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entitled

A National Study on Cost Containment Practice Savings at
Public Community Colleges

by

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Submitted to the Graduate Faculty as partial fulfillment of the requirements for
the Doctor of Philosophy Degree in Higher Education

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In the recession of 2008-09, community colleges were experiencing record enrollment increases. Meanwhile, state governments, with their loss in revenue, were being forced to cut funding to the institutions. To meet the growing enrollment demand and still provide access to higher education, institutions needed to increase revenue. Their only options were to raise tuition and fees or reduce operating costs. With the public outcry about the rising cost of higher education, the question of whether community colleges practiced cost containment or not needed to be explored.

In an exhaustive search of the literature it was found that a study of cost containment practices in higher education was done for public four-year colleges and universities, but not for public community colleges. A survey, titled The Public Community College Cost Containment Questionnaire, was sent to 981 community colleges to assess if cost containment practices were being utilized for fiscal year 2008-

09. The responses demonstrated that institutions placed a strong importance on cost containment practices. It was found that the most savings documented by the institutions were realized through the following: facility and infrastructure energy management, adjustments to staffing levels, and changes in academic and extracurricular activities.

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Table of Contents

Abstract	iii
Acknowledgements	v
Table of Contents	vi
List of Tables	xi
List of Figures	xiv
I. Introduction	1
A. Background of the Problem	1
B. Public Opinion on Rising Tuition and Fees	2
C. Federal Government on Rising Tuition and Fees	3
D. Congress Stepping into Discussion on Cost and Prices	4
E. The Economy	6
F. Educational Policy Center	7
G. The Impact of the 2009 Economy on Community Colleges	8
H. Community Colleges Mission	10
I. Community College Collision 2009	12
J. Statement of the Problem	13
K. Conceptual Framework	14
L. Purpose of the Study	15
M. Research Questions	15
N. Need for the Study	16
O. Limitations of the Study	16
P. Delimitations of the Study	17

Q. Definitions	17
R. Assumptions	18
S. Summary	19
II. Literature Review	20
A. Introduction	20
B. Cost Language Definitions	20
C. Community Colleges Beginning and Growth	21
D. Community College Evolution	24
E. Community College in 2009	26
F. National, State, and Local Economy	27
a. National Economy 2009	27
b. State and Local Economy 2009	32
G. The American Recovery and Reinvestment Act of 2009	34
H. Community College History of Revenue, Resources, and Finances	35
I. Community College 2009 Revenue, Resources, and Finances	37
J. Community Colleges and Appropriations	39
K. Organizational Efficiency to Resource Dependency Theory	41
L. Cost Containment in Higher Education History	43
M. Twenty-First Century Cost Containment	44
N. Summary	53
III. Methodology	54
A. Introduction	54
B. Research Questions	54

C. Instrumentation	55
D. Theoretical Framework	55
E. Original Survey	56
F. Design of Survey	56
G. Modification	64
H. Questionnaire Tested for Study	64
I. Population	64
J. Unit of Analysis	65
K. Data Gathering	65
L. Analysis	66
M. Limitation of the Study	67
N. Summary	68
IV. Findings	69
A. Introduction	69
B. Overview of Findings	69
C. Cost Containment Practices Used at Public Community Colleges [RQ1]	71
a. Cost Containment Practice by Category	71
b. Cost Containment Practice by Category Dollars	73
c. Summary of Cost Containment Practices by Category	74
d. Cost Containment Practices by Details Areas	75
e. Cost Containment Practices by Dollar Savings in Detail Areas	84
f. Cost Containment Practices and Consortiums and Outside Consultants	85

D. Cost Containment Practices and Institutional Characteristics [RQ2]	86
a. Geographical Region Cross Tabulation	87
b. Degree of Urbanization Cross Tabulation	88
c. Carnegie Classification 2005 Cross Tabulation	90
E. Cost Containment Practices by Institutional Best Practice [RQ3]	91
F. Summary	93
V. Discussion, Recommendations, and Conclusions	95
A. Introduction	95
B. Recapitulation of the Research	95
C. Overview of Research Questions Discussions	97
D. Discussion of Cost Containment Practices by Usage	97
E. Discussion of Cost Containment Usage Dollars Savings Detail	99
F. Discussion of Consortium and Outside Vendors Usages	100
G. Discussion of Cost Containment Practices by Institutional Characteristics	101
a. Discussion of Geographical Region	101
b. Discussion of Degree of Urbanization	102
c. Discussion of Carnegie Classification	103
H. Discussion of Cost Containment Practices by Institutions Best Practices	104
I. Discussion of Summary of Findings	105
J. Discussion of Hurley’s Study versus Public Community College Study	106
K. Discussion of Theoretical Framework	107
L. Recommendations	109

M. Future Studies	111
a. Future Value for Presidents: New Revenue Generation	112
b. Public Community College Strategic Planning	113
N. Limitation to the Study	114
O. Conclusions	114
References	116
Appendices	
A. Introduction Letter to Institutional Presidents	125
B. Dr. George R. Boggs Endorsement Letter	126
C. Electronic Questionnaire	127
D. Mailed Questionnaire	137
E. Original Questionnaire	141

List of Tables

Table 1: The Number of U.S. Community Colleges from 1901 through 2005	23
Table 2: Percentage of Income from Various Sources for Public Two-Year Colleges from 1918 through 2009	37
Table 3: Higher Education Price Index Yearly Percent Change from 2002 through 2009	48
Table 4: Summary of PC4 Questionnaire Section I, Institution on Cost Containment	57
Table 5: Summary of PC4 Questionnaire Section II, Detailed Areas of Cost Containment	58
Table 6: Summary of PC4 Questionnaire Section III, Institutional Reporting on Cost Containment	58
Table 7: Summary of PC4 Questionnaire Section IV, Institutional Consortium on Cost Containment	59
Table 8: Summary of PC4 Questionnaire Section V, Institutional Employees on Cost Containment	60
Table 9: Summary of PC4 Questionnaire Section VI, Outside Consultant on Cost Containment	61
Table 10: Summary of PC4 Questionnaire Section VII, Other Areas of Savings on Cost Containment	62
Table 11: Summary of PC4 Questionnaire Section VIII, Budgets, Dollar Savings, and Percent of Revenue for Public Community Colleges	63

Table 12: Summary of PC4 Questionnaire Section IX, Endowment Resource for Public Community Colleges	63
Table 13: System Results for Public Community College Cost Containment Questionnaire	66
Table 14: Rank Ordered by Relied Upon Level on Cost Containment Categories	72
Table 15: Rank Ordered by Relied Upon Plus Analyzed Category Averages	73
Table 16: Rank Order by Cost Containment Dollar Savings	74
Table 17: Summary of Leading Categories for Cost Containment Savings	75
Table 18: Rank Ordered Salaries & Benefits Category Details and Percent Results	77
Table 19: Rank Ordered Staffing Levels Category Details and Percent Results	78
Table 20: Rank Ordered Business Services/Processes Category Details and Percent Results	80
Table 21: Rank Ordered Academic & Extracurricular Category Details and Percent Results	82
Table 22: Rank Ordered Student Services Category Details and Percent Results	83
Table 23: Rank Ordered Facilities & Infrastructure Category Details and Percent Results	84
Table 24: Total Dollars Saved for Cost Containment Areas and Percent of Total	85

Table 25: Geographic Region & Importance of Cost Containment	
Cross Tabulation	88
Table 26: Degree of Urbanization & Importance of Cost Containment	
Cross Tabulation	90
Table 27: Carnegie Classification 2005 & Importance of Cost	
Containment Cross Tabulation	91
Table 28: Public Community Colleges Summarized Best Practices	92

List of Figures

Figure 1.	Flow of funds for a public community college	9
Figure 2.	Public community college revenue by source of revenue	15
Figure 3.	The housing market from December 2007 through September 2009	28
Figure 4.	Consumer spending in the U.S. Economy	29
Figure 5.	U.S. inflation and deflation from December 2007 through September 2009	30
Figure 6.	U.S. stock market from December 2007 - September 2009	31
Figure 7.	Post World War II recessions	32
Figure 8.	The percentage change of state and local taxes	33

Chapter One

Introduction

This national study on cost containment practices at public community colleges was conducted to develop an understanding of whether these institutions were practicing cost containment at a time of declining state funding and double-digit tuition increases. Central to this study is a dialogue that has ensued among the public, Congress, and public community colleges about continuously increasing educational costs, federal regulations, the national recession and its impact on state and local revenues, and the impact of these issues on community colleges. As community colleges experienced a reduction in revenues during the past three fiscal years, they also responded to calls from the public, state legislatures, and Congress to control costs and implement cost containment practices. This study queried community college presidents to determine whether community colleges implemented cost containment practices during a time of declining revenues.

