and instead agreed to play Yale in their annual game at the Polo Grounds in New York City. At the time, Harvard was spending \$13,000 to



upgrade its field and Yale was in the process of buying property adjacent to the campus in New Haven to build a field. Both schools anticipated that gate receipts from the game would cover their expenses. The Harvard-Yale game was played before 10,000 fans; cash flowed readily to both campuses and faculty opposition at Harvard faltered (Falla, 1993). Given the violence and skullduggery that was exhibited the following year, Harvard's president suspended the sport for a year in 1885 (Suggs, 2005). Columbia dropped football as well, and both schools withdrew from the IFA. Both rejoined the organization following the addition of rules that mandated paid referees, and made blatant fouls like slugging punishable by ejection (Falla, 1993).

The cash that flowed and the alumni that flocked to see the games continued to influence the college game. The Harvard-Yale game of November 24, 1894 in Springfield, Massachusetts attracted tens of thousands. That year, Harvard spent \$18,754 on football and recorded \$32,092 in gate receipts \$15,049 from the Yale game alone. Nine years later, the Thanksgiving Day game between Yale and Princeton was all the rage in New York City. "Hotel rooms were scarce, and the colors of Yale and Princeton were hung from the mansions of the Vanderbilts, Whitneys, Alexanders, and Sloanes" (Stagg, & Alonzo, 2005, pp. 150-3). But with this increased popularity arose a myriad of other problems that ranged from the increased outcry over continued harsh play, injuries and even deaths, to player eligibility and financial aid to athletes.

In the first game in 1893, Harvard introduced the devastating "flying wedge" formation, which resulted in increased violence and left six players seriously injured

(Falla, 1993, pp. 10-11). Although Harvard lost the game, the flying wedge was greeted with enthusiasm and soon adopted by many teams (Watterson, 2000).

Another new play on the scene that year was the “hurdle play” which involved the running back “taking a flying leap into the arms of his teammates and then [being] flung feet first over the defensive line five to six feet in the air” (Falla, 1993, p. 12). In 1902, Princeton’s answer to the hurdle play was to similarly fling a defensive player into the air, resulting in devastating mid-air collisions (Falla, 1993).

By the mid-1890s, the sport had grown in popularity and was being played at more than 120 schools (Falla, 1993). The first sign of future league affiliations occurred in 1895 with the formation of a group that involved the University of Chicago, Northwestern University, the University of Wisconsin, the University of Illinois, the University of Michigan, the University of Minnesota and Purdue University – the future Big Ten Conference.

In 1895, Harvard president Charles Elliott issued a scathing report on the “...evils of intercollegiate sports. In particular, the game of football grows worse and worse as regards foul and violent play, and the number and gravity of injuries which players suffer” (Watterson, 2000, p. 37). Ironically, the disconnect between Harvard’s president and its football program was evidenced by the fact that Elliott’s own school introduced the destructive “flying wedge” (mentioned earlier) two years prior to his report. The flying wedge play was declared illegal in 1895 (Watterson, 2000). After a particularly

violent game involving the new tactic that year, the Army and Naval Academies decided to discontinue their series (Falla, 1993).

As had happened on previous occasions when public ire was raised against the sport, modest changes were made. In 1903, these included the provision for seven players on the line of scrimmage, allowing the quarterback to carry and run with the ball, and empowering officials more latitude in calling personal fouls. (This assumed the officials were trained and/or not subject to bribery which ran rampant). Finally, the lining of the field both vertically and horizontally was mandated to enhance play. The newly lined field resembled a “gridiron,” and the name stuck (Watterson, 2000, pp. 61-62).

These changes did little to address the violent nature of the game and by 1905 the safety of the sport again became an issue. Although the flying wedge had been banned, mass momentum plays – in which the ball carrier was literally carried into the line fronted by teammates – still were legal, and resulted in an increasing number of life-threatening injuries and deaths. Safety equipment such as padding, reinforced helmets and mouthpieces were not yet part of the football uniform (Hawes, 1999).

Eighteen men died that year and 149 were seriously injured playing the sport. The University of California and Stanford opted to play rugby for the next decade, Columbia dropped football for a decade, and both Northwestern University and Union College suspended their programs for a year (Reisman & Denny, 1951).

President Teddy Roosevelt believed, as did many late 19<sup>th</sup> century American college presidents, that playing football was “good for young men as the game added strength to the body and reinforced the masculine traits appropriate for the role of men in society” (Watterson, 2000, p. 64). But when a photo of a stricken football player from Swarthmore made the national press in early October 1905, President Roosevelt felt compelled to intervene (Hawes, 1999). Of the violence he said, “Brutality and foul play should receive the same punishment given a man who cheats at cards” (Riesman & Denny, 1951, p. 319). Roosevelt’s “retreat” with two officials each from Harvard, Yale, and Princeton, and Secretary of State Elihu Root (a Yale graduate) at the White House produced more talk than results, with the collegiate reps unified to maintain the status quo (Watterson, 2000, pp. 71-72).

One month later, in a game between Union College and New York University, Union player Harold More was gravely injured and died later that night. NYU Chancellor Henry McCracken sent messages to the presidents of the eight eastern colleges in the New York Conference, calling for an immediate meeting with the intent to abolish football. At the meeting, representatives of NYU, Columbia and Union College were in agreement with the resolution, but a speech made by Major Palmer Pierce (future president of the NCAA) persuaded the other attendees – from Army, Fordham, Haverford, Rochester, Rutgers, Swarthmore, Syracuse, and Wesleyan – to keep the sport and seek reforms. A subsequent meeting of the Intercollegiate Rules Committee was held. This group was the rule-making authority for college football at

the time. It consisted of representatives from powerhouses Yale, Pennsylvania, Princeton, Cornell, Harvard, and the University of Chicago. The meeting failed to produce a consensus among the members over a varying number of proposals (Watterson, 2000).

In reaction, Major Pierce wrote that members of the committee were "...a self-constituted, self-perpetuating and irresponsible body, which, in order to make the rule more favorable to the playing talent available at a particular institution, has degraded what once was a noble sport to the plane of a brutal gladiatorial contest" (Falla, 1993, p. 14). Yale's role in subverting change efforts was particularly insidious. Its dominance of football in the last decades of the 1800s reflected the talents of legendary coach Walter Camp. Camp's style of play was in unison with the violent nature of the game, and Yale excelled at it.

Like their eastern counterparts, the annual meeting of The Big Nine (now the Big Ten) in December of 1905 produced little reform despite increasing discontent with the game. This upheaval was less a result of violence occurring among Midwestern teams than it was a continual barrage of bad press from everything happening back east. A similar meeting among Presbyterian colleges that month echoed the calls for reform (Watterson, 2000).

Henry M. McCracken of NYU remained resolute in his actions, convening a larger meeting of representatives from 62 football playing schools on December 28, 1905. By the meeting's end, 39 of them agreed to form the Intercollegiate Athletic

Association of the United States (IAAUS), a new rule making body for the game (Hawes, 1999). The charter members included the following colleges and universities:

Allegheny College	Ohio Wesleyan University
Amherst College	University of Pennsylvania
Bucknell University	University of Rochester
Colgate University	Rutgers College
University of Colorado	Seton Hall College
Dartmouth College	Swarthmore College
Denison University	Syracuse University
Dickinson College	Tufts College
Franklin & Marshall College	Union College
George Washington Univ.	United States Military Acad.
Grove City College	Vanderbilt University
Haverford College	Washington and Jefferson Col.
Lehigh University	Wesleyan University
Miami University (Ohio)	Western University, Pa.
University of Minnesota	Westminster College, Pa.
University of Missouri	Williams College
University of Nebraska	Wittenberg University
New York University	University of Wooster
Niagara University	
University of North Carolina	
Oberlin College	

The meeting produced a resolution calling for combining the old Intercollegiate Rules Committee with membership from the new organization (Watterson, 2000).

A meeting of the joint rules committee that lasted for several months into 1906 finally produced the changes that addressed the concerns of the public, faculty and presidents of the member institutions. The changes approved included:

- Allowing the forward pass;
- Outlawing hurdling;
- Establishing of 1-yard neutral zone between the offensive and defensive teams;
- Increasing first downs to 10 yards;
- Limiting games to 60 minutes; and
- Outlawing mass momentum plays by requiring six men on the offensive line at the beginning of each play.

The most significant of these reforms was the last and, in the subsequent year, deaths and injuries dropped dramatically (Falla, 1993). A spike in injuries, deaths and the accompanying publicity two years later resulted in additional reforms that further opened up the playing field: the forward pass was liberalized, four 15-minute quarters were established, and the pushing and pulling of players was banned (Watterson, 2000).

Following the last of the reforms, college football enjoyed a prolonged period of relative tranquility during which Woodrow Wilson, then governor of New Jersey, commented, “new rules are doing much to bring football to a high level as a sport, for its brutal features are being done away with and the better elements retained” (Watterson,

2000, p. 129). From 1912 to 1914, no deaths were reported in the sport. As a result, the tracking of annual deaths and injuries by the NCAA (formerly known as the ICEA) came to a halt (Watterson, 2000).

During the lead-up to World War I, a number of small colleges made their mark on the football scene as Swarthmore defeated the team of Pennsylvania in 1912 and 1916, Carleton College upended Amos Alonzo Stagg's University of Chicago team in 1916, and the University of South Dakota beat Minnesota the same year (Watterson, 2000).

No small college used football to its advantage like the University of Notre Dame. Set in the then sparsely populated plains of Indiana, Notre Dame could not easily schedule local college teams like rivals Wabash and Beloit did because of anti-Catholic sentiments, even among people associated with the Big Nine universities. As a result, Notre Dame was compelled to pursue a national schedule of opponents, which culminated in a 1913 upset of Army, while making near perfect use of the forward pass (Watterson, 2000, pp. 134-135).

With the onset of World War I in 1917, most colleges saw dramatic decreases in the number of able men to play the sport and many programs went into hiatus. West Virginia had a roster of only 14 players and because it had no opponents to play, Yale scrapped its entire varsity season (Watterson, 2000).

With the end of the war in 1918, the issue of amateurism arose as thousands of young men returned home - many enrolling in college intent on playing football. With



the rise of professional football teams and the establishment of the American Football League, institutions were left to sort out who was and who wasn't a student when scrutinizing their football rosters. It was common for college players to also play as professionals for the community football team. At the major football schools, the "big man on campus" came to be the football star players who were admired by their fellow students and regularly appeared in the sports pages of big city newspapers. Both college presidents and faculty realized the value of such high profile students in advertising their schools and appealing to loyal alumni. As a result, schools often turned a blind eye to eligibility and code of conduct violations. Nevertheless, interest in addressing the issue of amateurism did not rise to the level of other issues, like violence and needed rule changes, had in earlier years, and it was not until 1940 that the membership authorized the NCAA Executive Committee to investigate alleged violations of the association's amateurism regulations (Watterson, 2000).

By 1919, there were 170 institutions in the NCAA, and the Association was directly involved in 11 sports (Falla, 1993). In the 1920s, small private colleges grew and prospered in football. Most notable during the decade was Washington and Jefferson College (PA), which went to the Rose Bowl in 1922 (Watterson, 2000).

In 1922, under pressure to hire a high profile football coach who was an alumnus, Centenary College president R. Ames Montgomery wrote to his trustees in a way that represented the growing thinking among the leadership of private colleges. Montgomery questioned the fact that often the highest paid person at many institutions

was the football coach. Often the salary of a coach amounted to \$9,000, with the average professor making barely one quarter of that. He argued that it was foolish for faculty members to live “in poverty” while the athletic department enjoyed the benefit of the University’s reputation for academic excellence. The trustees followed the advice of the president and chose a lesser profile candidate. Like many institutions that would later choose such a route, the Centenary program lapsed into mediocrity (Watterson, 2000, p. 149).

Unlike Centenary, Chicago’s Northwestern University viewed football as a way to change the school’s “...effete reputation.” So bad was the school’s team from 1915 to 1921 that the University of Wisconsin proposed dropping Northwestern from membership in the Big Nine. In 1922, Walter Dill Scott, Northwestern’s new president, saw improving its football team as a way to attract increased interest and applications from men. In addition to allocating significant new resources to the team, Scott raised the money to build a new football stadium that opened in 1926 and elevated Northwestern to the top ranks of the Big Nine (Lester, 1999, pp. 136-137).

The 1920s were a relatively calm time in college football until the 1929 report of the Carnegie Foundation was released. This report represented the beginning of a decades-long struggle regarding the funding of athletics, particularly in the form of athletic scholarships. In a project that lasted two years, the Foundation sent its associates to numerous college campuses to investigate recruitment, eligibility and financial aid practices, conducting many interviews with presidents, athletic directors, coaches and

players. The report identified only 28 of 130 schools that did not provide some type of financial aid to their players. While some of the noted “clean” schools had big time football programs – e.g., Chicago, Cornell, Illinois, Marquette, Tulane, Virginia, West Point, and Yale-the majority were mostly small, unknown colleges, not known for big-time athletics. They included such schools as Dalhousie, Laval, MIT, Queens, Reed, Saskatchewan, Tufts, and Wooster (Watterson, 2000, p. 165).

A number of other small colleges were identified for recruiting and subsidy violations. Colleges that provided subsidies through alumni organizations, friends or from institutional funds included Allegheny, Carnegie Institute of Technology, Dickinson, Grove City, Lafayette, Lebanon Valley, Pennsylvania, and Western Maryland. These subsidies included loans and, more commonly, employment for which the player was paid handsomely. But it was at the larger universities that the report revealed the most widespread abuses. Schools including California, Chicago, Columbia, Dartmouth, Drake, Denver, Iowa, Michigan, Missouri, Northwestern, Ohio State, Penn, SMU, Southern California, Texas, Washington, Wisconsin, and Wyoming were tagged with a myriad of violations including providing jobs to athletes for which they were unqualified and providing loans that did not require repayment (Watterson, 2000).

The report noted the loyalty of supporters of Catholic colleges. Unlike their peer institutions, Catholic colleges embraced a set of principles that lent themselves to the support of the athlete. These principles espoused a belief that “every young man who desires an education is expected to prove himself worthy by honoring in some way his

college or university” (Watterson, 2000, p. 167). This understanding provided justifiable latitude for providing all types of financial aid. Priests, alumni, and parochial school coaches created a powerful recruitment network, directing athletically talented Catholic men to the church’s colleges and universities.

Many college presidents were quick to defend their institutions, denying the allegations made, while others were brutally honest. For example, the president of Lebanon Valley College (PA) readily admitted granting athletic scholarships. Another president, E. G. Bixler, of Blue Ridge College (MD), admitted that his institution dropped the game due to the inability to compete for football students without breaking the bank (Watterson, 2000).

In December 1935, the NCAA passed seven resolutions that condemned recruiting and subsidies. This was all but a symbolic gesture as the organization had neither the staff nor the budget to enforce its rules. It would take another two decades and another series of crises before the organization would be provided broad oversight powers and the ability to investigate and sanction its members (Watterson, 2000).

In an opposite move that same year, members of the Southeastern Conference (SEC) adopted rules to allow athletic scholarships. Conference presidents saw their actions as virtuous – bringing out into the open a practice that was deeply imbedded in nearly all major football programs throughout the country. Instead of maintaining a clandestine network of behind the scenes dealings and underhanded practices, the conference felt their approach was both the most honest and lent itself to the utmost

accountability. While addressing their decision in an honorable, forthright way, the conference members were motivated by their own self-preservation, because SEC member schools were at a disadvantage in their ability to recruit athletes compared to their northeast and Midwest counterparts. Located in small towns in chronically depressed parts of the Deep South, the schools had neither the local jobs nor wealthy alumni to feed the subsidy networks as was the case in places like Chicago, New York, Detroit, Philadelphia, or Columbus. Taking a cue from its southern counterparts, the University of Virginia split from the Southern Conference in 1936 and announced that it, too, would provide athletic scholarships (Watterson, 2000).