Background of the Problem

H.G. Wells wrote, “History is becoming more and more a race between education and catastrophe” (Wells, 1920, p. 594). This quotation accurately expresses the idea that the quality of postsecondary instruction and research affects the value and effectiveness of education at every level, so, according to Lingenfelter (2009), the “un-funding of higher education” is a serious matter (p. 1).

The National Commission on the Cost of Higher Education (NCCHE) explored costs from a different point of view. In its final report, published in 1997, the NCCHE (1998) stated that “the phenomenon of rising college tuition evokes a public reaction that

is compared to the 'sticker shock' of buying a new car" (p. 13). The report also found that financing a college education in 1998 was a serious and troublesome matter for the American public. This fact remains true in 2009 (Immerwahr, Johnson, Gasbarra, Ott, & Rochkind, 2009b).

Double-digit tuition and fee increases at universities have led to a rising stream of complaints by the public, policy makers, and Congress. Tuition and fees have risen faster than the overall inflation rate of the United States every year since fiscal year 1972-73. The cost of higher education, including the sharp increase in tuition, has outstripped the growth of the public's income, taking an ever larger portion of consumers' annual earnings to finance a college education (Vedder, 2004).

Public Opinion on Rising Tuition and Fees

Recently, the attitude of the American public has been on a virtual collision course with higher education tuition policies. College has been perceived more frequently as absolutely essential for professional success, but each year more Americans have felt that a college education was out of their reach (Immerwahr et al., 2009b). A study on public opinion conducted by Public Agenda and the National Center for Public Policy and Higher Education, demonstrated that changes in the attitudes of Americans had taken place from early 2007 to December 2008. The survey suggested that 55% of Americans felt that a college degree was necessary and that it was the only way to succeed in America and a global economy. The survey further suggested that 67% of Americans felt access to higher education was a problem and that qualified people did not have the opportunity to attend college (Immerwahr et al., 2009b).

The public's concern was that college costs were spinning out of control, with 63% reporting they believed that college tuition rose faster than the cost of other items (Immerwahr et al., 2009b). The deterioration of college affordability throughout the United States contributed to the disparity between higher education opportunity and attainment. The erosion of college affordability was exacerbated not only by increased tuition but also by relatively flat or declining family incomes. As a result of those trends, the financial burden of funding college costs increased substantially, particularly for low- and middle-income families, even when scholarships and grants were taken into account (National Center for Public Policy and Higher Education [NCPPE], 2008).

Federal Government on Rising Tuition and Fees

After listening to public complaints about the ever-increasing costs of tuition and fees, Congress commissioned studies on university and college tuition and fees. In 1998, two studies were presented to Congress: the *National Commission on the Cost of Higher Education* and *Straight Talk About College Costs and Prices*, which later influenced changes to the Amendment to the Higher Education Opportunity Act of 1965 (1998 Amendment of the HEOA).

The 1998 amendment of the HEOA allowed Congress to direct the commissioner of education statistics to conduct studies on higher-education operational costs paid by institutions and the costs paid by students and their families. These changes required the National Center for Education Statistics (NCES) to standardize definitions, redesign data systems to improve timeliness and usefulness, and provide consumer information to students and their families about the cost of college tuition and student financial aid (National Center for Education Statistics [NCES], 2003).

The NCES commissioned three additional studies to address the concern of rising tuition and fees: *Study of College Costs and Prices, 1988-89 to 1997-98*; *What Students Pay for College: Changes in Net Price of College Attendance Between 1992-93 and 1999-2000*; and *A Study of Higher Education Instructional Expenditures: The Delaware Study of Institutional Costs and Productivity* (NCES, 2003). These studies addressed the financing of higher education but not cost containment.

Congress Stepped into Discussion on Costs and Prices

The 1998 Amendment of the HEOA gathered information that Congress needed to understand the concern over rising college costs. In 2006, under Secretary of Education Margret Spellings, the Commission on the Future of Higher Education was formed, which later presented higher education reports to Congress. The final report by the Commission, titled *A Test of Leadership: Charting the Future of U.S. Higher Education*, included findings on access, cost, affordability, learning, transparency, innovation, and accountability. The Spellings report gave Congress information on the future of higher education, provided that the status quo remained unchanged (U.S. Department of Education, 2006).

As Congress continued to conduct studies and gather information, Public Agenda and the National Center for Public Policy in Higher Education (NCPPE) began publishing a biannual report (1993) known as *Squeeze Play*, which illustrated the changes in public opinion regarding issues related to higher education (Immerwahr et al., 2009b). In 2008, the NCPPE published a report titled *The Iron Triangle: College Presidents Talk about Costs, Access, and Quality*. Several college and university presidents were interviewed about issues related to higher education over which the public had expressed

concern. In a statement, the presidents conceded that inefficiencies existed within the educational system just as they did within any complex system, but most believed that colleges and universities had done much of what they could to become cost-effective (Immerwahr, Johnson, & Gasbarra, 2008, p. 5). The public's consternation regarding increased college costs had been discussed during the past two decades but was a mere annoyance to colleges and universities. It was not until the passage of the Higher Education Opportunity Act of 2008 (HEOA of 2008), when Congress stepped in to address the concerns about increasing costs of higher education, that a serious discussion began between Congress, policy makers, higher-education institutions, and the public (Immerwahr et al., 2009b).

This emerging discussion illuminated concerns about institutional spending, lack of fiscal transparency, and the efficient use of public college facilities. The annual increase of tuition and fees, along with the perception that higher education spending was not well managed, caused the public and policy makers to lose confidence in higher education administration and ask what measures colleges and universities were taking to contain and reduce costs (Wellman, Desrochers, & Lenihan, 2008).

With approval of the HEOA in 2008, the federal government mandated controls over tuition and expenditures without determining whether institutions had been controlling costs and practicing cost containment. In an overview of the HEOA of 2008, Senator George Miller (Democrat) discussed the opportunities the changes called for in the Act and what these changes would mean for the public. The Act encouraged colleges to rein in price increases and held colleges and universities accountable for tuition hikes by requiring them to report their reasons for tuition increases. It further ensured that

states maintained higher-education funding and encouraged colleges to use innovative methods to keep costs down (Miller, 2009).

A report by the NCPPHE titled *Campus Commons?* (2009) reviewed state higher education officials' concerns about rising costs and the ability of colleges to produce quality graduates. As a result, college and university presidents and CFOs were caught between declining state revenues and rising expenses. The expected results were to increase higher education prices or decrease availability and lower quality (Immerwahr, Johnson, & Gasbarra, 2009a).

Faculty members also expressed concern about productivity and efficiency, as noted by Massy (2004), and recognized increased costs in higher education but took issue with the quality of students. Faculty members witnessed inadequately prepared incoming students, remediation that diluted quality, too many deficient students dragging down the merits of good students, and administrative pressure to retain students—all leading to lower standards. The public understood students were caught between a growing sense that a college education was necessary for success and the growing fear that increased college tuition and fees were putting higher education out of their reach (Immerwahr et al., 2009b).

The Economy

In 2008, as an unprecedented fiscal meltdown played out, America faced a growing crisis in public higher education. At the same time, growing concerns about student access and increasing costs plagued the nation (Jones & Wellman, 2009). The U.S. economy declined sharply when the housing market collapsed and the stock market hit record lows. The economy was in the longest-running recession in recorded history,

dragged on by the credit crisis. State and local governments faced their own economic downturn as a result of revenue reductions and budget gaps expected to exceed \$100 billion in fiscal year 2009-10 and \$350 billion over the next three years (Boyd, 2009). With state and local appropriations declining, community colleges were forced to increase tuition and fees, which brought more attention to cost containment practices (Bess & Dee, 2007).

Educational Policy Center

A report presented to the National Council of State Directors of Community Colleges-discussed local and state appropriations that were being adjusted due to the 2008-09 recession. The report, titled *Funding and Access Issues in Public Higher Education: A Community College Perspective*, discussed the results of a survey on state appropriations sent out to state directors of community colleges (Katsinas & Tollefson, 2009).

The national survey results indicated that half of the states expected to face midyear reductions in their appropriations. Other key findings from the survey included the following:

- Directors predicted that tuition at community colleges would rise at more than double the rate of inflation for the 2009-10 fiscal year.
- In a period of all-time record enrollments, the directors predicted that state operating-budget support for community colleges would decline by one percent in fiscal year 2009-10.
- By a ratio of 3 to 1, directors stated high unemployment was straining the capacity of their community colleges to retrain workers for new jobs.

- Three of four directors in states with spending formulas for community colleges said their states did not fully finance the formulas in the 2008-09 fiscal year. (Gonzalez, 2009; Jaschik, 2009)

The survey results revealed issues community colleges faced in the recession as enrollments drastically increased and budgets were cut. The average tuition increase that directors predicted at their colleges for the 2009-10 fiscal year was five percent. Katsinas (2009) stated, “The state budget priorities speak to the severe competition public education encounters and may indicate a major public-relations challenge in higher education that community colleges face to promote the cause of access” (as cited in Gonzalez, 2009, p. 2).

The Impact of the 2009 Economy on Community Colleges

In the twenty-first century, 82% of community colleges were considered public institutions. The majority of these community colleges received their funding from state and local appropriations and tuition and fees (Ratcliff, 1992). According to the American Association of Community Colleges (AACC), public community colleges received revenue from state appropriations (38%), from local appropriations (17%), from tuition and fees (20%), and from other sources (24%), such as grants and income (American Association of Community Colleges [AACC], 2009).

Hudson (2008) presented in his report, *A Policy Analysis of Community Colleges Funding in Texas*, a model of the flow of funds for a public community college (see Figure 1). This model demonstrates how three economic sources (the federal government, state and local funds, and the economy) move money towards the college. The federal government funds students through student aid and finances community

colleges through grants. Available government funds, which are defined as state and local funds, appropriate money through income taxes, are obtained through the economy. The economy provides income to students, who in turn pay state and local taxes. This model illustrates how a change in the economy can affect available government funds and ultimately public community colleges.

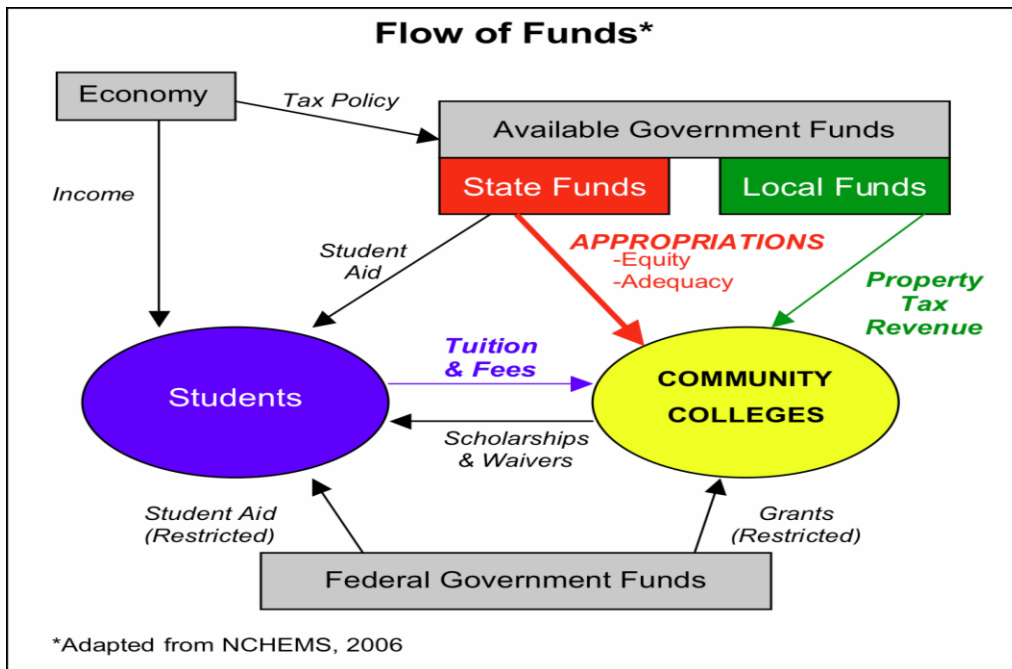


Figure 1. Flow of funds for a public community college (Hudson, 2008).

In 2007, public community colleges enrolled close to seven million full-time and part-time students for credit classes, about half of all students in public higher education, but community college state budgets total only about one-sixth of that of public four-year colleges and universities, according to the National Center for Education Statistics (NCES) (Shaffer, 2009).

California Community Colleges, the nation's largest higher education system, experienced the problem of too many students and insufficient funding. An announcement from Jack Scott, Chancellor of California Community Colleges, stated that enrollment increased 4.9% or more for fiscal-year 2009-10, though \$840 million in state funding had been lost for the 2009-10 academic year (Grove, 2009, p. 1). San Diego Community College District was expecting to cut \$10 million from its 2009-10 budget after it had already cut \$10 million from its 2008-09 budget. The results were expected to be 117 full-time employees laid-off and 1,300 classes cut from the schedule (Strauss, 2009). Even with enrollment climbing, officials at community colleges in the Washington D.C. area also were trying to find ways to handle a decline in resources without rejecting students. Northern Virginia Community College (NVCC) lost more than 10%, or \$8.2 million dollars, over the past two years and was prepared to cut another 5% from the 2009-10 budget. NVCC had been recovering a portion of the funding that was lost through budget cuts by increasing tuition rates; however, it found that this practice enabled the college to meet current demands, but not to keep pace with college growth rates (Strauss, 2009).

Community Colleges Mission

The mission of community colleges has been to enroll students using an open-access admissions policy, which aids student populations that traditionally have not been prepared to meet the challenges of the college environment (Goldrick-Rab, Harris, Mazzeo, & Kienzl, 2009). Vedder (2004) stated that the national economic crisis pushed more students towards community colleges, increasing enrollment; however, these community colleges have been receiving less state and local funding. This increase in

enrollment combined with decreased funding has become, in turn, a strategic challenge for community colleges.

Community colleges provided access to higher education through their open admissions mission, which has resulted in a mixture of diverse students with dramatically varying goals. Students have turned to community colleges for what they offer: the opportunity to earn a degree, transfer to a four-year institution, and receive on-the-job training (The Center for Community College Student Engagement [CCSSE], 2008). According to the Department of Educational Statistics, community college enrollment grew 741% from 1963 to 2006, compared with public four-year colleges, which grew 197% during the same time (Goldrick-Rab et al., 2009). In 2008-09 the American economy was in a recession, and unemployment was rising, but students continued to enroll at community colleges (Goldrick-Rab et al.).