Fourteen years after the Centenary move to de-emphasize football and affirm its academic mission, the once mighty football power, the University of Chicago, decided to follow the same route. For nearly a decade during the 1930s, Chicago struggled to field competitive teams, partly due to the rise of proximate well-funded programs at Notre Dame and Northwestern. In 1939, after consecutive losing seasons, the program hit rock bottom, losing to little known Beloit College and winning only two games against Wabash and Oberlin. The remaining games were crushing blowout losses to Michigan, Ohio State, Illinois, Virginia, and Harvard; the worst was an 85-0 loss to Michigan.

President Robert Hutchins, once a proponent of big time football, saw a different path for the institution. He noted in a letter to his trustees that,

in the past 15 years of a football program that was mediocre at best, the university had attracted increasingly more applications from interested students and enjoyed a diverse donor pool and alumni network that were not captive to the game as they were at other established football schools. (Watterson, 2000 p. 194)

The student body seemed indifferent as well. Hutchins wrote that by abolishing football, Chicago would “confirm the pioneering reputation of the university and in one stroke do more to make clear what the university should be than we could in any other way” (Watterson, 2000, pp. 194-195). After a remarkable campaign of persuasion and networking on Hutchins’ part, the University’s board of trustees voted to eliminate the sport on December 21, 1939 (Watterson, 2000).

Similar to the situation during World War I, World War II sapped college campuses of young men. Nevertheless, football was played across the nation and college campuses became training grounds for military service, adopting military exercise regimens. Military leaders saw football as building qualities such as leadership, discipline, heightened aggressive instincts and the ability to react quickly under pressure (Rominger, 1985).

The postwar years of the late 40s saw a boom in college bowl games. Dozens of new bowls came and went during those years. Some of the numerous and now-defunct games were intriguingly titled:

- Glass Bowl (Toledo, Ohio, 1946-1949)
- Raisin Bowl (Fresno, California, 1946-1949)
- Oil Bowl (Houston, 1946-1947)

- Gotham Bowl (New York City, 1961-1962)
- Refrigerator Bowl (1948-1956)
- Pineapple Bowl (Honolulu, 1946-1952)
- Salad Bowl (Phoenix, 1948-1952)

(Coll. Football Suite 101, 2008)

Following the end of World War II and the adoption of the GI Bill, American higher education was flooded with young men returning from battle, and overall college enrollments soared. The influx of young, military-conditioned men precipitated the next crisis for college football: the explicit use of incentives to attract talented athletes. This created a buyer's frenzy among the big time football schools. After newspaper accounts of bidding wars over star athletes began to appear, the members attending the annual meeting of the NCAA in July 1946 sought to develop new rules on the issue of player subsidies and scholarships. By this time, the organization's membership had reached over 400 institutions. Developed six months later, and presented at its January 1947 meeting, the new bylaws reiterated the rules of previous years. Known as the Sanity Code, the bylaws allowed athletic scholarships that:

- Totaled no more than the cost of tuition and fees in a given academic year;
- Were awarded based on need alone;
- Consisted of aid from the institution only, and not from alumni and/or booster groups; and
- Were based on work commensurate with services rendered.

Sweeping regulations related to recruiting practices by member institutions were also passed (Watterson, 2000, pp. 229-30).

The Sanity Code also resulted in larger private colleges moving in a different direction from their smaller counterparts. The University of Cincinnati and Western Reserve University chose to play in a mid-sized school conference known as the Mid-American Conference, and Vanderbilt University opted for the larger-school, Southeastern Conference (SEC). Smaller colleges like Case Tech of Cleveland, Kenyon College and Oberlin College, played largely small-college rivals in Ohio, Pennsylvania, Michigan, or Indiana (Watterson, 2000).

However, similar to the situation prior to World War II, member institutions began to balk at the Sanity Code. At its 1947 annual meeting, NCAA members voted to expel the University of Virginia and six other schools – the University of Maryland, Virginia Polytechnic Institute (VPI), Virginia Military Institute (VMI), The Citadel, Villanova and Boston College – for not abiding by the Sanity Code. Needing 136 affirmative votes to reach the 2/3 majority, the vote gained only 110 for with 93 opposed. This lack of enforcement of its own rules by the NCAA membership demonstrated two realities: the large school programs were moving toward athletic scholarships while smaller colleges balked at the idea; the lack of budget funding for the administration of the NCAA sapped its ability to monitor compliance and issue sanctions to guilty parties (Watterson, 2000).



As the status quo placed increased pressure on small colleges to emulate their larger counterparts, more than 50 small colleges dropped football because of declining revenues and decreasing numbers of players (Watterson, 2000). A number of these colleges were Catholic, with Georgetown University the most notable of the group. It dropped its program in 1952 as football operated a chronic deficit of \$250,000. St. Mary's of Oakland (CA), the University of San Francisco (CA) and Duquesne University (PA) followed suit. A decade later, programs at Marquette and Detroit suffered a similar fate. During this time it was evident that state colleges had more resources to support the game, and private colleges—especially those in urban areas—suffered most from the revenue and manpower crisis (Watterson, 2000). In the case of Johns Hopkins and Swarthmore—schools where revenue and reputation were not of concern—ending the programs was a matter of enhancing the academic focus of the institutions (Watterson, 2000).

The weakness demonstrated by the NCAA in 1947 and a highly public athletic recruitment scandal at the College of William and Mary (VA) in 1951, left an opening for the American Council on Education (ACE) to wield its power by conducting an audit of college athletics, similar to that of the Carnegie Foundation two decades before. Its final report, replete with illustrations of broad violations of standards, endorsed the Sanity Code and made other recommendations that would have returned oversight of athletics to academic administrators and eliminated high revenue post-season

competition. Perhaps its most contentious recommendation was that regional academic accrediting bodies should enforce athletic standards (Watterson, 2000).

Surprised by the recommendation, the New England and Middle States accrediting bodies rejected the idea as not within their purview. The North Central Association, however, had long wanted to rein in college athletics at its member institutions, but it was unable to do this alone and the issue was dropped two years later. The NCAA withstood the attempted power-grab by the ACE and North Central. In 1953, it emerged as a strengthened organization, poised for the powerful position it occupies today. That year also signaled the formal split of football programs into big-time scholarship football institutions and their non-scholarship small college counterparts (Watterson, 2000).

While resource-poor colleges dropped their programs in the early 1950s, those with ample revenues and strong reputations opted for the route taken by Centenary and Chicago years before. Beginning in 1952, members of what would become the “Ivy League” began talks regarding affiliation. While Harvard, Yale and Princeton were reluctant at first, the evolution of the game on the national scene hastened agreement, which finally occurred in 1956, after the University of Pennsylvania abandoned its ambition to be a nationally televised football power. All members agreed to a round-robin schedule and to play by purely amateur rules (Watterson, 2000).

The evolution of the Mid-American Conference (MAC) is another example of choices institutions made in the early 1950s concerning the level of academic emphasis

they would embrace. The founding members were primarily private urban colleges of similar stature and commitment. They included: Western Reserve University, Wayne University (MI), University of Cincinnati, Butler University (IN), and Ohio University. By 1953, the MAC had admitted Kent State, Bowling Green, and Miami of Ohio—all public institutions. Western Reserve, the smallest of the group, was increasingly non-competitive in conference competition. In 1956, it pulled out of the conference and joined the fledgling Presidents' Athletic Conference (as had Wayne a year earlier), a group of more similar institutions that adopted athletic policies similar to those of the Ivy League. Other members of the PAC included Bethany (WV), Washington and Jefferson (PA), John Carroll (OH), Wayne (MI), Allegheny (PA), and Juniata (PA).

At its 1951 convention, the NCAA spent much of the time debating what to do about the “threat” of television. This threat, they reasoned, would manifest itself in lower attendance at games and, as a result, diminish gate receipts to fund burgeoning athletic budgets. Although coming close to outright banning of the live broadcast of football games, the NCAA permitted the Westinghouse Corporation to televise games of the NCAA's choice during the next season. It also instituted a blackout policy as a means to safeguard the revenue streams of sponsoring colleges and universities (Watterson, 2000).

Given the growing popularity of football in 1952, it wasn't long before an outcry arose from the public who wanted to see the televised games the NCAA had blacked out. Among the critics was future president Gerald Ford—then a Congressman from

Michigan—who protested the blackout of a sold-out Michigan State - Illinois game (Watterson, 2000). That same year, the NCAA claimed all television broadcasting rights for the games of its member institutions, and it alone negotiated television rights. (This policy remained in effect until an anti-trust action was brought against the NCAA in 1984). While the data concerning the impact on game attendance and gate receipts during the first two seasons were mixed, it became clear that television revenue and the exposure gained from increased regional and national broadcasts were worth much more than increased game attendance.

Small private colleges saw large drops in game attendance during this period, and it was these colleges that made up the voting majority of NCAA membership. With the push for expanded opportunity for televised games, any proposal that would benefit football powerhouses was unlikely to succeed given the opposition of the large number of small colleges. That all changed when the Big Ten and PAC Ten Conference institutions threatened to withdraw from the NCAA. For a number of reasons, the results of such a move would have been devastating to all involved, and in 1955, television regulations were liberalized to allow one national game per week as well as regional games for more than half of the season. Revenue from television amounted to \$1,250,000 that year. Five years later in 1960, revenue from television rose to \$3,000,000 (Watterson, 2000).

Perhaps the institution that benefited most from football is the University of Notre Dame. In the 1930s, the university gained national exposure by using its national

radio network to broadcast games, promote the school, and add revenues to its coffers. With the advent of television, Notre Dame broadened its exposure, earning \$150,000 in 1950 (Watterson, 2000). Forty years later, Notre Dame signed a 5-year \$75M contract with NBC Sports for exclusive broadcast rights of its football games (Carter, 1990).

The decade of the 1960s saw the popularity of college football rise to unprecedented levels. ABC Sports began broadcasting a national Game of the Week in 1966, bringing key matchups and rivalries to a national audience for the first time (Watterson, 2000).

The 1960s also saw the development of some of football's most storied offensive formations. Legendary coach Darrell Royal of the University of Texas developed a three-back option formation called the wishbone. This run-heavy offense provided the quarterback with multiple options as to which back to hand off or pitch the ball. Some of the most dynamic quarterbacks kept the ball themselves. In contrast to the tightness of the wishbone formation, the spread offense was also developed during the 1960s. As the name suggests, this offense sought to "spread" the field to make way for an aggressive passing game (Vancil, 2000).

As in previous years, the rules of the game continued to evolve. In 1971, the NCAA made adjustments to the NCAA Code, which adopted the following:

1. Point of measurement for the ten foot crossbar was defined;
2. No decoration of the goalpost uprights was permitted;
3. Definition of a catch was added;

4. Definition of a simultaneous catch or recovery was added;
5. Definition of spearing was added;
6. Unsportsmanlike act after a score was prohibited; and
7. Dead-ball signal procedure was added. (Watterson, 2000)

Artificial turf made its first debut in 1971 (Nelson, 1993).

By 1972, attendance at games had nearly doubled from a decade and a half before, rising from nearly 15 million in 1956 to 30 million, with television revenues reaching \$12 million (Watterson, 2000). In spite of this, demographic changes in the population of college-going young Americans began to influence the sport in the 1960s and 1970s as the Baby Boom generation arrived on college campuses. Interest in college athletics waned and concerns about athletic spending were raised.

In June of 1972, Title IX was adopted by the U.S. Congress, which stated that: “No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational programs or activity receiving federal financial assistance” (Valentin, 1997, p. 1).

This landmark legislation would have a profound effect on American colleges and universities as women’s athletics were mandated to have similar levels of support as those of men. Title IX governed the overall equity of treatment and opportunity in athletics while giving schools the flexibility to choose sports based on student body interest, geographic influence, budget restraints, and gender ratio (About Title IX, n.d.). Given the limited nature of institutional athletic budgets, colleges and universities were

compelled to find significant resources to support women's sports causing, in some cases, the elimination of men's athletic scholarships and the dropping of lower profile men's athletic teams. Although football represented the greatest expense in the athletic budget at large universities, it also generated the most income, rendering it seemingly untouchable. Small and medium-sized institutions that did not enjoy such revenue success, sought relief from the NCAA from the tremendous cost to run the sport (Watterson, 2000).

In 1973, the national organizations of college athletics were also symbolic of the inequity that existed between men's and women's athletics. The wealthier NCAA was organized around men's athletics with the less prominent Association for Intercollegiate Athletics for Women (AIAW) advocating for female sports. It wasn't until nearly a decade later that the NCAA would sanction women's college athletics when, in 1982, the Association for Intercollegiate Athletics for Women (AIAW) joined the NCAA to create an all-encompassing organization that coordinated most men's and women's intercollegiate athletic programs (Lannin, 2000).

In 1973, a year following the enactment of Title IX, the NCAA membership voted to create a three-tiered structure known simply as Divisions I, II, and III, offering the two lower divisions playoffs in a variety of sports including football. Five years later, Division I members voted to create subdivisions I-A and I-AA (subsequently renamed the Football Bowl Subdivision and the Football Championship Subdivision,

respectively) in football (NCAA, 2007). The divisions established in 1973 are meaningful for the purposes of this research.

Division I institutions, comprised mostly of large state flagship institutions, other publics and similarly enrolled privates, has emerged as the most expensive division in which to sponsor athletics (June, 2007; Selingo, 1997; Wolverton, 2005). Members must sponsor a minimum of seven sports for men and eight for women; meet contest and participant minimums for each sport; and play nearly all games against Division I competition. Football Bowl Subdivision teams have to meet minimum attendance requirements at least once in a rolling 2-year period (an average of 15,000 people in actual or paid attendance per home game); and must comply with minimum and maximum athletic scholarship guidelines. Individual conferences often require higher numbers of athletic scholarships than the minimum for NCAA membership (NCAA, 2007). Division scholarship and operational expenses (travel, salaries, and related support) in addition to facilities expectations (venues, training rooms, offices, etc.) combine to make Division I the most expensive division in which to sponsor competition.

Division II institutions enacted lesser requirements for sports sponsorship although they have similar participation and contest requirements. There are no minimum requirements for attendance at athletic events and, depending on the sport, they have greater flexibility as to who they play in competition (NCAA, 2007). Athletic scholarships utilized by both Division I and II institutions tend to inflate institutional



financial aid budgets beyond what typically is expended to enroll a student, and are therefore counter to the philosophy of financial aid used by tuition-dependent colleges (Selingo, 1997; Wolverton, 2005).

Division III institutions have minimum sports sponsorship guidelines by season and gender and minimum contests and participants by sport. “Division III athletics encourages participation by maximizing the number and variety of athletics opportunities available to students, placing the primary emphasis on regional and conference competition” (NCAA, 2007, p. 1). Division III colleges forego the use of scholarships based on athletic talent (Bennett, 2007; NCAA, 2007) and are therefore able to maximize the number of students playing sports by utilizing the institutions preferred financial aid methodology. For small tuition dependent private colleges, non-scholarship athletics is seen as an avenue for maximizing enrollment and net revenue for the institution. Whether or not these expectations are realized is the subject of this research, investigating the impact of the initiation of 52 football programs at small tuition dependent colleges from 1985 through 2000 on enrollment and overall fiscal health.

With interest in major college football sustained through the 1980s and into the 1990s, greater interest in determining a national champion seemed increasingly at odds with the historic bowl system in place. In 1992, in an attempt to address the issue, seven major football conferences and independent Notre Dame agreed to form the Bowl Coalition to ensure an end-of-the-season match-up between the #1 and #2 ranked teams

in the Associated Press final poll. The attempt ultimately failed three years later because the central issue of bowl commitments remained.

The 1990s also saw a period of realignment and reorganization among the major football conferences. In 1990, the University of Arkansas left the Southwest Conference and the University of South Carolina exited the Metro Conference to join the Southeast Conference (SEC). In 1991, Florida State University left the Metro Conference to join the Atlantic Coast Conference (ACC) (University of Miami, Virginia Polytechnic University and Boston College would join ten years later). That same year, the Big East debuted as a major football conference with the addition of the University of Miami (FL), Temple University (PA), Virginia Tech, West Virginia, and Rutgers (NJ). In 1994, the Texas members of the Southwest Athletic Conference (with the exception of Rice University) and the Big Eight membership merged to form the Big Twelve Conference. These actions further solidified the geographic and market presence of these conferences and positioned them well in the battle for visibility and the recruitment of top athletes. Similar actions years later by the Big Ten, Southeastern Conference and Atlantic Coast Conference would further strengthen the conference configuration we see today.

In 1995, the Bowl Coalition was supplanted by the Bowl Alliance, which was comprised of the ACC, SEC, Big Eight, Southwest and Big East conferences. Unlike the effort of three years earlier, there was an agreement, that three bowls – the Fiesta, Sugar, and Orange Bowls host the national championship. Each conference agreed to forego its

historic conference bowl obligation to make the new system work. However, this improved agreement did not succeed because the Big Ten and PAC Ten conferences did not join the coalition and continued their commitments to the Rose Bowl (BCS Chronology, 2006; College Bowl Games, 2006).

In 1996, Division I-A nixed the provision for a stalemate tied game by adopting unlimited overtime until the victor was determined. New rules were adopted for the overtime session, which differed from how the game was played during regular time. Teams were given possession at the opponent's 25-yard line and changed possession as a result of a score or turnover.

In the 1998, the Bowl Championship Series (BCS) was adopted by the major conferences (the ACC, the Big East, the Big 12, the Big Ten, the Pac 10, and the SEC) and the four major bowl games (Rose, Orange, Sugar, and Fiesta). Champions of each conference along with two "at large" selections gained access to the four major bowl games, one of which was the national championship game. Representation in these bowls – most notably the national championship – was determined by a ranking system that combined human polls, computer ranking and strength of schedule (BCS Chronology, 2006).

By the late-1990s nearly 650 four-year colleges and universities (595 of them members of the NCAA) were fielding football teams. Home attendance records had reached nearly 37.5 million a year, more than 27.5 million of which were Division I-A schools (Ours, 1999). At the beginning of the 2000 academic year, the National

Collegiate Athletic Association (NCAA, 2000) sanctioned 614 football programs in the three separate divisions; the National Association of Intercollegiate Athletics (NAIA, 2000) sanctioned an additional 98 programs for a total of 712 collegiate football programs. Based upon these figures, 22% of America's 3,282 public and private non-profit institutions sponsored collegiate football at that time.

In August 2001, an article in *Black Issues in Higher Education* heralded the revival of football at smaller Black colleges, noting,

[football] is all about the bottom line. True, it is an expensive sport to maintain...the game has an alluring upside as a main attraction and moneymaker. Those are the chief reasons behind football's resurgence at those schools with student populations of 1,500 or less. (Greenlee, 2001, p. 30)

In 2006, a fifth game, the BCS National Championship Game, was established and played at the site of one of the four BCS bowl sites, one week after that bowl's hosted game. Five additional conferences were added to the group, including: Conference USA, Mid-American Conference, Mountain West Conference, Sun Belt Conference and the Western Athletic Conference. Rule modification allowed for the champions of each conference to claim a BCS bowl invite provided they ranked in the top 12 in the final BCS rankings (BCS Chronology, 2006). While the BCS configuration emphasized the four major bowl games, the growth of other lesser bowl games is notable. The number of bowl games numbered 11 in 1970, 19 in 1990, 25 in 2000, and an astounding 34 in the 2008-09 season – a testament to the popularity of the sport and the revenue potential for post-season games (Coll. Football Suite 101, 2008).

An article in the *New York Times* noted the continued trend this research explores:

In the last 10 years, nearly 50 colleges and universities have instituted or re-instituted football, with more than 80 percent in the small college ranks. In the same period, about 25 institutions have dropped football, the majority being scholarship-driven teams from the National Collegiate Athletic Association's top tier, Division I. (Pennington, 2006, p. 1)

The schools that closed programs included Michigan Technological University, University of Massachusetts at Lowell, Canisius College (NY), Fairfield University (CT), and St. John's University (NY). Each school cited the expense of sponsoring Division I or II football, while St. John's cited Title IX considerations (Kandyba, 2003).

A feasibility study for the consideration of adding football completed in 2006 at The College of St. Scholastica (MN) stated:

Football is an expensive sport which would require a significant outlay of funds for facilities, personnel and operating budget.... Despite these costs, there are some compelling reasons that make the addition of football attractive at The College of St. Scholastica.... While requiring a substantial up-front investment in facilities and personnel, football appears to be a financially viable endeavor that would enhance the long-term financial health of the College...potential to add 80 male students within two years of startup. (2006, pp. 3-5)

Along similar lines, according to Shenandoah's University athletic director, John Hill "You would be hard pressed to find five admissions officers or five professors or five marketing experts that could guarantee you 100 new, paying male students in one year," said. "But you can hire five football coaches and they can do it. In fact, they can find you 200 if you want. Those boys just want to play" (Pennington, 2006. p. 2).

In 2007, the movement of colleges to the Division III level had reached a record high. Since Division III was founded in 1973 by the National Collegiate Athletic Association, membership has increased by 57% from the original 243 institutions to 420. In sheer numbers, Division III membership dwarfs that of Division I and II, which have 326 and 290 members, respectively. Due to the continued popularity of Division III athletics, the NCAA placed a 3-year moratorium on new members until members have a chance to discuss the unbridled growth (Bennett, 2007).

In 1896, administrators at Notre Dame considered how to plan and implement an organized football program. While they had several reasons for their actions, their main intent was to increase recruitment to the college (Watterson, 2000). Two decades earlier in 1879, students at Illinois College, seeking faculty approval for an extended baseball trip, emphasized the publicity dividends such a trip would earn for the college (Rudolph, 1990). Clearly, what was true over a century ago is true today: college athletics can attract students to colleges they otherwise would not have attended by providing publicity for which the institutions would otherwise be unable to pay.

This selective review of the literature about the history of college football has described the profound impact of the game on American college campuses – from the early days of Harvard-Yale on a New Haven field to the 26.8 million fans who watched the national championship in January 2009 (Seidman, 2009). And while major college football programs like the University of Florida, University of Texas, University of Oklahoma, University of Southern California, and Ohio State University, occupy center

field for most of America, small tuition dependent private colleges with names like The College of St. Scholastica (MN), Avila College (KS), Wisconsin Lutheran College, and North Carolina Wesleyan, recently have quietly added football to the ranks of their athletic program offerings. These colleges cited the same logic used by the University of Notre Dame albeit 100 years later, and they are not alone. Between 1981 and 2000, 52 football programs were begun at small, tuition-dependent private colleges throughout the United States. This study sought to determine whether the goal of increasing enrollment and improving institutional fiscal health became a reality in these colleges.

### **The Benefits and Financial Challenges of Private Small, Tuition-Driven Institutions**

Private higher education is an important component of the system of post-secondary higher education in the United States. Some contend that, "preserving and strengthening the many diverse options represented by all types of colleges is essential to the well-being of our higher educational system" (Astin & Lee, 1972, p. 100).

According to Benezet (1976, p. 2), private colleges build their case for public support on four main points:

- (1) Private higher education is part of the American tradition of independent choice;
- (2) The public service rendered by private colleges is great;
- (3) The strength and variety of private college programs as options in education are undeniable; and
- (4) The private college example of autonomy and flexibility in higher educational operation is exemplary.

A 2007 Report by the National Association of Independent Colleges and Universities (NAICU) characterized private colleges in the following way:

Independent (also known as private) higher education is as old as our nation itself. Independent colleges are not only vehicles of tradition, but centers of learning that reflect the ever-evolving diversity and needs of American life. Their wide variety of sizes, locations, academic programs and institutional missions provide not only affordable access to higher education, but a choice in how students can live their dreams. (NAICU, 2007, p. 3)

America has a stake in the continued productivity and survival of its private colleges. One only has to ponder the public cost of accommodating increased numbers of students at public institutions should private colleges disappear from the American scene. The NAICU 2007 report speaks to the value of private colleges in reporting that the proportion of diversity—racial and ethnic—is nearly evenly matched by private colleges to their public counterparts, as is the percentage enrolled from low—and middle—class families. Students who are most at risk—who work full time, have a General Equivalency Diploma (GED), or face other learning challenges, are far more likely to graduate from a private college than a public institution. Private colleges enjoy greater success in graduating their students over four years, as their students are as likely to earn their degree in four years at a private college or university as they are in six years at a state institution (NAICU, 2007).

The financial condition of private colleges and universities has been debated since the early 1900s. William Rainey Harper and Abraham Flexner discussed the possibility of small denominational, liberal arts colleges eventually giving way to public junior colleges. A campaign to rescue small liberal arts colleges was launched by the



American Association of Colleges in 1930. The President's Commission on Higher Education (1947) predicted that publicly controlled institutions would force many weaker private institutions out of existence, subsequently changing the pattern of private institutional support. Beardsley Ruml, writing for the Ford Foundation in 1959, stated that small liberal arts colleges must address a need for substantial increases in faculty salaries with limited financial resources (Benezet, 1976), salaries, which comprise more than 70% of most small private college operating budgets, remain a major issue today.

The National Council of Independent Colleges and Universities stated that all but a few private institutions were in grave danger of closing (1974), and that private colleges were facing increased competition. "Private colleges operate in a common economic environment with public universities and for-profit institutions. However they relate to this environment in different ways and major differences exist in their internal economies" (Hanson as cited in Ingram & Associates, 1993, p. 38). Colleges and universities create operational plans in order to carry out specific missions. These missions differ and should be compared with institutions of similar internal economies. "Colleges and universities are not free from economic realities, but neither are they subject to the same economic realities that businesses face" (Winston, 1998, p. B6).

In 1987, the Carnegie Foundation classified 540 institutions as liberal arts colleges (Breneman, 1994). Of the roughly 200 private liberal arts colleges in the United States in 1999, not even 50 of the small private institutions had the financial strength or reputation to control their own destinies (McPherson & Schapiro, 2002). In 2003, the

National Center for Educational Statistics (NCES) reported that over 239 small private colleges had closed their doors since 1960, with 49 of those closing since 1980 (NCES, 2005b). Of the total 944 private colleges studied by Townsley (2002) from 1988 through 1996, 66% grew in size, 31% lost enrollment, and 3% closed. Of the colleges that closed, all were liberal arts colleges that enrolled fewer than 2,000 students (Townsley, 2002). Although enrollment grew at 66% of these colleges over the 9-year period, Townsley (2002) noted the compounded growth rate of 1.1% was not robust and warned that high volatility of enrollment and low growth rates could present serious problems for small, tuition-dependent colleges. Townsley identified market fluctuations, changes in student preferences, escalating tuition and new forms of competition as contributors to the decline of small colleges and universities.

The profound nature of the predicament of small tuition dependent private colleges at the start of the new Millennium included external factors such as changes in demographics (Christensen, Anthony, & Roth, 2004; Hossler & Hoeszee, 2005; NCES, 2006c; Snyder, Tan, & Hoffman, 2006), student demand (Hersh & Merrow, 2005; Moore, 2004; Newman, Couturier, & Scurry, 2004; Sora, 2001), stakeholder expectations, financial markets and government regulations (Boverini, 2005; Hersh & Merrow, 2005; King, 2005; Kirp, 2004; Moore, 2004; Newman, Couturier, & Scurry, 2004).

For some colleges, the vulnerable nature of their market position threatened their very existence (Kirp, 2003, Roach, 2004; Townsley, 2002). Finding it difficult to

identify new strategic directions and take some calculated risks, they faced the same fate as the 29 small, tuition-dependent private colleges that closed their doors in the 1990s, and the 3 that closed in early 2000 (Brown, 2008). In 2008 alone, Cascade College (OR), Taylor University (IN), Pillsbury Baptist Bible College (MN), and Vennard College (IA) announced they were closing their doors (Pope, 2008).

The demographic issue (Christensen, Anthony, & Roth, 2004; Hossler & Hoeszee, 2005; NCES, 2006c; Snyder, Tan, & Hoffman, 2006) is particularly profound. Projections show a significant decline in the overall number of high school graduates over the next decade or so, occurring in states where competition for students is already fierce and where a high proportion of U.S. colleges and universities exist—the Northeast, the Great Lakes region, and the Midwest. For example, by 2022, declines in overall high school graduates will be seen in Michigan (-19%), New York (-17%), Massachusetts (-15%) and Pennsylvania (-11%) (WICHE, 2008). These are states where the proportion of small private tuition-dependent colleges is highest.

Even more ominous is the decline among Caucasian students who constitute the historically largest enrolled population in most of these colleges. The same four states provide examples; the number of Caucasian students will decline in Michigan (-24%), New York (-28%), Massachusetts (-28%), and Pennsylvania (-20%) (WICHE, 2008). Although there are expected increases in under-represented populations, particularly Hispanics, the historic college-going rate for Hispanics is low and unlikely to offset the overall decline.

Between 2004-05 and 2014-15, the **Western Interstate Commission for Higher Education** (WICHE) projects that the nation's public high schools will produce:

- Almost 207,000 more Hispanic graduates (an increase of 54%);
- Nearly 46,000 more Asian/Pacific Islander graduates (an increase of 32%);
- About 12,000 more Black non-Hispanic graduates (an increase of 3%);
- About 2,000 more American Indian/Alaska Native graduates (an increase of 7%); and
- Nearly 197,000 fewer White non-Hispanic graduates (a decline of 11%) (WICHE, 2008).

At face value, these data raise the question: How can an increase in the number of high school graduates be bad for tuition dependent private colleges? The American Council on Education reports,

Although the rising enrollment numbers for students of color are encouraging, the gap among college participation rates for white, African-American, and Hispanic high school graduates has widened. In 1978-80, the college participation rate for all races was about 30%. However, in 1998-2000, the college participation rate of 18- to 24-year-old white high school graduates was 46%, compared with 40% of African Americans and 34% of Hispanics. (ACE, 2008, p. 2)

Not only are students of color not graduating from high school at rates to replace the declining number of Caucasian students, they are less likely to have the financial wherewithal to afford and attend private colleges. First-generation college-going students are more likely to come from African American or Latino families, and from families in the lowest income quartile. The likelihood that a student will enroll in some

form of postsecondary education is related to parental educational attainment. The enrollment rate is 93% among those whose parents had at least a bachelor's degree, compared to 59% of students whose parents did not go to college (Choy, 2001).

In addition,

At the least-selective private four-year colleges, where in 2003-04, 42 percent of the dependent students were from families with incomes below \$40,000 and only 17 percent were from families with incomes of \$100,000 or higher, lower-income students received less institutional grant aid, on average, than did wealthier students. However, because of federal and state grant aid, net prices paid increased with income. (College Board, 2007, p. 20)

The “average increases in grant dollars between 1996-97 and 2006-07 covered an average of about one-third of the increase in private college tuition and fees, and one-half of the increase in average public four-year college tuition and fees” (College Board, 2007, p. 23).

It is also noteworthy that according to the NCES,

From 1970 to 2006, women's undergraduate enrollment increased over three times as fast as men's, surpassing men's enrollment in 1978. In this period, women's enrollment rose from 3.2 to 8.7 million (an increase of 178 percent), while men's rose from 4.3 to 6.5 million (an increase of 53 percent). From 2007 to 2017, both men's and women's undergraduate enrollments are projected to increase, with women maintaining 57 percent of total enrollment. (NCES, 2006b, p. 1)

In spite of the dramatic looming change in demographics, colleges—including those that are small and tuition-dependent—continue to increase the amount of merit aid offered to students at the expense of need-based aid. In 1994, colleges and universities reported that 27% of their institutional aid funds were merit-based and 66% were need-based; in 2007, 43% of institutional aid funds were merit-based, compared to 49% need-

based. Many institutions, both public and private, award grant aid not only to students with insufficient resources to meet the cost of attendance, but also to students who have the ability to pay, but whom the school is particularly interested in enrolling. Most non-need-based aid is based at least partially on either academic qualifications or athletic ability (College Board, 2007).