The state of California cut \$840 million from the operating budgets of community colleges, yet Chancellor Jack Scott announced a fourth consecutive increase in enrollment. California Community Colleges grew by 15.9%, almost 400,000 students, an increase of 4.9% for fiscal year 2009-10 (Johnson, 2009). According to the AACC, community colleges experienced a national increase in attendance, with reports that confirmed growth rates of 10% or higher for fall 2009 (Staff, 2009). Connecticut's Community College System recorded the highest spring semester enrollment in history, with a 7.2% increase in head count. Raleigh North Carolina cut \$56 million from its community college education system for 2008-9, even as enrollment increased 14% over the previous year (Gallagher, 2010; Smith, 2009).

Community College Collision 2009

Community colleges faced a tsunami of students that many institutions did not have the space to accommodate, especially in peak times and in high-demand programs (Biemiller, 2009). The number of community college students swelled, but the systems had neither the funds nor the capacity to serve them all (EdSource, 2009). The community demand was driven by a population that needed retraining because of unemployment as well as a large number of recent high school graduates who could not afford a four-year degree (Biemiller, 2009).

In the state of California, budget cuts affected state-funded student aid, limiting access for lower-income college-bound students. This effectively kept an estimated 250,000 students out of classes and essentially closed the door on an open-door policy, creating conflict with the mission statement (Strauss, 2009).

In the Washington D.C. area, community college officials said they were trying to find ways to handle the decline in state and local subsidy without rejecting students, but with enrollment growth, they felt it might not be possible to serve everyone. Community colleges were the safety valve for the neediest students, but these students, most first generation minorities, were working against new enrollment caps or growing classroom sizes (Strauss, 2009). Community colleges were under more stress than ever, just when there was more demand than ever. Hundreds of thousands of students were likely to be turned away from low-cost community colleges across the country over the next year because of funding cuts at a time when record numbers of students were flocking to open-admission schools (Strauss, 2009).

As community colleges were scrambling to respond to the influx of students by scheduling more courses early in the morning (Biemiller, 2009), or late at night—e.g., 11:30 p.m. to 2:30 a.m., as at Bunker Hill Community College (Goodnough, 2009)—others were capping enrollment. Miami Dade Community College, which traditionally had an open-admission policy, announced plans to cap enrollment (Killough, 2009).

For public community colleges to survive the reduction of state and local funding and the community's growing need for education and training, they would have to restrain tuition and fee increases and show fiscal responsibility and efficiency. Institutions would have to contain costs and implement cost containment strategies.

Statement of the Problem

This study focuses on whether community colleges practiced cost containment. A questionnaire was conducted of public community college presidents to determine whether cost containment was important to public community colleges; what relationship, if any, institutional characteristics played on cost containment practices; and what cost containment best practices the institutions were practicing. The factors studied included staffing levels, salaries, business services, academic programming, student services, and facilities, among others. The results of this study—i.e., a determination of whether cost containment practices were implemented—benefits institutions by adding to the information concerning their fiscal and efficient management of education dollars and facilities.

Conceptual Framework

A growing problem for colleges and universities was that state governments were facing budget deficits estimated at \$34 billion for fiscal year 2008-09 and more than \$100 billion for fiscal year 2009-10 (Boyd, 2009).

Resource Dependency Theory, developed as a business model by Gerald Salancik and Jeffery Pfeffer in 1974, states that an organization's survival is dependent on its ability to attract resources from the environment and to control costs and expenditures in order to make sure those resources are appropriate (Bess & Dee, 2007; Pfeffer & Salancik, 2003). All public, higher education falls into this category. These organizations cannot produce the necessary resources internally, nor can they obtain the necessary resources at will from the environment; therefore, they are dependent on external entities for revenue (Pfeffer & Salancik, 2003).

As community colleges lose revenue in one area, they must look for alternatives to maintain operations. In 2009, with the nation moving through a recession, the impact to public community colleges was three-fold with local, state, and federal funding all reduced. In a resource dependency model, the survival of community colleges is dependent on attracting new resources and controlling expenditures (Pfeffer & Salancik, 2003). With tuition and fees under their control, would community colleges practice cost containment, or would they just defer to raising tuition and fees?

The largest source of revenue for community colleges was state government (38%), followed by tuition and fees (20%) and local taxes (17%) (See Figure 2) (AACC, 2009). Since colleges received 38% of their revenue from state funding, they were dependent on the state, but because state funding was dropping nationally, colleges have

had to become more dependent on the public—i.e., consumers—who were demanding that tuition and costs be contained (Pfeffer & Salancik, 2003).

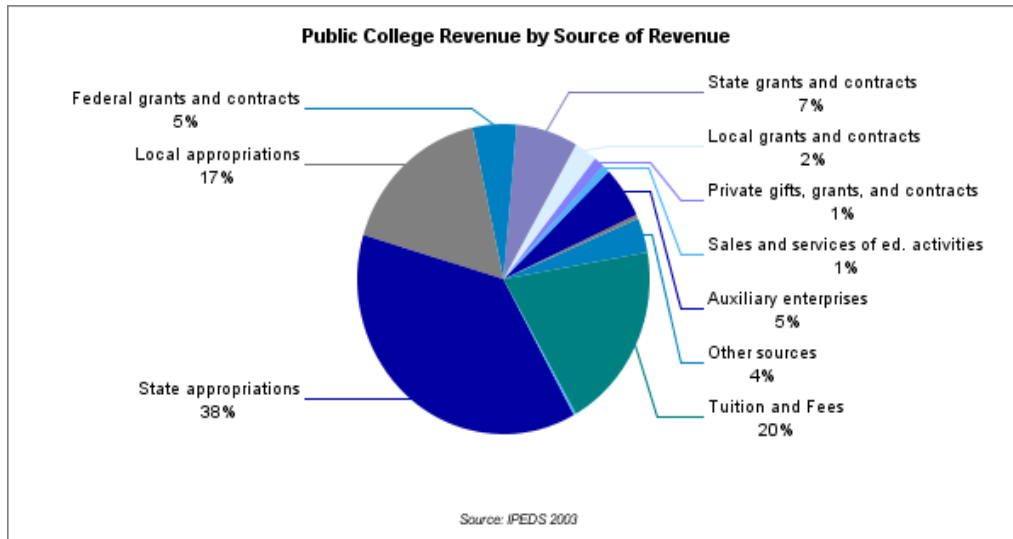


Figure 2. Public community college revenue by source of revenue (American Association Community Colleges, 2009).

Purpose of the Study

The purpose of this national study on cost containment practices at public community colleges is to develop an understanding of whether public community colleges practiced cost containment during a time of declining state funding and double-digit tuition increases.

Research Questions

The research questions guiding this study were as follows:

- 1.) What cost containment practices were utilized by public community colleges in the United States?

2.) What relationship did institutional characteristics of public community colleges have on the cost containment practices of public community colleges?

3) What cost containment best practices were reported by public community colleges in the United States?

Need for the Study

In an exhaustive search of the literature focusing on public community colleges, it was found that research on cost containment practices has been conducted primarily on public four-year colleges and universities. A national study on the cost containment practices of public community colleges was needed at a time when state governments were cutting funding to these institutions. The purpose of this research study was to fill a void in the current body of knowledge.

Limitations of the Study

Limitations to this study were associated primarily with the methodology and the questionnaire. The questionnaire distributed was originally designed to query public four-year colleges and universities; however, it was adapted for public community colleges and was distributed both by electronic and direct mail to 940 public institutions, and 261 colleges responded. The questionnaire itself consisted of 43 questions and requested information from fiscal year 2008-09. The length of the questionnaire may have been a hindrance to college personnel and may have contributed to the low response rate of 27.8%.

A second limitation to this study involved a discrepancy between the time frame in which the survey was administered and the time frame under investigation. In response to the question of whether institutional characteristics played a role in cost

containment practices, many respondents asked to provide information based on the 2009-10 fiscal year; however, the targeted time frame was fiscal year 2008-09, so the results could be cross tabulated with the most recent information from the Integrated Postsecondary Education Data System (IPEDS).