The movement of need-based aid to that of merit is a technique used in discounting – an enrollment management strategy that seeks to enroll the maximum number of students through the manipulation of financial aid packages. Baum and Lapovsky (2006) point out that, “discounting or price discrimination - charging different students different prices for the same educational opportunities—is a long-standing feature of private higher education institutions” (2006, p. 1). Breneman adds,

Tuition discounting has become an art form on many campuses, as fewer families are able or willing to pay the full price of tuition. The disparity in wealth among institutions within the private sector continues to grow, with a small but steady rate of closures occurring at the weaker end of the spectrum. Those most at risk are poorly endowed, tuition-dependent colleges with enrollments under 1,000. (2002, p. 20)

Small private tuition-dependent colleges increasingly rely on tuition discounting to enroll each entering class and attract the student profile they seek. In 2002, Moody's downgraded the bond ratings of Hartwick College and Lasell College, in part because of their high discount rates – 40% and 48%, respectively. “When you reach the point where you are discounting so much that your net tuition revenue is falling, that is the pressure point” (Van Der Werf, 2002, p. 1).

The National Postsecondary Student Aid Study (NPSAS) indicates that, “particularly in the lower-priced private colleges and universities, a disproportionate amount of institutional aid is being distributed to middle- and upper-income students, suggesting an increase in non-need-based aid” (NCES, 2005a, Figure 12a). In 2001, the average tuition discount rate for 4-year private colleges was 38.2%, with nearly eight out of ten students getting discounts (Hubbell & Lapovsky, 2002). A NACUBO study in 2006 found that average grants had risen to 40% - 60% of the sticker price (NACUBO, 2006), with one analyst noting, “While the use of tuition discounting is rising throughout higher education, its growth among small private colleges is startling” (Dillon, 2006, p. 1).

The difficulty with discounting for tuition-dependent small private colleges is that it doesn't always work. A Lumina Foundation report (2003) found that discounting neither guarantees a better profile of student or an increase in net revenue. As a result, tuition discounting “has the potential to contribute to financial failures of more than a few colleges if they continue to lose net tuition revenue to discounting” (2003, p. 25).

The competitive factors that continue to confront small tuition dependent private colleges have been exacerbated given the dramatic upheaval in the U.S economy that began in earnest in 2008. The July 2008 report from Moody's Investors Service points to several areas of college business that could be negatively affected in a worsening economy:

- Colleges with high tuition may suffer, as families choose less-expensive institutions, and political pressure may build to scrutinize and limit tuition increases.
- Endowments may weaken and fund-raising campaigns "will likely underperform for the first time in many years" (Carlson, 2008, p. A12).
- State of need-based financial aid will probably weaken.
- Colleges with variable-rate debt may feel more pressure as rates go up (Carlson 2008).

Admissions officers are under extreme pressure. "Getting exactly the right enrollment — always a tricky proposition — is especially crucial for small colleges with tuition-driven budgets". (Lewin, 2008, p. A13) Institutions preparing for the worst include Beloit College in Wisconsin, a school of 1,300 students that gets three-quarters of its \$55 million budget from tuition. It plans to delete 40 positions because the admissions office fell 36 students short of what had been budgeted for the current year (Lewin, 2008).

The competition for students in higher education is hardly relegated to only one group of colleges - even the highest profile institutions are under pressure. In a paper entitled "Where is Aggressive Price Competition Taking Higher Education?" Winston and Zimmerman (2008) discussed the ramifications of increased competition for America's most highly regarded colleges. They also provide a realistic depiction of the



“trickle-down” reality that is the application frenzy among America’s top students – the students for whom most colleges today are clamoring.

Winston and Zimmerman theorize that to maintain their current profile of high caliber students, these colleges will enter a situation of “negative tuition” where even the coverage of tuition, room and board and related expenses are not enough. Tuition revenue therefore is turned upside down – thus negative – when these schools begin to offer stipends (which amounts to a subsidy) to continue to attract high caliber students. They also argue that the price umbrella that the most selective and wealthiest schools hold up over less selective and less wealthy institutions is in danger of collapse. They refer to the Ivy and sub-Ivy League schools as the “...800 pound gorillas whose behavior has inordinate importance for all of higher education. They hold up the umbrella. The less wealthy schools have been able to charge much higher tuitions only because those at the top charged even more” (Winston & Zimmerman, 2008, p. 20). This, they contend, will coincide with the charging of higher prices by poorer schools that will spend less on their students, competing with more highly regarded schools that will lower their prices and/or become so affordable, even more students will want to apply for a ratio of fewer spaces. There will simply not be enough space for all the students to be admitted and they then will enroll in lesser-regarded, more expensive colleges. With regard to needy students, the authors argue that the wealthiest private colleges will be in the catbird seat, charging virtually nothing for these students whereas lesser-able schools will be unable to do so. In summary, if Winston and Zimmermann

are correct; the wealthiest colleges will not sit idly by and watch their student academic profiles decline due to the aggressive actions of less wealthy colleges.

Tuition dependent colleges lack annual operating revenue derived from sources outside of tuition. Wealthier private colleges, by contrast, earn additional income from earnings on their substantial endowments. Eighty percent of private colleges nationally are tuition dependent, deriving more than 60% of their operating budget from tuition revenues (Taylor & Massy, 1996). There are 76 private institutions that had endowments over \$1 billion in 2007, and about one-third had less than \$50 million - even before the economic downturn, according to the National Association of College and University Business Officers (NACUBO, 2008). Even more alarming, the NACUBO report accounts for about 800 colleges while the rest have negligible extra cash (Pope, 2008). The endowment issue is significant for private colleges because the more endowment an institution accumulates, the greater control the institution has over the make-up of its student body, expenditures it commits to quality and, as a result, its overall reputation. Lesser endowed private colleges are all the more dependent on revenue derived from tuition to fund overall operating costs, and therefore much less able to make substantial investments in quality enhancements, such as prestigious faculty, facilities, curricula, and equipment.

In the recent economic upheaval, even the presence of endowment capital does not always guarantee solvency if the ways in which the money is invested are compromised. For example, Simmons College (MA), was placed on a watch list for a

ratings downgrade because of an estimated \$10 million exposure in a complex interest rate swap deal with now-bankrupt Lehman Brothers (Pope, 2008; Wolverton, 2008).

Compounding the operating costs of many private colleges within the last decade, are long-term debt obligations for the construction of facilities. Because of the competitive pressure to have the “newest” and the “biggest” facilities—academic, athletic, housing, and recreational—some colleges may have taken on more debt than they should have, lured by low interest rates and ambitious growth plans. Most small private colleges were built on the assumption that they would serve 18–24 year old students, and that these students would learn at the same time and in the same place under the guidance of a professor. This assumption has led colleges and universities to commit significant resources to improvements in the campus physical plant (KPMG, 1999).

Moody's figures on private colleges show that in the year 2007, median debt for college was up 50% over the last five years (Pope, 2008). To make matters worse, much of the debt was borrowed at variable rates. While this was a money saving move in the late 1990s, the opposite has been true recently with the onset of the current financial crisis. The auction-rate market, in which interest rates on bonds are reset frequently, began to deteriorate in 2008 after the credit ratings of several bond insurers were downgraded. When investors lost their interest in the bonds, interest rates soared to almost 15%, making the borrowing of money very expensive (Wolverton, 2008). Private colleges influenced by this include both the wealthy and less so:

- Stanford University's (CA) rates on its variable bonds rose to 8% in February 2008, 5% higher than average (Wolverton, 2008);
- Simmons College (MA) was given negative outlook rating by Moody's for having \$100 million in variable rate bonds with only \$51.6 million of unrestricted resources (Wolverton, 2008);
- Guilford College (NC) saw a quadrupling of its interest rate on its \$32-million debt in September 2008 (Blumenstyk & Field, 2008); and
- Heidelberg College, in Ohio, "has \$17-million in variable-rate bonds and is struggling to resell a portion of them that investors have "tendered," or returned, to the institution" (Blumenstyk & Field, 2008, p. A1).

Not only are institutions having to deal with increased debt, so are their students since their need to go into debt to fund their education continues to grow.

Undergraduate federal borrowing grew 51 percent in inflation-adjusted dollars over the decade from 1996-97 to 2006-07, but declined between 2005-06 and 2006-07. However, private undergraduate loans grew 12 percent, to \$14.5 billion, and borrowing through state programs grew 20 percent, to \$1.1 billion. (College Board, 2007, p. 2)

Over the decade from 1996-97 to 2006-07, federal grant aid to undergraduate and graduate students increased by 82% in inflation-adjusted dollars, and federal loans increased by 61%. However, total federal aid declined from 66% to 58% of the total funds used to help finance postsecondary education as alternative private loans grew from 3% to 12% (College Board, 2007).

With private lending growing 10 times as fast as federal lending (Field, 2008), in some cases colleges may not even be aware that their students are taking out private loans. Financial-aid officers who responded to the National Association of Financial Aid Administrators (NAFSAA) survey estimated that up to a quarter of private loans made to their students were issued without the aid officers' knowledge. Last year, borrowers took out \$17-billion in private loans, more than 10 times as much as they did a decade earlier, according to The College Board. Private student loans comprised 24% of all borrowing, compared to a decade ago, when private loans made up only 6% of borrowing. During the same period, federal borrowing less than doubled. Until recently most private loans went to graduate and professional students (Baskin & Blumenstyk, 2008).

This trend is problematic for small, tuition-dependent private colleges for a number of reasons, including raising consumer (students' and parents') anxiety over the cost of college, particularly those with more expensive price tags; the increased need for colleges to offset concerns about the accumulation of debt with assurances of quality and success (College Board, 2007); and given the historic populations of these colleges – first generation, working class families – the ability of these students and their families to access the loans they need given the recent pullback of credit from the market (Dickler, 2009).

For-profit and corporate educational institutions continue to threaten the livelihood of tuition dependent colleges, particularly those with non-traditional programs of their own that grew significantly since the late 1980s by attracting learners through

distance education (Berg, 2005, Christensen, Anthony, & Roth, 2004; Kirp, 2003).

According to the NCES (2006a), between 1993 and 2003, the number of traditional 4-year nonprofit institutions grew by 2.66% (from 1506 to 1546), whereas for-profit 4-year institutions grew by 337.5% (from 80 to 350). Although fewer for-profit institutions exist, many enroll large numbers of students through distance education programs.

In summary, small, tuition-dependent private colleges have arrived at a crossroad with few attractive paths available to them. They are likely to experience continued escalating costs and diminishing revenues for the foreseeable future with increasingly diverse competition from larger and wealthier private institutions, public universities and for-profit institutions. From 1981 through 2000, a group of 52 tuition-dependent private colleges decided that initiating football on their campuses was one way to respond to the competitive environment, looking to the sport to grow their enrollments and improve their overall fiscal health. This study sought to explore whether or not they achieved these two strategic goals.

### **Enrollment Management History and Theory**

Hossler, Bean, and colleagues defined Enrollment Management as:

...an organizational concept and a systematic set of activities designed to enable educational institutions to exert more influence over their student enrollments. Organized by strategic planning and supported by institutional research, enrollment management activities concern student college choice, transition to college, student attrition and retention, and student outcomes. These processes are studied to guide institutional practices in the areas of new student recruitment and financial aid, student support services, curriculum development, and other academic areas that affect enrollments, student persistence, and student outcomes from college. (1990, p. 5)

The term “enrollment management” was first formally introduced to higher education lexicon by Jack Maguire (1976) of Boston College when he described institutional efforts to enhance enrollments. Other early proponents argued for a fundamental restructuring of how colleges and universities recruit, enroll and retain students along an organized continuum (Hossler, 1986). Kemerer, Baldrige, and Green (1982) endorsed earlier calls for organizing enrollment-related activities around new models that combine key elements of the recruitment and enrollment process. They describe the roots and early evolutionary stages of enrollment management organizational structures asserting that such structures are often created to address an institutional problem or crisis, yet ironically, such structures tend to produce their own inherent problems.

Hossler (1986) noted that, “A comprehensive enrollment management program has the potential to encompass a wide range of offices: marketing, recruitment, financial aid, orientation, academic advising, learning assistance, career planning, student services, institutional research and strategic planning” (Huddleston & Rumbough, 1997, p. 1).

Hossler, Bean, and Associates (1990) advocated for an enrollment management conceptualization that is concerned not just with the marketing to and recruitment of students, but also with their retention and graduation as well. They advanced a model advocating four enrollment management organizational models for consideration:

- The **enrollment management committee** comprises personnel campus-wide for the general discussion of issues and overall communication. It primarily serves to augment communication across campus and is useful for the identification of issues that ought to be addressed. Like many such groups in higher education, little else can be done as the committee has limited power or influence.
- Establishing the role of **enrollment management coordinator** generally does not influence the formal structure but does centralize the issues identified by the enrollment management committee in an individual. Whether or not that person is successful in that role depends on a number of variables including the traits the coordinator possesses—charisma, organizational skills, intellect, and the scenario that the campus environment provides for the coordinator—importance of the issue, support of the president and campus culture. Even if all the most positive attributes are in place, the lack of formal reporting links and related oversight authority that typically accompanies this position can limit its overall effectiveness.
- The **enrollment management matrix** is more centralized than the first two as it centralizes authority in an executive level capacity. There are implied benefits as the individual typically is a vice president, such as student affairs, and the goal of organizing around enrollment management principles usually is the main tasking theme. The position may not be as optimal because



typically the person has this responsibility as an added assignment and must therefore carve out the significant time needed to provide the most effective of leadership.

- The **enrollment management division** is the most centralized of the four models and significant reorganization must be made to elevate the leadership of the area as a functioning vice president. The senior rank of this person combines with direct oversight of the area's most critical to enrollment management—marketing, recruitment and admissions and financial aid, with the possible additions of orientation, advising, registrar and first year programming. Unfortunately, this type of restructuring is done in atmospheres of crisis and not as a result of long-range strategic planning. The success of the individual is just as dependent on the personal attributes the vice president provides as it is on the political and organizational climate she or he inherits (Hossler, Bean, & Associates, 1990).

The extent to which enrollment management structures were prevalent in higher education was the subject of a study done by Huddleston and Rumbough in 1996. They determined that 226 colleges and universities had definitive enrollment management structures. Of that total, 143 were private institutions and 83 were public institutions. The findings indicated a significant difference in the reporting lines of enrollment management structures between private and public institutions. The highest reporting percentage among public institutions was 50% and that was to academic affairs whereas

the highest reporting percentage among private institutions was 60% and that was to the president.

This study is illuminating for the purposes of this research for at least two reasons: first, private colleges elevate the reporting relationship to the president of the institution in six out of ten cases indicating the importance of the role and expectations for enrollment management at those schools (Huddleston and Rumbough theorized that it symbolizes the tuition-dependent nature of most privates (1997)); second and more importantly, the study revealed the relatively few number of private colleges (143) that had adopted an enrollment management structure compared to the total number of private colleges nationally (1,500+). It is reasonable to speculate that the implementation of football at the 52 tuition dependent small private colleges during the period 1981 to 2000 was accomplished absent an enrollment management structure that would have been best suited to execute the initiative.

Contemporary understandings of the enrollment management model were described by Huddleston and Rumbough (1997) in their assertion that:

- “Students, faculty, staff and administration are the primary beneficiaries of an enrollment management paradigm” (p. 2);
- Enrollment management is a primary catalyst for customer service (p. 2);
- New student enrollment, retention and graduation should be the central concern of everyone at the college or university (p. 2);

- Integrated marketing, planning and research provide a basic foundation for the enrollment management process (p. 2); and
- Ongoing research is a key ingredient of the enrollment management process (p. 2).

The theory of enrollment management was further developed by Dolence (1996) in the form of Strategic Enrollment Management (SEM). He defines SEM as “a comprehensive process designed to help an institution achieve and maintain the optimum recruitment, retention, and graduation rates of students, where ‘optimum’ is defined within the academic context of the institution” (p. 16). Dolence believes that any factor that influences a student’s decision to attend or continue enrolling is fair game for SEM. This new line of inquiry into SEM has led to many applications of the original concept (Black, 2001; Bontrager, 2004b; Bryant & Crockett, 1993).

According to Hossler and Hoezee (2001), “No theoretical construct provides a better understanding of the emergence of the field of enrollment management, or provides a better focal point for enrollment managers, than resource dependency theory” (p. 4). RDT examines how the external environment affects internal resources. Hossler and Hoezee (2001) state that, “Resource Dependency Theory helps enrollment managers to continually ask the following question, “What are the scarce resources for my campus associated with student enrollments?” (p. 5). Companion questions for enrollment managers that arise as a result include the following:

1. What are the areas of scarcity on campus?
2. Are student enrollments associated with any of these?
3. Can my organizational unit help alleviate these scarcities?

For the 52 tuition dependent small private colleges that are the subjects of this study, the solution to the answers to these questions appears to be the implementation of a football program!

The second enrollment management theory is systems theory. According to Hossler and Hoezee (2001), “Systems theory examines the structure and behavior of complex organizations” (p. 7). An important aspect of Systems Theory is organizational communication and collaboration. Hossler and Hoezee (2001) state that “in order to effectively influence student enrollments, enrollment managers and the units that comprise an enrollment management team have to share information, goals, and strategies frequently” (p. 7). The complexity of adding football to a small private college campus is enormous and the approach that systems theory provides would be beneficial.

Ten years after the Huddleston and Rumbough (1997) study, research done by Noel Levitz, a national marketing and recruiting company, documented the recruitment practices of colleges and universities, and solicited feedback regarding the enrollment management structures at various institutions. The results are reflected in the following table:

Table 1

*Reporting Line of Chief Enrollment Officers*

	4- Yr. Public	4-Yr. Private	2-Yr.	Total
President	13.4%	67.6%	23.7%	44.6%
VP-Academic Affairs	40.2%	11.4%	9.3%	17.7%
VP-Student Affairs	37.1%	5.0%	55.7%	24.5%
Administrative/Business Office	2.1%	1.4%	10.3%	3.6%
Other	7.2%	14.6%	1.0%	9.7%

The role of enrollment management and its importance to the institution is reflected in the high percentage (66.7%) of private colleges where the direct reporting relationship is to the president (Noel-Levitz, 2007)—up from the 60% reported ten years before (Huddleston & Rumbough, 1997). An indication of the increasing codification of enrollment management around enrollment and net revenue goals appeared in a 2008 report by the *National Association of College Admission Counseling*, which stated “control over financial aid and admission policy has increasingly shifted to enrollment management and/or financial aid managers, and shifted slightly away from faculty, presidents, and boards of trustees” (2008, p. 1). Given the rampant prevalence of the use of tuition discounting at small tuition dependent private colleges discussed previously, this trend ought not to be surprising.

The same 2007 study by Noel-Levitz, researching the recruitment practices of colleges and universities, found:

- Offering open houses and visit days, mailing recruiting publications, and sending admissions representatives to visit high schools remained among the

top strategies in student recruitment, though significant differences were evident between 4-year public, 4-year private, and 2-year institutions;

- Ads in college magazines and listings in commercially published directories were rated among the least-effective practices;
- Most respondents indicated the quality of their practices needed improvement, including the quality of their written annual and long-range strategic recruitment plans;
- Among the least-used practices measured in this study, for both the public and private sectors, were emerging e-recruitment practices such as podcasting, RSS/XML syndicated feeds, and using text messaging to notify prospective students of impending deadlines, events, acceptance, etc. (Noel-Levitz, 2007)

The report also detailed:

- Planning and leadership practices for student recruitment;
- The effectiveness of 66 recruitment strategies and tactics, including emerging practices in e-recruitment; and
- The use of 20 additional recruitment practices, including emerging practices in the student search process (Noel-Levitz, 2007, p. 2).

The study found the most common marketing and recruitment practices among private colleges included the following by rank order:

1. Hosting open house events;
2. Recruiting publications in general (view book, search piece, etc.);
3. E-mail communication with prospective students;
4. Campus visit days for high school students;
5. High school visits by admission representatives to primary markets;
6. Using enrolled students in recruiting;
7. Encouraging prospective students to use an inquiry form on the admissions Web site;
8. Encouraging prospective students to schedule campus visits on the admissions Web site;
9. Telecounseling; and
10. Using faculty in recruiting. (Noel-Levitz, 2007, p. 3)

At its core, enrollment management is grounded in the idea of “exerting influence/control” over the long-term enrollment and fiscal health of the institution. It is this outcome that provides the foundational rationale for this study. From 1985 through 2000, 52 small tuition-dependent private colleges undertook the initiative of starting a football program at their institutions in an effort to increase enrollment and improve the overall fiscal health of their institutions. Years later, this trend seems to be continuing.

A 2006 article in the *New York Times* noted that,

Football is popular among small colleges because the start-up costs for a non-scholarship program are less than \$1 million, and that money can usually be raised from alumni. The annual football budget is subsidized by increased tuition revenue flowing from teams of at least 100 players. (Pennington, 2006, p. 1)

Shenandoah University (VA) President Dr. James A. Davis, now in his 25th year, said:

"I said no to football for 15 years, but I was wrong. Football is the best draw of qualified male applicants that there is anywhere. I am shocked more schools aren't adding football" (Pennington, 2006. p. 10).

Ehrenberg (2000) argues that, "colleges are risk averse and slow to react to market pressures. To compete, small colleges must differentiate themselves through the programs they offer or by the individual attention they can offer to students" (p. 26). For the small tuition dependent private colleges that are the focus of this study, initiating football was their answer to the issue of differentiation. This study sought to explore whether or not the addition of football to the 52 private tuition dependent colleges that introduced it from 1985 to 2000 found it to achieve what they had hoped: increases in both enrollment and overall fiscal health.

Enrollment management practitioners are concerned with the role of college football—and athletics in general—in advancing the enrollment and fiscal health of institutions as well as the value of other initiatives. Therefore, a secondary potential outcome of this study is to contribute to the paucity of literature on the role of athletics in enrollment management.



## **Chapter Three: Methodology**

### **Introduction**

The primary focus of this research was to explore the impact of the addition of football programs on the enrollment and fiscal health of 530 small, tuition-dependent private U.S. colleges and universities from 1985 to 2000. The analytical strategies for this study included examining both the fiscal and enrollment data of these institutions during this period. This chapter details the methods employed in this research.

In the analysis, institutions were separated into four groups. The first group consisted of 52 institutions that established intercollegiate football programs during that time period. The second group was comprised of six institutions that ended football programs during that time period. The third group involved 172 institutions that had football programs during the entire time span. The fourth group consisted of 300 institutions that had no football program during the entire time span of the study.

### **Research Questions**

This study examines the following research questions as they apply to small, tuition-dependent private colleges:

1. Does the initiation of a football program result in increased enrollment?
2. Does the initiation of a football program result in improved fiscal health?

## **Sample**

This research was sparked by an observation that there were a substantial number of small, tuition-dependent private U.S. institutions that added an intercollegiate football program between the years 1985 and 2000. Once this was determined to be the case, comparative groups of institutions (defined below) were identified to complete the sample.

Step one was to check the assumption that a substantial number of small, tuition-dependent private institutions had added an intercollegiate football program during the study period. To authenticate this claim, an e-mail was sent to over 400 athletic directors at private NCAA Division III institutions whose e-mail addresses were listed on the NCAA website. A copy of the e-mail is in Appendix A. One hundred forty-seven responses were received – a number of them with duplicate information that, when compiled, indicated that 67 new football programs had been initiated between 1985 and 2000.

After the e-mail survey was completed, it was then discovered that a document produced by the NCAA listed institutions that started intercollegiate football programs during the same time period (NCAA, 1999). Using this document and the results from the e-mail solicitation, the list of 67 programs was narrowed down to those at 48 small, private tuition-dependent colleges that were selected for this study. The 19 institutions removed from consideration had been identified through the original e-mail solicitation, but were determined to be either public

institutions or private institutions that did not meet the definition of tuition-driven, were specialized in their mission, or were too large (see below). Four additional institutions started football programs in 2000 after the publication of the NCAA list bringing the total number of small, private tuition-dependent colleges in the primary sample to 52. They are listed in chapter four.

Once it was determined that a significant number of small, private tuition-dependent institutions had started a football program during the time period of the study (1985–2000), comparative groups were chosen. These included institutions that had football programs throughout the time period of the study, those that did not have football during the period, and those institutions that had a program at some point during the period of the study, but dropped it. This was accomplished as follows.

In 2000, there were approximately 3,600 colleges and universities in the United States, 1,626 of which were private 4-year institutions (Almanac Issue, 2000). Eighty percent of these private institutions were tuition-dependent; they derived more than 60% of their operating budgets from tuition revenue (Taylor & Massy, 1996). Institutions were included in the primary sample if they were private and tuition-dependent and had an undergraduate enrollment of up to 2,500 full-time undergraduate students in fall of 1985. Specialty colleges including culinary, business, art, music, technical and trade institutions, Bible colleges, and seminaries that were unlikely to consider football as an option were excluded, along with women's colleges, upper division institutions (senior colleges), and non-traditional colleges serving primarily adult and evening populations.

This resulted in a core sample of 530 small, tuition-dependent private colleges and universities that were used for this study. Of those institutions, the previously mentioned 52 had initiated football programs during the time frame of the study. Of the remaining 478 institutions, 172 had football programs in place throughout the fifteen-year period (as determined by matching NCAA and NAIA membership rosters), and 300 did not have a football program in place during the period. The remaining six institutions ended their programs at some point during the time period.

### **Data Sources**

A comparison of an institution with its peers is usually of great importance to its strategic planning and decision-making (Teeter & Brinkman, 1992). This is especially true for small, tuition-dependent private colleges in an era of increasing challenges and competition. Faced with the difficult task of balancing ever-expanding financial needs, such institutions are obliged to take note of peer behavior as they attempt to maintain their competitive edge with modest resources.

Several reviews of revenue and/or expenditure trends for various types of institutions and time periods have appeared in the literature, including Harris (1962); O'Neill (1973); Bowen (1980); Froomkin (1990); Halstead (1991); Blasdell, McPherson, and Schapiro (1993); McPherson and Shapiro (1994); Barbett and Korb (1996); Winston, Carbone, and Lewis (1998); Toutkoushian (2001); Paulsen and Smart (2001); and Wellman, Desrochers, and Lenihan (2008). The primary focus of this study was to explore the impact of the addition of football programs on the

enrollment and fiscal health of small, tuition-dependent private colleges and universities from 1985 through 2000. Unfortunately, the available data on this topic were limited.

The collection of financial data from American colleges and universities began in 1929 with the establishment of the federal Biennial Survey of Education. That survey was conducted every other year until it was replaced by the Higher Education General Information Survey (HEGIS) in 1965-66. HEGIS was conducted annually through 1987-88. The survey did not require institutions to divide expenditures according to whether their use had been restricted by their external sources (i.e., into restricted and unrestricted categories). HEGIS also did not require reporting on government grants and contracts until 1974-75. In 1988, HEGIS was replaced by the Integrated Postsecondary Education Data System (IPEDS), which collects a wide range of data on colleges and universities in the United States.

IPEDS collects data on revenues in the following areas:

- tuition and fees
- appropriations from government sources
- grants and contracts from government sources
- private gifts, grants and contracts
- endowment income
- sales and services of educational activities
- auxiliary enterprises

- hospitals
- other sources
- independent operations (Toutkoushian, 2001, p. 16)

Revenues in each of these categories are divided into restricted and unrestricted funds. Restricted funds can only be used for the purpose(s) specified by the external provider, while unrestricted funds can be used for any purpose as determined by the college. The sum total of both restricted and unrestricted funds equals current funds revenue for the institution (Toutkoushian, 2001).

Expenditure categories collected by IPEDS include the following:

- instruction
- research
- public service
- academic support
- student services
- institutional support
- operations and maintenance of physical plant
- scholarships and fellowships
- mandatory and non-mandatory transfers
- auxiliary enterprises
- hospitals
- independent operations (Toutkoushian, 2001, p. 17)

Similar to the way revenues are categorized, expenditures can be either restricted or unrestricted (Toutkoushian, 2001). The combined unrestricted and restricted expenditures are referred to as current funds expenditures.

Unfortunately, the data from IPEDS and the earlier surveys are limited when used to compare institutions over extended periods of time. Financial data aggregated at the institutional level do little to capture the differences among institutions regarding missions, populations served, academic programs, history, and so forth. Changes in accounting practices at institutions can lead to categorizing expenditures into different line items. Invariably, data errors occur. An additional concern is that the physical plant operation and maintenance expenditure category does not capture value, depreciation, or replacement costs for facilities (Toutkoushian, 2001). This is noteworthy for purposes of this study because small, tuition-dependent private colleges are place-bound, brick and mortar institutions. As campuses age, a true depiction of their financial health is lacking when comprehensive data sets such as IPEDS do not reflect the cost of facilities upkeep, replacement, and equipment.

Also troublesome for researchers is a change enacted in 1996 by the Financial Accounting Standards Board (FASB). FASB was formed in 1973 to “establish standards of financial accounting and reporting for private-sector entities, including business and not-for-profit organizations” (FAF, 2008). The change made in 1995 by FASB “no longer required private institutions to report financial data

using the long-established fund accounting standards of the time” (Toutkoushian, 2001, p. 18). For this reason, the financial data available for the purposes of comparative research for small, tuition-dependent private colleges that initiated football programs from 1985 through 2000 were limited to the broad categories of current funds revenue and current funds expenditures.

Institutional data utilized for this study were derived from the National Center for Educational Statistics (NCES) and IPEDS data as provided by WebCASPAR, a clearinghouse for all types of data regarding higher education (WebCASPAR, 2009).

### **Timeframe**

The reasons for choosing the 1985-2000 timeframe for this study were twofold: first, a relatively large number of intercollegiate football programs were established during the period, and second, the availability of data. However, in order to track any type of change before and after a given event, a data time series must be developed with at least one observation occurring before the event under study, and another observation occurring after. There were six institutions that started their football programs in 1985 and four that began in 2000. Therefore, in order to provide proper data points before and after these programs were started, data for five years prior to the start of the study period, beginning with 1980, and five years after the end of the study period, ending with 2005, were used for the analysis.



## **Research Design**

This study incorporates an interrupted time series design which allows for the “a large series of observations made on the same variable consecutively over time” (Shadish, Cook, & Campbell, 2002, p. 172). Integral to such methodology is the identification of the specific date/time in which the “interruption” or “treatment impact” occurred. Sufficient data must be obtained prior to and after the interruption in order to determine whether or not the interruption had an impact, specifically that the observations after the interruption will demonstrate a change in slope or level compared to those measured prior to the interruption (Shadish, Cook, & Campbell, 2002, p. 172).

## **Variables of Interest**

The variables used in this study are defined in the following list. It contains the two independent variables and two dependent variables.

### **Independent variables.**

***Presence or Absence of a Football Program (1985-2000):*** The 530 institutions that were included in this study fell into one of four groups: the 52 that initiated football programs during the time frame of the study (these constituted the primary sample), the 172 that had football programs in place throughout the twenty-year period, the 300 that did not have a football program in place during period, and the six that ended their programs at some point during the time period.

***Year football program started.*** This applied to the 52 institutions that began football programs during the time period of the study. Many economic and social

conditions varied over the years included in the study. Therefore, it was important to consider the possibility that the effects of a newly introduced football program might vary considerably over the years.

**Dependent variables.**

***Enrollment: Full-time undergraduate headcount enrollment (1985-2000).***

Annual Fall enrollment totals from IPEDS.

***Fiscal health.*** The fiscal data were all suitably adjusted for inflation to the base year of 2000 before further analyses. In this study, the term “fiscal health” refers to the financial strength of an institution as measured by the ratio of the institution’s current funds revenue to its current funds expenditure.

***Current funds revenues (1985-2000).*** Annual total restricted and unrestricted revenues from IPEDS. Because of a change in accounting standards made by FASB, effective in 1997, total revenues were reported for all private colleges and universities as “total revenue and investment return.” Thus, the time series financial data for this study were inconsistent for the last several years of the study period. After consulting with Dr. Thomas Snyder from NCES and Dr. Robert Toukoushian of the University of Michigan, experts in IPEDS research, the problem was addressed by subtracting “investment return” from “total revenue and investment return,” to arrive at “total revenue” for the years beginning with 1997. These experts agreed that this was the best analytical approach for the fiscal data under the circumstances.

*Current funds expenditures (1985-2000)*. Annual total restricted and unrestricted expenditures taken from IPEDS.

### **Data Description**

Data description was done before the main data analyses. For each variable, SPSS procedures were used to describe the amount of missing data, the mean, standard deviation, skewness, kurtosis, and the Shapiro-Wilk test for normality. All institutions were kept in the data for the main data analyses.