A final limitation was the use of Likert-type response items. The response options to one of the questions were *extremely important, very important, important, not important, and not at all important*. These response options may not have provided enough discrimination due to the small intervals between the scale points and the fact that three options indicated “favorable” responses while only two options indicated “unfavorable” responses. This could have resulted in an inability to distinguish reliable differences among the response options, and the variations could have skewed the responses in a positive direction,

Delimitations of the Study

The selection of the sample to study public community colleges and omit private community colleges and tribal colleges was a delimitation of this study. The selection of this sample restricts institutions with different sources of funding. Excluded were private institutions, which are eligible to receive funding from companies and organizations, and tribal institutions, which receive funding from the federal government.

Definitions

The following terms appear in this study. To assure common understanding, the definitions of these terms are listed below:

Costs in higher education refer to the expense or expenditures an institution of higher education incurs to deliver an education to a student (NCCHE, 1998).

Prices are defined as the proportion of the costs that students and families have to pay, which are tuition and fees (NCCHE, 1998).

Cost cutting is defined as reducing the unit cost of production. This definition comes from the production aspect and refers to the reduction of costs related to producing the same product for less total expense to the organization (Hurley, 2008).

Cost containment is a reduction in the growth of spending by maintaining organizational costs within a specified budget—i.e. restraining expenditures (Hurley, 2008).

Cost management does not automatically mean that costs are being reduced or contained but that resources are being reallocated from non-essential areas of the college or university to essential areas, as defined in the policies of the institutions' (Hurley, 2008).

Appropriation, state appropriations, state funding is when the state allocates money to state entities or institutions (NCCHE, 1998).

Public community college, often referred to as a “two-year college” or “junior college,” is an established state entity that receives state funding to educate students during their freshman and sophomore years (NCCHE, 1998).

Assumptions

Cost containment practices at public community colleges have not been studied extensively, but this does not mean that the institutions did not practice cost containment. As a researcher, the assumption in this study was that public community colleges practiced cost containment, but did not publish or promote the practices they utilized or how much money they may have saved doing so.

A questionnaire was sent to public community college presidents about their cost containment practices, and the assumption was made that the responses given by these presidents were approximations based on their knowledge and/or experience and from the specified time frame. It was also assumed cost containment was an important issue to college presidents and that respondents answered the questionnaire honestly.

Summary

This chapter provides background information about the importance of public community colleges in higher education. It provides a context for understanding that if no action were taken, there would be a collision between higher education and public funding. Public community colleges have registered more than half of all students enrolled in credit-bearing classes, and that number has been growing each year; however, these public community colleges have received less than one sixth of the funding as a result of cuts in state budgets.

This dissertation is organized into five chapters. Chapter One presents background information about the study and the research problem. Chapter Two provides a comprehensive review of the literature pertaining to four-year colleges and universities relevant to community colleges and cost containment practices. It also provides an overview of the Resource Dependency Theory, which was used to study the importance of the change in revenue source. Chapter Three describes the research methods, including the context of the study and the questionnaire. Chapter Four analyzes the questionnaire responses and answers the research questions. Finally, Chapter Five discusses conclusions, suggestions for popular practices, and recommendations for future studies.

Chapter Two

Literature Review

Introduction

An exhaustive review of the current literature has revealed that past and current research on cost containment practices in higher education has been conducted with respect to public four-year colleges and universities, with no attention (or documentation) focused on public community colleges. Research has been conducted on areas that were considered important points of interest for cost containment practices at public four-year institutions, and it should be understood that public community colleges follow the same logic, funding practices, and trends in their structure, and they also experienced similar opportunities and needs on their campuses for cost containment controls and practices.

Cost Language Definitions

A brief review of the language used to describe costs and other financial terms is provided to provide clarity and to set the direction of this study. Cost language is broken down into two segments that differentiate between costs and prices (NCCHE, 1998). Costs in higher education refer to the expense or expenditures an institution of higher education incurs to deliver an educational product to a student. Prices are defined as the proportion of the costs students and families have to pay—for example, tuition and fees. Cost language further distinguishes different aspects of costs and the benefits that colleges and universities receive when using them (Hurley, 2008). Cost-cutting refers to the process of reducing the unit cost of production. This definition has its origins in the area of production and views the reduction of costs related to producing the same product (service) for less total expense to the organization. Cost containment refers to the

reduction in the growth of spending by maintaining organizational costs within a specified budget and thus restraining expenditures. Cost management does not automatically mean that costs are being reduced or contained, but that resources are being reallocated from non-essential areas of the college or university to essential areas, as defined in the policies of the institution (Hurley, 2008).

Community Colleges Beginning and Growth

The Morrill Acts of 1862 and 1890 established public support for colleges and universities within every state, but it was not until 1901 that these Acts were used to establish the first community college in Joliet, Illinois (Cohen & Brawer, 2008). In 1907, California passed legislation authorizing high schools to offer the first two years of a college education, and by 1917, the state legislature reaffirmed the right of local school districts to organize public junior colleges. Within the first 22 years of the 20th century, 37 of the 48 states were home to more than 74 institutions (see Table 1) (AACCC, 2006), but it was not until the 1960s that the number of community colleges started to grow (Mellow, 2000).

Congress passed the Servicemen's Readjustment Act in 1944, after World War II, as a result of the GI Bill. The Servicemen's Readjustment Act made available the first large-scale financial aid program and made it possible for people to be reimbursed not only for their tuition but also for their living expenses while attending college, resulting in a rapid increase in college enrollment. This Act, also known as the GI Bill of Rights, basically provided a scholarship for every eligible veteran who sought a college education (Cohen & Brawer, 2008). It altered the view of higher education by breaking the social barriers for every American and set a precedent for student financial aid

programs that exist today. The GI Bill, and later on student aid programs, impacted community colleges' growing enrollment, the diversity of students enrolled, the programs offered, and the missions of community colleges (Vaughan, 2006).

The changes to community colleges did not stop with the GI Bill, but continued to move forward with the Truman Commission Report. Early in 1947, the President's Commission on Higher Education for American Democracy, later called the Truman Commission Report, preserved and enhanced the democratic ideals of education by asserting that 49% of high school students could benefit from two years of education beyond high school and wanted to offer more opportunities for a college education (Vaughan, 2006; Brubacher & Rudy, 2004). The members of the Truman Commission believed that the barriers to higher education needed to be eliminated and that the best way to accomplish this was to establish a network of publicly supported two-year institutions, which the Commission later called community colleges (Vaughan, 2006).

The Truman Commission envisioned community colleges as publicly supported two-year colleges and emphasized the importance of working with other public schools. The members of the Commission believed that community colleges should be located close to communities and their citizens, charge little or no tuition for the education provided, serve as cultural centers for the community, offer continuing education for adults as well as technical and general education, be locally controlled, and be part of each state's and nation's education system (Vaughan, 2006).

Community college numbers grew from an estimated 238 institutions to 330 institutions by 1950, primarily as a result of the GI Bill and the Truman Commission Report (AACC, 2006). Community colleges experienced their largest growth phase as a

result of the open-admissions movement in the 1960s (see Table 1) (Brubacher & Rudy, 2004). Community Colleges were urged by the Carnegie Commission on Higher Education to adopt an open-door policy for enrollment as well as to admit all high school students and otherwise qualified individuals. The goal of this educational extension was to provide access to education without the conventional limitations of entrance, residence, and graduation requirements (Brubacher & Rudy, 2004).

Table 1

The Number of U.S. Community Colleges from 1901 through 2005 (American Association Community Colleges, 2006).