The goals of data analysis were to discover whether starting a football program tended to increase enrollment or fiscal health. One or more colleges began a football program during most of the years included in this study. Therefore, in each year where one or more colleges began a football program, its prior and subsequent enrollment and fiscal health were to be compared. Since economic and other conditions varied among years, it was also important to find how the enrollment changes or fiscal health changes of the colleges that initiated football programs compared to other colleges that made no such change in the same time period.

### **Main Data Analyses**

The time frame for analysis of change for institutions that initiated football programs was limited to the five years prior to and five years after the initiation of the football program. The first year of implementation was included in the five years after the start. The inaugural years of new football programs were distributed over the range from 1985 through 2000. Therefore, each of the 16 years in the study range could be

considered as a “starting year” for one or more institutions. For each individual institution, in each of the 16 possible starting years, the linear trend of enrollment and fiscal health on years was computed for the five years prior to each starting year. For each institution, this yielded a regression–derived intercept and a slope that described the trend “before” the current year.

Similarly, for each institution, the linear trend of fiscal health and enrollment in the five years after the “starting year” was computed by linear regression. This resulted in an “after” intercept and slope which together described the trend in enrollment and fiscal health after each possible starting year for each institution.

As stated previously, the 530 small, tuition-dependent private colleges and universities that comprised the study sample were subdivided into four groups: the 52 institutions that initiated football programs during the study period; the 172 that had football programs in place throughout the study period; the 300 that did not have a football program during the study period; and the remaining six institutions that ended their programs at some point during the study period. This last group was not included in the analysis due to the small number of institutions in it. Therefore, a revised total of 524 institutions were included in the comparative analyses.

The before and after trends for enrollments and fiscal health were compared among the three groups. These analyses were done by appropriate applications of one-way analysis of variance.

## **Summary**

This study utilized available data from established sources to determine whether establishing an intercollegiate football program positively affected the enrollment levels and fiscal health of small, private, tuition-driven colleges and universities that took this action between 1985 and 2000. The nature of the study sample, the data sources, and the specific variables were considered, and the analytical techniques employed were summarized in this chapter. The results of those analyses are presented in Chapter 4.

## **Chapter Four: Results**

### **Introduction**

The purpose of the research was to investigate the effects of initiating a football program in small tuition-dependent colleges. The effects might be manifested in several different ways. A new football program might directly increase enrollments or directly improve the fiscal health of an institution. More subtly, a new football program might change the rate of growth of enrollments, or it might change the trend of the fiscal health of the institution over time.

The research design was an adaptation of the interrupted time series design with comparison groups. It was chosen because it addresses whether an intervention, such as adoption of football program, results in a change in enrollment or fiscal health of an institution (Shadish et al., 2002). The inclusion of the comparison groups provides a control for the possible influences of exogenous variables on the impact of the football program.

### **Research Questions and Hypotheses**

This study sought to answer questions regarding the impact of initiating a football program on undergraduate enrollment and the fiscal health of institutions of higher education.

**Research question 1.** Does a new football program increase the undergraduate enrollment of initiating institutions compared to those institutions not initiating a new football program?

**Research question 2.** Does a new football program increase the fiscal health of initiating institutions compared to those institutions not initiating a new football program?

**Research question 3.** Does a new football program increase the growth rate of undergraduate enrollment of initiating institutions compared to those institutions not initiating a new football program?

**Research question 4.** Does a new football program increase the rate of improvement of the fiscal health of initiating institutions compared to those institutions not initiating a new football program?

**Null hypothesis 1.** Initiating a new football program does not produce a greater increase in undergraduate enrollment for initiating institutions than for those institutions not initiating a new football program.

**Alternative hypothesis 1.** Initiating a new football program produces a greater increase in undergraduate enrollment for initiating institutions than for those institutions not initiating a new football program.

**Null hypothesis 2.** Initiating a new football program does not produce a greater increase in fiscal health for initiating institutions than for those institutions not initiating a new football program.

**Alternative hypothesis 2.** Initiating a new football program produces a greater increase in fiscal health for initiating institutions than for those institutions not initiating a new football program.

**Null hypothesis 3.** Initiating a new football program does not increase the rate of growth of undergraduate enrollment of initiating institutions compared to those institutions not initiating a new football program.

**Alternative hypothesis 3.** Initiating a new football program increases the rate of growth of undergraduate enrollment of initiating institutions compared to those institutions not initiating a new football program.

**Null hypothesis 4.** A new football program does not increase the rate of improvement of the fiscal health of initiating institutions compared to those institutions not initiating a new football program.

**Alternative hypothesis 4.** A new football program increases the rate of improvement of the fiscal health of initiating institutions compared to those institutions not initiating a new football program.

### **Institutions Studied**

The primary focus of this research was to explore the impact of the addition of football programs on the enrollment and fiscal health of 530 small, tuition-dependent private colleges and universities from 1985 to 2000. As described in chapter three, these 530 institutions included the entire population of interest.

In the analysis, institutions were separated into four groups. The first group consisted of 52 institutions that established intercollegiate football programs during that time period. The second group was comprised of six institutions that ended football programs during that time period. The third group involved 172 institutions



that had football programs during the entire time span. The fourth group consisted of 300 institutions that had no football program during the entire time span of the study.

### **Characteristics of Institutions**

Tables 2 and 3 summarize information about the institutions included in the study. As seen in Table 2, only six institutions ended their football programs during the study period. These six were not included in analyses of the impact of a football program because of the small number, which ended their programs.

Tables 2 and 3 also show the considerable geographical diversity of the institutions. New football programs were concentrated in the Great Lakes and Southern regions compared to those institutions that did not have programs or continued their programs during the time span of the study.

Table 2

*Summary Characteristics of the Institutions*

Region	Institutional Category				Total
	Began football program between 1985-2000 inclusive	Ended football program during study period	Always had football program during study time span	Never had football program during study span	
	1	2	3	4	
New England	6	0	9	37	52
Mid-Atlantic	3	0	21	59	83
Great Lakes	14	0	51	36	101
South	19	3	29	94	145
Mid-West	3	1	46	28	78
Southwest	6	0	4	26	36
West	1	2	12	20	35
Total	52	6	172	300	530

Table 3

*Characteristics of New Football Programs from 1985-2000*

<b>College/University</b>	<b>State</b>	<b>Region</b>	<b>Year Begun</b>
Assumption College	MA	New England	1988
Aurora University	IL	Great Lakes	1987
Belhaven College	MS	South	1998
Benedict College	SC	South	2000
Bethel College	TN	South	1993
Blackburn College	IL	Great Lakes	1998
Campbellsville University	KY	South	1988
Charleston Southern University	SC	South	1991
Chowan College	NC	South	1993
College of Mount St. Joseph	OH	Great Lakes	1990
Cumberland University	TN	South	1990
East Texas Baptist University	TX	Southwest	2000
Ferrum College	VA	South	1985
Gallaudet University	DC	South	1987
Greensboro College	NC	South	1997
Greenville College	IL	Great Lakes	1987
Hardin-Simmons University	TX	Southwest	1990
Jacksonville University	FL	South	1999
King's College	PA	Mid-Atlantic	1993
Lambuth University	TN	South	1985
Lindenwood University	MO	Mid-West	1990
MacMurray College	TX	Southwest	1985
Malone College	OH	Great Lakes	1993
McKendree College	IL	Great Lakes	1996
Menlo College	CA	West	1986
Merrimack College	MA	New England	1996
Methodist College	NC	South	1989
MidAmerica Nazarene University	KS	Mid-West	1986
Mount Ida College	MA	New England	1999
North Greenville University	SC	South	1988
Quincy University	IL	Great Lakes	1986
Sacred Heart University	CT	New England	1991

<b>College/University</b>	<b>State</b>	<b>Region</b>	<b>Year Begun</b>
Saint John Fisher College	NY	Mid-Atlantic	1987
Saint Xavier University	IL	Great Lakes	1993
Salve Regina University	RI	New England	1993
Shenandoah University	VA	South	2000
Southern Nazarene University	OK	Southwest	2000
Southwestern Assemblies of God University	TX	Southwest	1996
Stonehill College	MA	New England	1988
Tennessee Wesleyan College	TN	South	1985
Texas Lutheran University	TX	Southwest	1998
Thomas More College	KY	South	1990
Tiffin University	OH	Great Lakes	1985
Trinity Bible College	ND	Mid-West	1986
Trinity International University	IL	Great Lakes	1989
Tusculum College	TN	South	1991
University of Saint Francis-Ft Wayne	IN	Great Lakes	1986
University of St Francis	IL	Great Lakes	1986
University of the Cumberlands	KY	South	1985
Urbana University	OH	Great Lakes	1986
Wesley College	DE	Mid-Atlantic	1986
Wisconsin Lutheran College	WI	Great Lakes	2000

### **Description of Dependent Variables**

**Enrollment.** The fall term undergraduate enrollments were determined by methods described in chapter three. The univariate characteristics of enrollments in each of the years from 1980 through 2005 were examined, and these results are shown in Table 4. Some institutions closed between 1980 and 2005, so the later enrollment counts tend to be less. Although none of the enrollments are normally distributed over the institutions, the departures from normality tend to become greater in the later years of the study.

Table 4

*Univariate Characteristics of Fall Term Undergraduate Enrollments*

<b>Descriptive Statistics for Fall Enrollments</b>								
Year	Number of Institutions	Minimum	Maximum	Mean	Standard Deviation	Skewness	Kurtosis	Shapiro-Wilk Normality Test
1980	530	36	2316	968.24	469.84	.67	-.20	.000
1981	530	69	2302	968.43	478.88	.66	-.23	.000
1982	530	72	2291	944.12	469.84	.68	-.23	.000
1983	530	85	2450	979.41	498.14	.75	-.07	.000
1984	530	80	2428	974.69	502.58	.77	-.10	.000
1985	530	76	2467	967.82	505.11	.83	-.01	.000
1986	520	79	3119	975.29	513.53	.88	.38	.000
1987	519	4	2884	998.67	527.59	.84	.26	.000
1988	528	67	3216	1044.53	542.71	.97	.74	.000
1989	520	5	3712	1079.58	570.03	.99	1.10	.000

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**Descriptive Statistics for Fall Enrollments**

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Year	Number of Institutions	Minimum	Maximum	Mean	Standard Deviation	Skewness	Kurtosis	Shapiro-Wilk Normality Test
1990	527	73	4209	1099.61	578.07	1.31	2.89	.000
1991	528	71	4307	1131.64	608.09	1.45	3.26	.000
1992	527	69	4650	1167.15	646.53	1.69	4.52	.000
1993	526	66	4774	1184.87	640.13	1.61	4.39	.000
1994	526	71	4482	1199.12	638.12	1.45	3.32	.000
1995	526	67	5446	1232.76	696.60	1.90	6.19	.000
1996	525	51	5926	1264.00	733.41	2.07	7.41	.000
1997	524	51	3842	1182.75	594.71	1.22	2.27	.000
1998	527	56	4494	1219.91	633.17	1.40	3.26	.000
1999	527	96	4433	1254.93	653.83	1.42	3.18	.000
2000	527	78	4695	1289.21	688.37	1.54	3.97	.000
2001	526	126	5099	1327.33	715.55	1.62	4.32	.000

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**Descriptive Statistics for Fall Enrollments**

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Year	Number of Institutions	Minimum	Maximum	Mean	Standard Deviation	Skewness	Kurtosis	Shapiro-Wilk Normality Test
2002	525	162	5574	1366.13	734.21	1.69	4.97	.000
2003	525	117	5986	1401.67	767.10	1.84	6.15	.000
2004	525	116	6908	1440.18	808.85	1.99	7.65	.000
2005	524	101	7852	1462.19	823.57	2.12	9.40	.000

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Table 5  
*Correlations Among Enrollments in Successive Years<sup>a</sup>—1980-2005*

<b>Year</b>	<b>1980</b>	<b>1981</b>	<b>1982</b>	<b>1983</b>	<b>1984</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>
<b>1980</b>	100	98	96	92	89	86	83	82	80	77	75	70	67
<b>1981</b>	98	100	98	94	92	90	86	85	83	79	77	73	70
<b>1982</b>	96	98	100	96	94	92	88	86	84	80	79	75	72
<b>1983</b>	92	94	96	100	99	97	94	91	90	86	85	82	79
<b>1984</b>	89	92	94	99	100	98	96	93	93	88	88	85	82
<b>1985</b>	86	90	92	97	98	100	97	95	94	89	89	86	83
<b>1986</b>	83	86	88	94	96	97	100	96	96	90	91	89	85
<b>1987</b>	82	85	86	91	93	95	96	100	96	94	93	91	87
<b>1988</b>	80	83	84	90	93	94	96	96	100	96	97	94	91
<b>1989</b>	77	79	80	86	88	89	90	94	96	100	96	94	91
<b>1990</b>	75	77	79	85	88	89	91	93	97	96	100	98	95
<b>1991</b>	70	73	75	82	85	86	89	91	94	94	98	100	97
<b>1992</b>	67	70	72	79	82	83	85	87	91	91	95	97	100
<b>1993</b>	65	68	70	78	81	82	84	86	90	90	94	97	97
<b>1994</b>	64	67	69	76	79	80	82	85	88	88	92	95	95
<b>1995</b>	61	63	66	74	77	77	80	82	87	86	91	93	94
<b>1996</b>	58	60	63	71	74	75	77	80	84	84	89	91	92
<b>1997</b>	64	66	69	70	73	73	75	77	82	81	86	85	86
<b>1998</b>	64	66	68	70	71	70	72	74	78	77	82	81	83
<b>1999</b>	62	64	67	69	70	69	71	73	77	76	81	81	82
<b>2000</b>	60	62	65	67	69	68	70	72	76	76	81	80	82
<b>2001</b>	58	60	63	65	67	66	68	70	74	74	79	78	80
<b>2002</b>	58	60	63	65	67	65	68	69	73	73	78	76	78
<b>2003</b>	57	58	61	64	65	63	66	67	71	70	75	74	75
<b>2004</b>	55	58	61	64	64	63	64	66	69	69	73	72	74
<b>2005</b>	54	57	59	62	63	62	64	66	67	68	72	71	72



<b>Year</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>1980</b>	65	64	61	58	64	64	62	60	58	58	57	55	54
<b>1981</b>	68	67	63	60	66	66	64	62	60	60	58	58	57
<b>1982</b>	70	69	66	63	69	68	67	65	63	63	61	61	59
<b>1983</b>	78	76	74	71	70	70	69	67	65	65	64	64	62
<b>1984</b>	81	79	77	74	73	71	70	69	67	67	65	64	63
<b>1985</b>	82	80	77	75	73	70	69	68	66	65	63	63	62
<b>1986</b>	84	82	80	77	75	72	71	70	68	68	66	64	64
<b>1987</b>	86	85	82	80	77	74	73	72	70	69	67	66	66
<b>1988</b>	90	88	87	84	82	78	77	76	74	73	71	69	67
<b>1989</b>	90	88	86	84	81	77	76	76	74	73	70	69	68
<b>1990</b>	94	92	91	89	86	82	81	81	79	78	75	73	72
<b>1991</b>	97	95	93	91	85	81	81	80	78	76	74	72	71
<b>1992</b>	97	95	94	92	86	83	82	82	80	78	75	74	72
<b>1993</b>	100	99	97	95	89	86	85	85	83	81	78	76	76
<b>1994</b>	99	100	98	96	91	87	87	86	84	82	80	78	78
<b>1995</b>	97	98	100	99	91	87	87	86	85	83	80	78	78
<b>1996</b>	95	96	99	100	91	86	87	86	85	83	80	78	78
<b>1997</b>	89	91	91	91	100	95	94	93	91	89	86	84	83
<b>1998</b>	86	87	87	86	95	100	99	97	96	95	93	91	89
<b>1999</b>	85	87	87	87	94	99	100	99	98	96	94	92	91
<b>2000</b>	85	86	86	86	93	97	99	100	99	98	96	94	92
<b>2001</b>	83	84	85	85	91	96	98	99	100	99	98	95	94
<b>2002</b>	81	82	83	83	89	95	96	98	99	100	99	97	96
<b>2003</b>	78	80	80	80	86	93	94	96	98	99	100	98	97
<b>2004</b>	76	78	78	78	84	91	92	94	95	97	98	100	99
<b>2005</b>	76	78	78	78	83	89	91	92	94	96	97	99	100

a      Decimal points have been omitted to save space.

The correlation coefficient among enrollments over successive years are quite high within a five-year time span. This means that the rank order of enrollments among institutions remains stable within five-year time spans.

**Fiscal health.** The sources of the revenues and expenditures are described in chapter three. The revenues and expenditures were inflation-adjusted to the base of year of 2000 before further calculations were done. Fiscal health for each year was indexed by 100 times the ratio of revenues to expenditures for the purpose of expressing the fiscal health measurement as a percentage. The univariate characteristics of fiscal health in each of the years from 1980 through 2005 were examined, and these results are shown in Table 6. Some institutions closed between 1980 and 2005, and financial data were otherwise not available for some institutions in some years. As a result, the number of cases for each year's fiscal data varies but tends to decrease over time. None of the fiscal health ratios are normally distributed over the institutions. There are occasional large outliers in some years that produce larger departures from normality.

Table 7 summarizes the correlations among the fiscal ratios over the years of the study. Although there is some ordinal consistency in the fiscal health of institutions from year to year, the correlations tend to be smaller than those observed for enrollments. The pattern of correlations does not decrease as smoothly as it does for enrollments as the number of years between fiscal ratios increases. Apparently, this arises from a combination of outliers and exogenous variables affecting the institutions' fiscal health.

Table 6

*Univariate Characteristics of Fiscal Health Indices***Descriptive Statistics for Fiscal Health**

Year	Number of Institutions	Minimum	Maximum	Mean	Standard Deviation	Skewness	Kurtosis	Shapiro-Wilk Normality Test
1980	527	68.75	172.89	102.96	7.76	2.04	15.71	.000
1981	527	68.88	152.87	103.14	7.44	1.00	6.41	.000
1982	527	63.98	148.37	102.66	8.58	1.12	7.29	.000
1983	527	51.72	142.72	102.07	7.96	-0.17	9.13	.000
1984	527	63.64	201.24	101.79	8.17	3.51	43.30	.000
1985	527	67.78	164.19	101.72	7.33	1.94	17.65	.000
1986	523	70.16	160.52	102.18	8.42	1.01	7.95	.000
1987	524	64.32	157.03	102.41	8.66	0.88	8.35	.000
1988	524	73.35	135.13	103.12	7.11	0.31	3.73	.000
1989	524	71.03	153.14	103.24	7.17	0.79	8.08	.000
1990	525	72.34	151.34	102.85	6.84	0.97	7.60	.000
1991	524	67.42	1576.28	105.01	64.68	22.59	514.87	.000
1992	523	77.81	165.7	102.84	6.77	2.34	20.04	.000
1993	523	75.63	164.93	103.14	7.68	2.17	13.37	.000
1994	523	83.24	158.94	103.25	7.06	1.76	10.71	.000

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1995	520	69.48	163.69	104.42	9.27	1.47	8.89	.000
1996	514	59.12	298.31	104.82	15.93	4.29	45.25	.000
1997	513	.00	275.61	104.52	17.22	2.33	25.30	.000
1998	514	51.24	538.93	106.72	26.32	9.93	149.05	.000
1999	510	56.02	269.55	105.15	17.60	3.39	24.43	.000
2000	510	50.99	208.29	101.79	14.79	1.52	7.59	.000
2001	510	37.69	212.10	100.85	14.38	1.19	9.54	.000
2002	509	54.53	166.59	100.6	13.40	0.71	4.13	.000
2003	509	50.61	240.72	102.75	14.84	2.93	24.29	.000
2004	509	40.1	176.11	102.37	13.10	0.66	5.24	.000
2005	509	56.08	158.66	103.77	13.02	0.55	2.88	.000

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Table 7

*Correlations among Fiscal Health Ratios in Successive Years*

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
1980	100	51	42	36	30	21	09	11	23	25	18	03	10
1981	51	100	56	43	37	30	23	22	32	30	20	03	10
1982	42	56	100	52	43	36	22	14	20	24	17	02	04
1983	36	43	52	100	43	29	23	17	27	25	21	03	09
1984	30	37	43	43	100	32	13	21	22	26	14	03	03
1985	21	30	36	29	32	100	37	39	25	30	21	03	02
1986	09	23	22	23	13	37	100	40	29	20	16	-03	10
1987	11	22	14	17	21	39	40	100	49	37	30	01	08
1988	23	32	20	27	22	25	29	49	100	58	44	43	22
1989	25	30	24	25	26	30	20	37	58	100	65	18	26
1990	18	20	17	21	14	21	16	30	44	65	100	22	29
1991	03	03	02	03	03	03	-03	01	43	18	22	100	35
1992	10	10	04	09	03	02	10	08	22	26	29	35	100
1993	13	18	05	16	06	08	07	11	23	27	29	25	56
1994	19	18	07	12	01	05	09	02	17	21	26	19	58
1995	07	09	06	10	04	00	05	00	14	13	15	06	32
1996	-02	-08	-05	-06	-05	-11	-01	-12	-17	-16	-16	-10	31
1997	-02	-04	-07	-08	-09	-05	00	-02	-08	-10	-10	01	01
1998	-03	-04	-06	-11	-10	-07	-03	-05	-06	-11	-07	-03	-05
1999	-11	-10	-09	-10	-12	-10	-07	-04	-07	-08	-01	00	-01
2000	-15	-16	-11	-14	-19	-09	-05	-06	-12	-11	-02	-03	-01
2001	00	-13	-05	-04	-17	-10	-06	-09	-06	-03	01	06	01
2002	01	-13	-07	-03	-05	-04	-06	-04	00	04	01	08	03
2003	00	-11	-08	-07	-14	-04	-07	-09	-04	-01	02	08	03
2004	03	-10	-01	-06	-05	-06	01	-04	-07	-05	02	08	01
2005	-01	-08	-03	-03	-09	-14	-02	-04	01	00	01	09	04

Table 7 cont

1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
13	19	07	-02	-02	-03	-11	-15	00	01	00	03	-01
18	18	09	-08	-04	-04	-10	-16	-13	-13	-11	-10	-08
05	07	06	-05	-07	-06	-09	-11	-05	-07	-08	-01	-03
16	12	10	-06	-08	-11	-10	-14	-04	-03	-07	-06	-03
06	01	04	-05	-09	-10	-12	-19	-17	-05	-14	-05	-09
08	05	00	-11	-05	-07	-10	-09	-10	-04	-04	-06	-14
07	09	05	-01	00	-03	-07	-05	-06	-06	-07	01	-02
11	02	00	-12	-02	-05	-04	-06	-09	-04	-09	-04	-04
23	17	14	-17	-08	-06	-07	-12	-06	00	-04	-07	01
27	21	13	-16	-10	-11	-08	-11	-03	04	-01	-05	00
29	26	15	-16	-10	-07	-01	-02	01	01	02	02	01
25	19	06	-10	01	-03	00	-03	06	08	08	08	09
56	58	32	31	01	-05	-01	-01	01	03	03	01	04
100	59	32	12	04	04	03	02	01	05	04	02	-01
59	100	45	33	05	-04	06	14	09	07	08	06	10
32	45	100	20	01	09	06	05	-01	-01	03	04	01
12	33	20	100	25	14	10	15	05	09	06	16	13
04	05	01	25	100	19	27	19	23	16	12	18	15
04	-04	09	14	19	100	14	21	07	01	04	02	-01
03	06	06	10	27	14	100	38	14	10	16	16	19
02	14	05	15	19	21	38	100	35	21	19	23	21
01	09	-01	05	23	07	14	35	100	44	41	27	29
05	07	-01	09	16	01	10	21	44	100	43	41	29
04	08	03	06	12	04	16	19	41	43	100	48	35
02	06	04	16	18	02	16	23	27	41	48	100	51
-01	10	01	13	15	-01	19	21	29	29	35	51	100

Table 8

*Mean Enrollment and Fiscal Health by Institution Category*

	Category	N	Mean	Std. Deviation	Minimum	Maximum
Average Enrollment	1.00	52	1082.68	480.93	333.67	2219.00
	3.00	172	1274.23	525.34	246.81	3116.63
	4.00	300	1078.13	604.11	73.50	3850.06
	Total	524	1142.95	574.34	73.50	3850.06
Average Fiscal Health	1.00	52	102.60	6.51	70.76	123.82
	3.00	170	102.78	4.22	92.78	123.62
	4.00	299	104.26	10.44	87.35	266.28
	Total	521	103.61	8.54	70.76	266.28

Table 8 shows the characteristics of mean fiscal health or enrollment for the years 1985 through 2000 for each category of institutions. Category 3 institutions tend to have higher enrollments than category 1 or 4 institutions (nominal  $p < .05$  by analysis of variance). Other than that difference, the mean enrollments or mean fiscal health tend to be similar among the three categories.

**Main Data Analyses**

**Hypothesis one.** The next step was to determine whether the beginning of a new football program would increase the enrollment of an institution. As Table 3 indicates, the inaugural years of new football programs varied considerably over the years studied. A general conclusion for hypothesis 1 was desired independent of the year each new program was begun.

Individual institutions varied greatly in their enrollment levels. Hence, their difference in enrollments before and after initiating a football program is best indexed by their percentage gain in enrollment. Exogenous conditions in different years likely influenced the gains achievable for new football programs. This was controlled for within a given year where a new program was begun by subtracting the mean percentage gain for either category 3 or category 4 institutions for that specific year. Table 9 summarizes these computations for testing hypothesis one.

Table 9

*First to Second Year Percentage Enrollment Gains from Beginning Football Programs*

Year	Institution Category						One Minus Three	One Minus Four
	1		3		4			
	N	Mean	N	Mean	N	Mean		
1985	6	1.1338	172	0.9981	300	0.9887	0.1357	0.1451
1986	8	1.0334	169	1.0161	293	1.01	0.0173	0.0234
1987	4	1.0626	169	1.0301	291	1.0253	0.0325	0.0373
1988	3	1.0449	169	1.0748	291	2.7035	-0.0299	-1.6586
1989	2	1.1154	170	1.0187	293	1.0462	0.0967	0.0692
1990	5	1.1035	170	1.0338	292	1.9033	0.0697	-0.7998
1991	3	1.0006	172	1.024	298	1.0433	-0.0234	-0.0427
1992	0		171	1.0098	299	1.0499		
1993	6	1.097	171	1.018	298	1.0252	0.079	0.0718
1994	0		171	1.0173	298	1.0153		
1995	0		171	1.0157	298	1.0305		
1996	3	1.1664	171	1.0137	297	1.0317	0.1527	0.1347
1997	1	1.05	170	0.989	297	0.9538	0.061	0.0962
1998	3	1.0913	170	1.0292	296	1.0461	0.0621	0.0452
1999	2	0.9926	171	1.0195	298	1.034	-0.0269	-0.0414
2000	4	1.0868	171	1.0228	298	1.022	0.064	0.0648



The median percentage gains for the first year of the football program compared to the prior year were 6.40 and 4.12, respectively, compared to gains for institutions in categories 3 and 4. The percentage gains compared to category 3 and category 4 institutions were both nominally significant with  $p < .001$  by the binomial test. The net effect is that null hypothesis one is rejected, and there is support for the alternative hypothesis.

**Hypothesis two.** The next step was to determine whether the beginning of a new football program would improve the fiscal health of an institution. As in the case of enrollment, a general conclusion for hypothesis 2 was desired independent of the year each new program was begun.

Individual institutions varied greatly in their fiscal health levels. Hence, their difference in fiscal health before and after initiating a football program is best indexed by their percentage gain in fiscal health. Exogenous conditions in different years likely influenced the fiscal health achievable for all institutions. This was controlled for within a given year where a new program was begun by subtracting the mean percentage gain of fiscal health for either category 3 or category 4 institutions for that specific year.

Table 10 summarizes these computations for testing hypothesis two.

Table 10

*First to Second Year Percentage Fiscal Health Gains from Beginning Football Programs*

Year	Institution Category						One Minus Three	One Minus Four
	1		3		4			
	N	Mean	N	Mean	N	Mean		
1985	6	1.0285	170	1.0032	299	1.0045	0.0253	0.024
1986	7	1.0935	170	1.0009	296	1.0088	0.0926	0.0847
1987	4	0.9914	170	1.0149	295	1.0027	-0.0235	-0.0113
1988	3	1.0088	170	1.0089	297	1.0141	-0.0001	-0.0053
1989	2	1.0155	170	0.9987	296	1.0049	0.0168	0.0106
1990	5	1.056	170	0.9923	297	0.9978	0.0637	0.0582
1991	3	1.0257	169	0.9925	298	1.0352	0.0332	-0.0095
1992	0		169	1.0044	297	1.0068		
1993	6	1.0067	169	1.0043	297	1.0066	0.0024	0.0001
1994	0		169	1.0024	297	1.0011		
1995	0		169	1.0222	294	1.0089		
1996	3	1.0439	166	0.9991	292	1.0097	0.0448	0.0342
1997	0		166	1.0166	292	1.0049		
1998	3	0.9269	165	1.0029	291	1.0565	-0.076	-0.1296
1999	2	1.1434	166	1.013	289	0.9987	0.1304	0.1447
2000	3	1.0256	166	0.9753	289	0.984	0.0503	0.0416

By using the binomial test, category one institutions improved their fiscal health more than did category three ( $p < .001$ ) or category four ( $p < .003$ ) organizations during the same year. The median percentage improvement for category one organizations was 2.53% compared to category three, and 2.40% compared to category 4. Null hypothesis two is rejected, and the alternative hypothesis is supported.

**Hypothesis three.** In most of the years from 1985 through 2000, one or more new football programs were begun. For each of the years where a football program was begun, the trend of enrollments for each institution in the prior five years was fit by linear regression. Likewise, for each institution the linear trend of enrollments in the five years after the beginning of the football program was fit. The first year of the new program was included as part of the five years after the start of the program.

For each institution, the linear regression models fit before and after a change year provided an intercept and a slope of enrollment as a function of years. The slope of the regression model for the five years before the change defined the rate of increase or decrease of enrollments before initiation of a football program. The slope of the linear trend after the change year showed the rate of change of enrollments after the change. The “after slope” minus the “before slope” defined the change in the trend of enrollment.

The question to be answered for hypothesis three was whether the change in the slopes of enrollments for category one institutions was greater than that of the category three or category four colleges and universities in the same years.

Table 11

*Slopes of Enrollment on Years Before and After Beginning Football Programs*

Year	Institution Category						One Minus Three	One Minus Four
	1		3		4			
	N	Mean	N	Mean	N	Mean		
1985	6	27.8333	172	40.225	300	13.6612	-12.3917	14.1721
1986	8	24.8875	172	38.1541	300	24.031	-13.2666	0.8565
1987	4	-65.075	172	26.3352	299	30.3131	-91.4102	-95.3881
1988	4	-0.425	172	14.5753	299	38.4965	-15.0003	-38.9215
1989	2	-45.35	172	-4.5834	299	27.1208	-40.7666	-72.4708
1990	5	24.52	172	-15.94	299	8.2857	40.4572	16.2343
1991	3	163.8667	171	-14.752	299	-4.9625	178.6187	168.8292
1993	6	7.8167	171	-10.71	298	-35.73	18.5229	43.5516
1996	3	66.4333	170	-4.7918	299	-19.002	71.2251	85.4353
1998	1	-38.00	170	6.1547	297	9.2428	-44.1547	-47.2428
1999	3	33.9667	170	19.38	296	32.5537	14.5867	1.41
2000	2	106.15	170	27.0147	296	41.6207	79.1353	64.5293

The enrollment slope change in category one was not significantly greater by using the binomial test than that in category three ( $p=.77$ ), but was in comparison to category four ( $p<.001$ ). The median slope difference between category one and category three was -12.39, and 14.17 compared to category four. Null hypothesis three is rejected by comparison with category four, but not with respect to category three institutions.