Number of Community Colleges: 1901-2005

Year	Number of Colleges
1901	1
1910	25
1920	74
1930	180
1940	238
1950	330
1960	412
1970	909
1980	1058
1990	1108
2000	1155
2004	1158
2005	1186

With foreign critics calling Americans the best “half-educated” people in the world, Vice-President Spiro Agnew and sociologist Daniel Moynihan raised the question of whether open-admissions watered down the quality of students and curriculum. This question was answered by the Carnegie Commission on Higher Education with a study covering the years 1925 through 1961. The study illustrated that not only had quality not declined but that it had actually increased (Brubacher & Rudy, 2004).

The growth of community colleges continued, and as of January 2009, there were 1,195 U.S. community colleges, consisting of 987 public institutions, 177 independent institutions, and 31 tribal institutions. These 1,195 community colleges educate 6.5 million credit-taking students and five million non-credit taking students, totaling 11.5 million students. The average annual tuition and fees for public community colleges was \$2,361, compared to public four-year colleges at \$6,185, for fiscal year 2008 (AACC, 2006).

The Truman Commission Report (1947) stated that community colleges would offer a diverse environment for students, and in fiscal year 2008, community colleges had achieved that. The percentages of all ethnic groups attending community colleges were as follows: Native American (1%), Asian/Pacific Islander (6%), Black (13%), Hispanic (15%), and Caucasian (65%) (Provasnik & Planty, 2008; AACC, 2009; Goldrick-Rab et al., 2009).

Community College Evolution

The public perceived schooling as an avenue of upward mobility and a contributor to the community’s wealth. The community college has evolved through generations of

changes that have been guided by public educational needs and federal, state, and local education requirements (Brown & Gamber, 2002).

The development of the community college can be organized into time ranges, or generations of change, through the year 2000. The first generation, from 1900 to 1930, was characterized as an extension of secondary education (Geller, 2001). During this time period, postsecondary education was used as a precursor to a college education; it occurred outside the college and was meant to assist students preparing for college. This type of education platform was not thought of as a specific institution until the twentieth century. The second generation, from 1930 to 1950, was characterized as the “junior college.” The third generation, from 1950 to 1970, was referred to as the “community college generation,” and the open-admission movement began in the 1960s. The fourth generation, from 1970 to 1985, was called the “comprehensive community college,” and the fifth generation, from 1985 through 2000, has not been named but has been identified as the “post-comprehensive community college,” reflecting changes in the overall community college format. The latest generation, from 2000 on, has been called the “learning community college generation” (Geller, 2001).

As community colleges evolved, they established a presence in each community, meeting educational as well as community needs. The name itself, “community college,” was applied to several types of institutions that offered various degrees and certificates up to the associate’s degree. Community colleges have been classified as public, private, proprietary, or special purpose. In some cases, community colleges were designed for specific racial and ethnic groups; for women; or for specific purposes, such as business,

art, or military training, but in the twenty-first century, public institutions represented the majority of community colleges in the United States (Ratcliff, 1993).

Community College in 2009

Whether it was the economy, new academic programs, or better recruiting, community colleges experienced an enrollment boom for the fall 2008 (Moltz, 2008).

While enrollment has been growing steadily at many community colleges, the fall of 2008 appeared likely to set records. As a result some community colleges were exploring innovative ways to serve their growing student bodies, make better use of facilities, and attract new professors (Moltz, 2008).

In 2009, community colleges continued to grow in enrollment, but new colleges were hindered because of the economic recession plaguing the U.S. economy.

Community colleges across the nation were looking at double-digit enrollment, enrolling close to seven million full- and part-time students for credit classes. This was about half of all students in public higher education (Shaffer, 2009).

The California Community Colleges system was the nation's largest higher-education system, serving 1.8 million adults and high school seniors (Wilson, Fuller, & Angeli, 2009). A California Postsecondary Education Commission (CPEC) report estimated that the state should prepare for 222,000 additional community college students by 2019. California confronted unprecedented economic and fiscal challenges while unprecedented economic conditions tested the state's Master Plan and its commitment to educational opportunity (Wilson et al., 2009). California community college enrollments had been increasing dramatically for five years. Between 2005 and 2008, fall enrollments grew 12.6%, from 1.6 million in 2005 to 1.81 million in 2008. The estimated

growth for the next decade has ranged from 1.81 million to 2.03 million in 2019, which could translate into a minimum of 222,000 new students potentially entering the community college system (Wilson et al., 2009).

Community colleges were absorbing large numbers of new students, beginning in the spring of 2009 and continuing through the summer and into the fall of that same year. Displaced workers, students electing a reverse transfer from four-year colleges, and others seeking a less costly option were generating this growth (Snyder, 2009). “We don’t see any end in sight,” said Norma Kent, Vice President of Communication at the AACC (Snyder, 2009, p. 2).

National, State, and Local Economy

The United States economy has declined sharply since the housing market fall in 2008. State and local governments faced their own economic downturn with budget gaps that were expected to exceed \$100 billion in fiscal year 2009-10 and \$350 billion over the next three years (Boyd, 2009).

National Economy 2009. In October 2009, the U.S. national economy was recovering from a sharp decline in the housing market due to foreclosures related to subprime housing loans. The decline in the housing market triggered an economic downturn which spilled into other areas of the economy. Home prices served as a key measure of consumers' wealth and the financial sector's overall stability. For example, an increase in home values indicates that consumers potentially have access to more funds to borrow and spend. The housing market hit a peak in 2005 and then dropped a record 34.7% by January 2009, as shown in Figure 3 (Goldman, 2009). The sharp decline in home values drastically changed consumer funds for borrowing and spending and

impacted consumer confidence. Home foreclosures, which had totaled 6.3 million during the recession, fell slightly in the past two months (See Figure 3.) (Goldman, 2009).

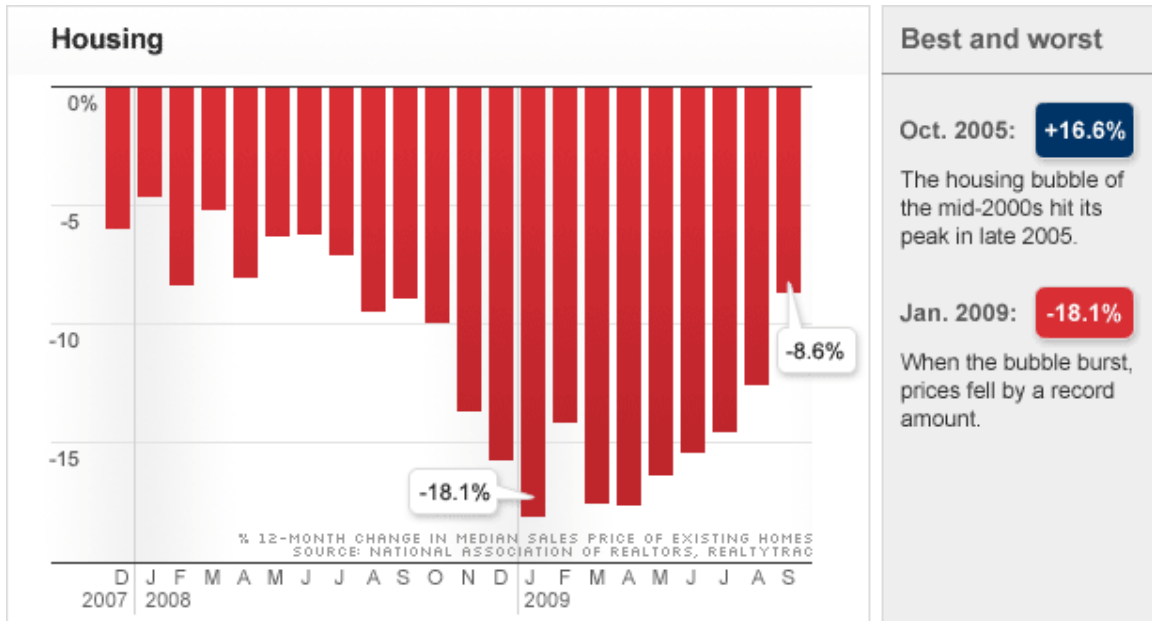


Figure 3. The housing market from December 2007 through September 2009 (Goldman, 2009).