**Hypothesis four.** Similar analyses were conducted to test hypothesis number four. In this case, the interest is in whether the trend in fiscal health changes as a result of initiating a new football program.

Table 12

*Slopes of Fiscal Health on Years Before and After Beginning Football Programs*

Year	Institution Category						One Minus Three	One Minus Four
	1		3		4			
	N	Mean	N	Mean	N	Mean		
1985	6	2.05	170	0.81	299	0.75	1.24	1.30
1986	8	0.83	170	0.37	298	0.69	0.46	0.14
1987	4	1.78	170	-0.46	298	1.24	2.24	0.54
1988	4	-1.17	170	-0.9	298	0.45	-0.27	-1.62
1989	2	-0.58	170	-0.74	298	-0.16	0.16	-0.42
1990	5	3.36	169	-0.42	298	-0.64	3.78	4.00
1991	3	0.80	169	0.47	297	-0.87	0.33	1.67
1993	6	3.90	169	1.12	297	-0.08	2.78	3.98
1996	3	-4.01	166	-1.25	293	-0.81	-2.76	-3.20
1998	1	-2.42	166	-1.91	292	-1.73	-0.51	-0.69
1999	3	8.55	166	-2.48	289	-2.21	11.03	10.76
2000	2	-1.17	166	-1.39	289	-1.58	0.22	0.41

The fiscal health slope change in category one was significantly greater by the binomial test than that in both category three and category four institutions ( $p < .001$  in both cases). The median slope differences between category one and categories three and four were respectively 1.24 and 1.30. Null hypothesis four is rejected, and alternative hypothesis four is supported. That is, beginning a football program tends to increase the upward trend of fiscal health.

## **Summary**

The purpose of this study was to determine if the addition of a football program in selected small, tuition-dependent private colleges is related to an increase in the enrollment and an improvement in the fiscal health of these institutions. The results of the analysis depicted in this chapter indicate to the affirmative: the addition of a football program appears to benefit the institution in both increased enrollment and fiscal health.

## Chapter Five

### Introduction

Small, tuition-dependent private colleges have arrived at a crossroad with few attractive paths available to them. They are likely to experience escalating costs and diminishing revenues for the foreseeable future with increasingly diverse competition from larger and wealthier private institutions, public universities and for-profit institutions. This situation has resulted in “limited pricing flexibility and a need to make significant capital investments” (Moody, 1990, p. 7). To add additional complexity to the issue, it has been observed that per-student costs are approximately 50% higher in private institutions than in public institutions (Winston & Yen, 1995), with only half of this difference being attributed to factors such as faculty salaries, enrollment, and research intensity (Toutkoushian, 2001).

What was true over a decade ago is even truer today; external factors impacting these colleges include changes in demographics (Christensen, Anthony, & Roth, 2004; Hossler & Hoeszee, 2005; NCES, 2006c; Snyder, Tan, & Hoffman, 2006), student demand (Hersh & Merrow, 2005; Moore, 2004; Newman, Couturier, & Scurry, 2004; Sora, 2001), stakeholder expectations, financial markets, and government regulations (Boverini, 2005; Hersh & Merrow, 2005; King, 2005; Kirp, 2004; Moore, 2004; Newman, Couturier, & Scurry, 2004). Therefore, small, tuition-dependent private colleges are forced to confront new realities that challenge their pricing and finance structures. For many, finding new ways to attract students is a necessity, not an option.

Higher education is perhaps the last industry to be affected by changes within its markets and small tuition-dependent colleges remain the most vulnerable, their very existence being threatened in many cases (Kirp, 2003; Roach, 2004; Townsley, 2002). If these institutions do not identify new strategic directions and take some calculated risks, they may face the same fate as the 29 small, tuition-dependent private colleges that closed their doors in 1990s, and the three that have closed since 2000 (Brown, 2008).

Although the forces of change within the marketplace that can threaten the survival of many small institutions increasingly present new challenges to attract and retain students (Christensen, Anthony, & Roth, 2004; Townsley, 2002), many small private institutions remain focused on competing with each other (Bok, 2006; Goldman, Gates, & Brewer, 2002). Christensen et al. (2004) noted that in order to survive, colleges must take action to mitigate the threat of disruptive innovation, and they must do it soon. As these colleges seek ways to attract more students they often heavily rely on co-curricular offerings such as athletics. Adding a new athletic program, however, requires a significant outlay of funds for its initiation and maintenance. Understandably, college administrators are hesitant to use the institution's scarce funds or limited bonding capacity to support co-curricular activities, no matter how promising the proposed result may be.



## **Problem Statement**

The purpose of this study was to determine if the addition of a football program in selected small, tuition-dependent private colleges is related to an increase in the enrollment and an improvement in the fiscal health of these institutions.

## **Research Questions**

This study examined the following research questions as they apply to small, tuition-dependent private colleges:

1. Does the initiation of a football program result in increased enrollment?
2. Does the initiation of a football program result in improved fiscal health?

## **Discussion of Results**

The results of the analysis in chapter four should be encouraging news to those who provide leadership and direction within small, tuition-dependent private colleges. Chapter two described the tremendous competitive pressures facing these relatively poor colleges, with limited reputation or awareness outside of their primary markets. Because of their distinctive missions and history, rarely do small, private tuition-dependent colleges choose to close if not for financial exigency, and for those that do continue to struggle, the major focus is unfortunately - survival from year to year, as opposed to healthier institutions that have the wherewithal to engage and execute long-range planning.

As the data in chapter four reflects, a large number of small, tuition-dependent private colleges benefitted both in enrollment and fiscal health gains with the

establishment of intercollegiate football on their campuses when compared to those similar schools that either had football or didn't during the time span of this study. These 52 category one schools have now joined the ranks of 172 category three colleges that had established programs. As a result, this research is most beneficial to those 300 institutions that may be considering undertaking this initiative.

For the purposes of commentary, the results of this research, as contained in chapter four, have been grouped to align the data to the research questions for this study. Regarding enrollment, the question reads: "Does the initiation of a football program result in increased enrollment?" The findings related to enrollment are as follows:

**Research question and finding 1.** Does a new football program increase the undergraduate enrollment of initiating institutions compared to those institutions not initiating a new football program? Initiating a new football program produces a greater increase in undergraduate enrollment for initiating institutions than for those institutions not initiating a new football program.

**Research question and finding 3.** Does a new football program increase the growth rate of undergraduate enrollment of initiating institutions compared to those institutions not initiating a new football program? Null hypothesis three is rejected by comparison with category four, but not with respect to category three institutions. Initiating a new football program increases the rate of growth of undergraduate enrollment of initiating institutions compared to those institutions not initiating a new football program.

The data indicates that beginning with the first year, enrollments increase, and continue to do so the ensuing four years of the study. Chapter two iterated the rationale for doing so. Enrollment management theory seeks to enhance and maximize the potential of institutions to attract and expand the market share of students from which they recruit students. While historical means of growing the student body was limited to the creation of new academic offerings, the contemporary practice has expanded that worldview to include the co-curricular. This new practice emphasizes the need for campuses to appeal to a wide range of interests that prospective students have when choosing a college, not solely the academic major. As the broad definition of co-curricular, includes intercollegiate athletics, football - the most popular sport in American high schools today, seems to be a logical offering consider.

These finding confirms the supposition that football positively impacts enrollment for those schools that initiate a new program with one caveat: the enrollment growth rate of colleges that have established football programs are very similar to those of newly established programs and therefore not significant.

**Research question and finding 2.** Does a new football program increase the fiscal health of initiating institutions compared to those institutions not initiating a new football program? Initiating a new football program produces a greater increase in fiscal health for initiating institutions than for those institutions not initiating a new football program.

**Research question finding 4.** Does a new football program increase the rate of improvement of the fiscal health of initiating institutions compared to those institutions not initiating a new football program? Beginning a football program tends to increase the upward trend of fiscal health. A new football program increases the rate of improvement of the fiscal health of initiating institutions compared to those institutions not initiating a new football program.

Chapter four demonstrates that not only did colleges with newly initiated football programs experience an immediate increase in enrollment, but that their fiscal health in that first year improved as well. Perhaps more importantly, this trend was maintained during the ensuing four years of the span of the study. Given the finding that net revenue increased at rates higher than those of similar colleges that had or didn't have football during the time span of the study, it is reasonable to speculate that average net revenue per student at the 52 small, tuition-dependent private colleges increased. This seems to be a logical premise given the fact that one of the initial qualifiers for inclusion in this study was the attribute of "tuition-dependency," deriving 80% of their net revenue from tuition.

Chapter two documents the trend towards increased discounting of tuition by small, tuition-dependent private colleges. The ability of these schools to manage their to generate needed increased net revenue is one of the most important indicators of long-term viability as these schools rely heavily on tuition revenue to fund salaries, technology, accrued debt, improvements and the maintenance of the physical plant.

This study does not account for the cost of initiating a football program, the provision of an annual operating budget to support the program, nor any long-term financial obligations incurred to fund the building of facilities that a football program requires. It is noteworthy that such expenditures would be reflected in the financial statements used for this study, and therefore it is all the more impressive that - even with the expense of the initial start-up costs, commitment to an annual operating budget and the increased debt payments to pay newly incurred obligations – the fiscal health of these 52 institutions improved. This study also does not account for the provision of gifts and donations to these schools that were used to offset the aforementioned expenditures.

### **Implementation for Practice**

**Demographics.** Traditional markets that colleges and universities depend on for the stability that accurate projections rely are far from stable. WICHE projections show significant declines in the overall numbers of high school graduates over the next decade or so, occurring in states where competition for students is already fierce and where a high proportion of U.S. colleges and universities exist—the Northeast, Great Lakes, and Midwest. For example, by 2022, declines in overall high school graduates will be seen in Michigan (-19%), New York (-17%), Massachusetts (-15%) and Pennsylvania (-11%). Even more ominous are the declines among Caucasian students who constitute the largest historic enrolled population in most of these colleges. Using the same four states as examples, declines in Caucasian students will include drops in Michigan (-24%), New York (-28%), Massachusetts (-28%), and Pennsylvania (-20%). And although there are

expected increases in under-represented populations, particularly Hispanics, the historic college-going rate of Hispanics is low and unlikely to offset the overall decline.

**The economy.** A recent survey (Noel-Levitz, 2011) indicates that an upheaval in the economy appears to be impacting students' college choice:

- 46% report that the current economic crisis has caused them to reconsider the schools to which they apply or may attend (*up from 34% last year*);
- 26% avoiding private school options (*up from 11% last year*);
- 25% commuting instead of living on campus (*up from 13% last year*);

**Discount rate.** Private colleges are spending more on grant aid than ever before, according a recent survey by the National Association of College and University Business Officers (NACUBO, 2010). "After years of stability, the average tuition-discount rate for full-time freshmen entering college in the fall of 2008 rose to 41.8 percent, up from 39.1 percent in the previous academic year." Not surprisingly, net tuition derived from tuition revenue fell by 2% between 2007 and 2008.

### **Further Questions**

Like any body of research that portends to address an issue with certainty, many more questions arise as a result. Future research in response to these questions will undoubtedly provide a valuable contribution to the literature on the subject of establishing new intercollegiate football programs at small, tuition-dependent private colleges. These questions include:

*Among the 52 institutions that initiated a football program, which ones saw the strongest and weakest performance?*

Although the general body of evidence supports the claim that starting a football program at small, tuition-dependent private colleges results in improved enrollment and fiscal health, there are instances where certain members of the 52 institutions studied didn't fare as well as others. Appendix B contains data specific to the two best and worst performing institutions in the study. Campbellsville University in Kentucky and Sacred Heart University in Connecticut, which started football in 1988 and 1991 respectively, showed the best results in this study, and Assumption College in Massachusetts and Southwest Assemblies of God University in Texas, which started football programs in 1988 and 1996 respectively, showed the worst.

In the previous five years before football, Sacred Heart was losing on average 95 students each year. After football was begun, they added 158 students on average each of the ensuing five years. Corresponding fiscal health measurements show improvement as well with the ratio of annual revenues to expenditures increasing by 1% after the start of football when compared to the previous five years.

Campbellsville University was losing 26 students on average each of the five years leading up to the start of football. In the inaugural and four ensuing years, the university averaged 76 additional students each year. Corresponding fiscal health measurements show improvement as well with the ratio of annual revenues to

expenditures increasing by 4% after the start of football when compared to the previous five years.

Assumption College was gaining 35 students on average each of the five years leading up to the start of football. In the inaugural and four ensuing years, the university lost an average of 14 students each year. Corresponding fiscal health measurements show that the ratio of annual revenues to expenditures decreased by 2% after the start of football when compared to the previous five years.

Southwest Assemblies of God University was gaining 120 students on average each of the five years leading up to the start of football. In the inaugural and four ensuing years, the university saw a decrease in the average gain to 85 students each year. More ominous for the institution, corresponding fiscal health measurements show that the ratio of annual revenues to expenditures decreased by 8% after the start of football when compared to the previous five years.

*Does adding football help address the gender disparity issue?*

One sub-surface theme that emerged in authoring chapter two was the issue of the gender imbalance that has become pervasive in American higher education. Since a major goal in adding football at small, tuition-dependent private colleges is to improve overall awareness, expand the market for prospective students and enroll a greater number of them, there is evidence that adding football may help campuses offset the growing disparity between men and women enrolled. A July 2006 article in the New York Times entitled “Small Colleges, Short of Men, Embrace Football” highlighted both



the need for small, tuition-dependent private colleges to bolster enrollment and fiscal health and address the gender imbalance on many campuses as well. The article used Seton Hill College in Pennsylvania and Shenandoah University in Virginia as illustrations. Both had recently added football with considerable success. They also saw a tightening of the campus gender ratio with Shenandoah moving from 31% male to 41% male and Seton Hill improving dramatically from 18% male; to 41% male (Pennington, 2006).

### **Summary**

This chapter summarized the results of this study addressing the effect of the commencement of intercollegiate football at small, tuition-dependent private colleges. The results showed a positive association between improvements in overall enrollment and fiscal health at institutions initiating football. The chapter concluded with the discussion of relevant application of these findings to practice and made recommendations for further research.

## **Appendix A**

The e-mail sent to over 400 athletic directors at selected private NCAA division II and III and NAIA institutions in October 2000:

Dear Colleague,

I am doing some preliminary data gathering on a dissertation project I am currently undertaking regarding college football. My impression is that there have been a number of institutions that have initiated football programs, many of them for the purposes of enrollment and revenue generation during the past 20 years.

If you would, please respond to the following:

1. Did the football program at your institution exist prior to the 1980 academic year?
2. Do you know of any institutions that have initiated a football program within the past 20 years?
3. Are you aware of any institutions that have dropped their football program within the last 20 years?

Other feedback you wish to provide me on the topic in general is most welcome. I greatly appreciate any assistance you could provide me.

Brian Dalton

Ph.D. Candidate, The University of Texas at Austin

## Appendix B

### Best and Worst Performing Institutions that Added Football

Institution	Year Begun	Average change of fiscal health per year		Average change of head count fall enrollments per year	
		Five Years Prior to Football	Five Years with Football	Five Years Prior to Football	Five Years with Football
Sacred Heart University	1991	1.0	2.0	-95.4	158.3
Campbellsville University	1988	-3.0	1.0	-26.2	76.6
Southwestern Assemblies of God University	1996	4.0	-4.0	119.7	85.0
Assumption College	1988	1.0	-1.0	34.9	-14.2

## Appendix C

### New Football Programs: 2001 - 2012

Ann Maria College (MA)	Shaw University (NC)
Ave Maria University (FL)	Stevenson University (MD)
Averett University (VA)	Stillman College (AL)
Becker College (MA)	St. Augustine's College (NC)
Birmingham Southern University (AL)	St. Paul's College (VA)
Christopher Newport University (VA)	University of the Incarnate Word (TX)
College of St. Scholastica (MN)	Wayland Baptist University (TX)
Concordia University (MI)	
Finlandia University (MI)	
Gallaudet University (DC)	
Lake Erie College (OH)	
Lincoln University (PA)	
Lindsey Wilson College (KY)	
Notre Dame College (OH)	
Pacific University (OR)	
Presentation College (SD)	
Rockford College (IL)	
Siena Heights University (MI)	

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