U.S. consumer confidence is a measure of the level of optimism consumers have about the performance of the economy. Generally, consumer confidence is high when the unemployment rate is low and general domestic product (GDP) growth is high. The average consumer confidence is used to indicate how much consumers are likely to spend. Consumer spending expanded at a 3.5% pace from July 2009 through September 2009, after shrinking the previous four quarters, as shown in Figure 4 (Goldman, 2009).

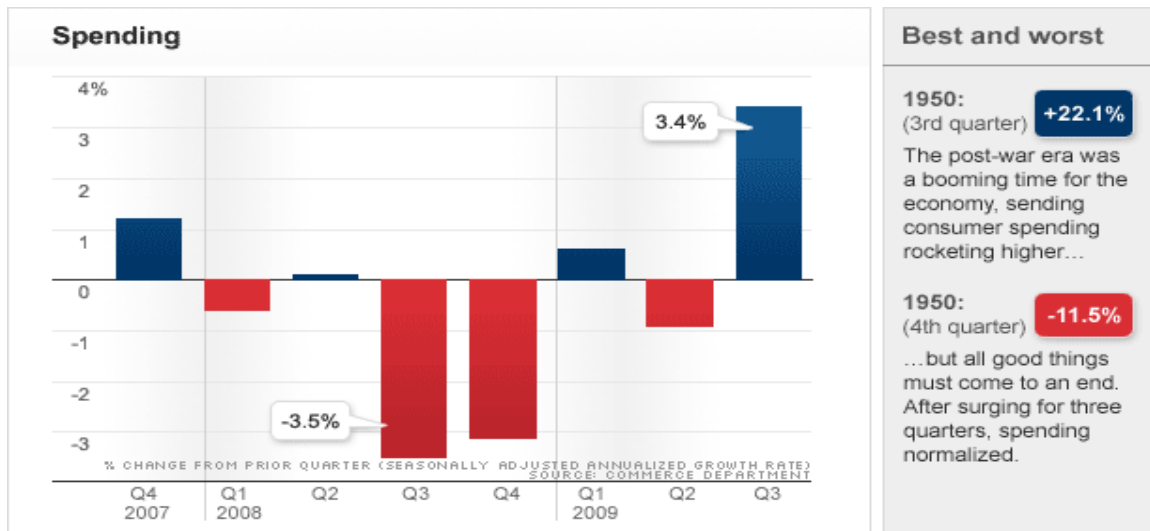


Figure 4. Consumer spending in the U.S. Economy (Goldman, 2009).

Household purchases climbed 3.4%, the most in more than two years. Consumer spending is simply a measure of how much individuals pay for goods and services. Spending by individuals accounts for 70% of the GDP, making it the single largest contributor to economic growth (Goldman, 2009). When consumers are confident, they tend to spend more, which leads businesses to produce more products and hire more people. Those economic gears stop turning when consumers slow down spending (Goldman, 2009).

There was a major increase in consumer spending in the third quarter of 2009, which was aided by government programs supporting auto sales and home purchases. Together, this increase in spending and support from government programs fueled other purchases in the following months. Consumers, however, were still very cautious about the economy, especially as the unemployment rate increased. Though there may be some stimulus-inflated blips in spending in the coming quarters, some economists believed consumers would save more and borrow less in the near future (Goldman, 2009).

Other factors that affect the national economy are inflation, the stock market, and unemployment. Inflation measures the increase of prices and the value of money. When inflation is high, money is worth less over time, but when prices fall over time, deflation occurs. In 2009, the Federal Reserve said there was no immediate risk of high inflation, and continued watching prices carefully for hints of a deflationary period, as shown in Figure 5 (Goldman, 2009). Economists said the massive amounts of government spending from the bailouts and stimulus package meant inflation could spiral out of control the following year if the economy recovered without reining in spending (Goldman, 2009).

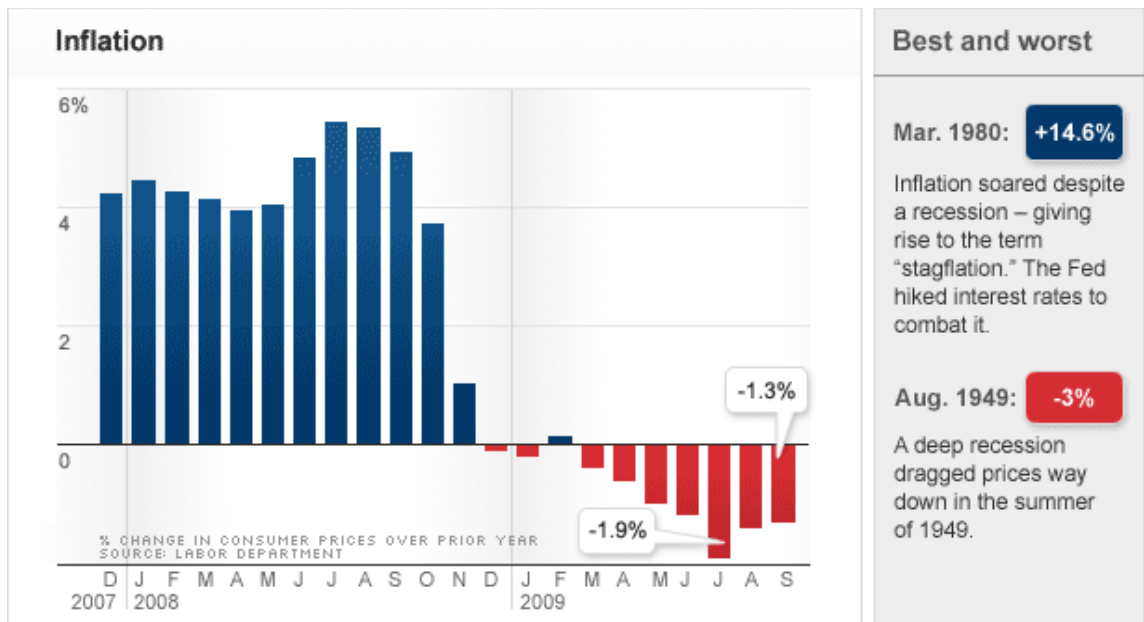


Figure 5. U.S. inflation and deflation from December 2007 through September 2009 (Goldman, 2009).

The next indicator of the economy is the stock market. Stocks are ownership stakes in companies, and the overall stock market is measured by a number of indexes,

such as the S&P 500, as shown in Figure 6 (Goldman, 2009). Stocks are considered to be forward-looking indicators about the health of the overall market and economy. In 2009, stocks had rallied at a fast pace since March, even though the economy had shown only slight signs of recovery. Many analysts think that stock prices were too inflated and that the market was due for a correction (Goldman, 2009).

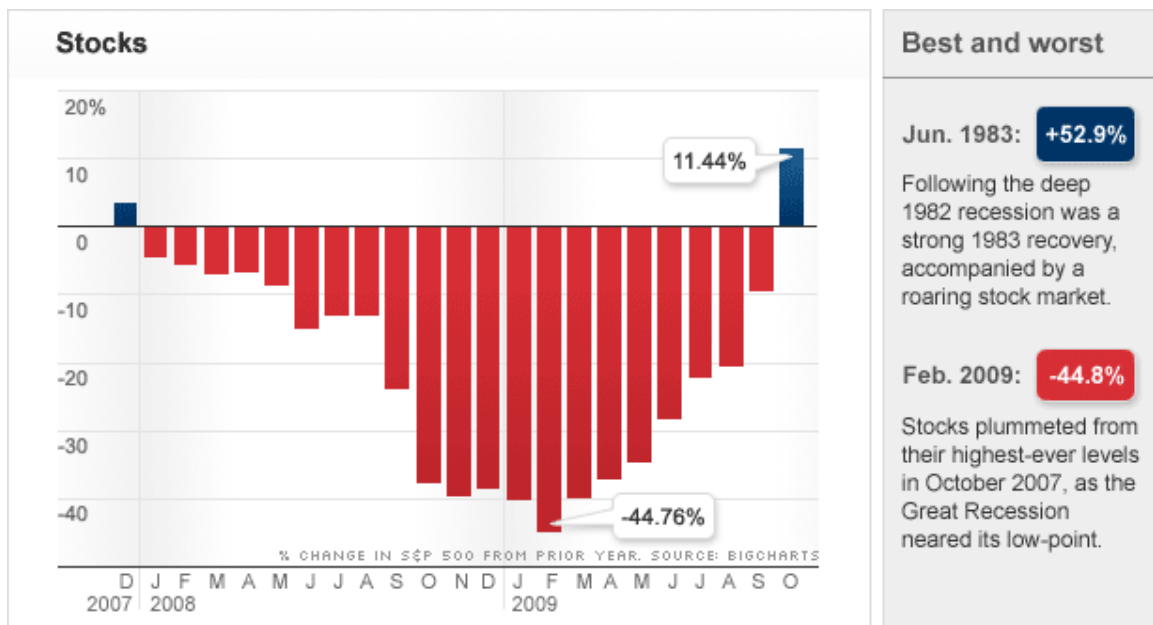


Figure 6. U.S. stock market from December 2007 - September 2009 (Goldman, 2009).

In summing up the United States national economy, economists at the National Bureau of Economic Research (NBER) defined the U.S. as being in a recession. A recession is defined as "a significant decline in economic activity, spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales" (Goldman, 2009, p. 8). However, economists also believed that we were entering a recovery period, ending what

was likely the longest and most painful recession since the Great Depression (see Figure 7) (Goldman, 2009).



Figure 7. Post World War II recessions (Goldman, 2009).

State and Local Economy 2009. State taxes come from two major sources: sales tax and personal income tax. Both of these sources had declined for the third consecutive quarter of 2009. As reported by the Census Bureau, overall state tax collections in the second quarter (April-June of 2009) declined 16.6% from the same quarter of the previous year. Second-quarter state tax revenues fell by amounts unseen in at least five decades. Personal income tax declined by 27.5%, sales tax declined by 9.5%, and corporate income tax increased by 2.9% (Boyd & Dadayan, 2009).

Local tax revenue had declined, but not as severely as the state tax slowdown. In the second quarter of 2009, local tax collections declined by 2.8%, mostly due to reductions in local income tax and sales tax collections. Most local governments rely

heavily on property taxes, which tend to be relatively stable but rose a surprising 3.1% during the quarter. Figure 8 shows the four-quarter average of yearly growth in state and local income, sales, and property taxes, adjusted for inflation for 2009. Both the income tax and the sales tax have shown slower growth, and then outright decline, over most of the last four years (Boyd & Dadayan, 2009).

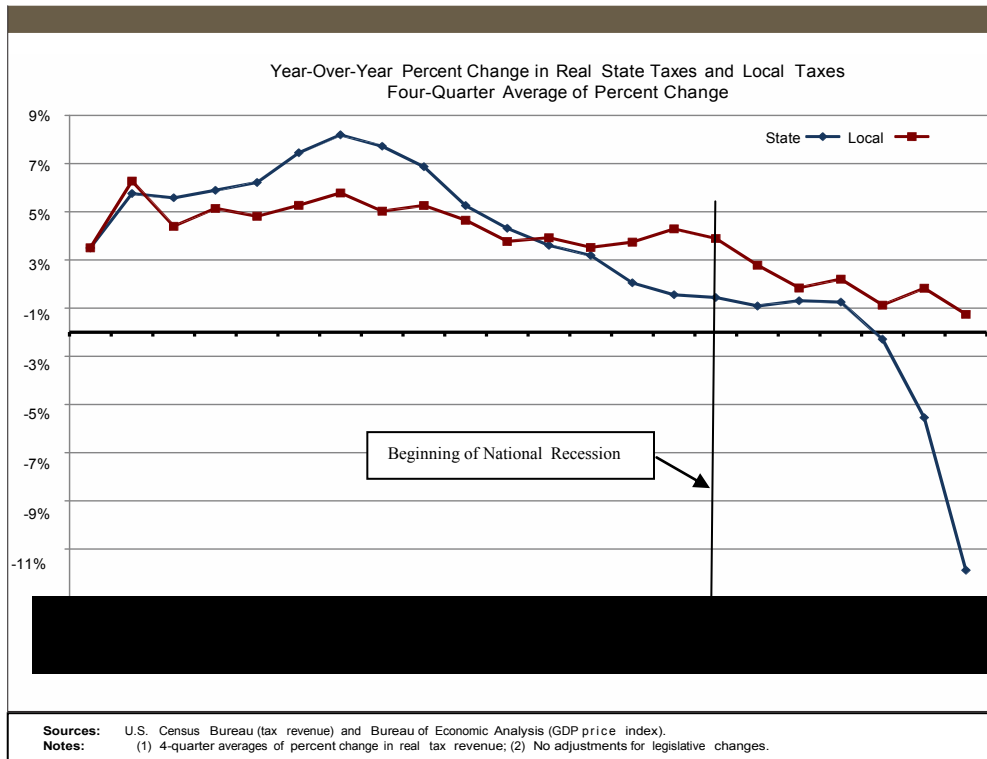


Figure 8. The percentage change of state and local taxes (Boyd & Dadayan, 2009).

Total tax revenue declined in 49 states in the second quarter of 2009, an increase from 45 states during the first quarter of 2009 (Boyd & Dadayan, 2009). Double-digit declines were reported in 36 states in the second quarter of 2009, compared to only 25 states in the first quarter of 2009 (Boyd & Dadayan, 2009). Alaska experienced the largest decline (87%) in the second quarter of 2009, as revenue collections were unusually high in the previous few quarters due to high oil prices (Boyd & Dadayan,

2009). All regions saw declines in total state tax collections, with the western states experiencing the largest decline (19.8%) (Boyd & Dadayan, 2009). The sum total of all state and local tax collections, from Census Bureau data, showed state and local sales taxes declined by 10.6% in the April-June quarter of 2009, far more than any quarter since 1963 (Boyd & Dadayan, 2009).

The American Recovery and Reinvestment Act of 2009

In a speech at Macomb Community College in Warren, Michigan, July 14, 2009, President Obama stated that "Too often, community colleges are treated like an afterthought—if they're thought of at all" (Beam, 2009). President Obama proposed a \$12 billion plan to renovate the country's community college system. The plan would add \$9 billion in grants affecting academic programs and raise graduation rates. Additionally, \$2.5 billion would be used to upgrade college facilities and fund open-source online courses (Beam, 2009; Kellogg & Tomsho, 2009).

The community college renovation plan was rolled into a higher education plan which included public colleges and universities and became part of the American Recovery and Reinvestment Act of 2009. The final resolution from Congress provided additional funding for current financial aid programs, science and health research grants, funding for state budget cuts, job training, and other programs (Lederman, 2009).

The ARRA made available educational aid to states (\$39.5 billion) for "backfilling" state budget cuts that had been made to the 2008 or 2009 budgets for elementary, secondary, and postsecondary education, which included facilities modernization. A separate governors' fund (\$8.8 billion) was established for "high priority" needs that could also be appropriated for education (Lederman, 2009). The

financial aid programs significant to public community colleges include Pell grants (\$17.1 billion), College Work Study (\$200 million), and job training (\$3.9 billion).

The American Recovery and Renovation Act provided funding for colleges and universities during a time of economic downturns. More so, with state governments cutting back on the fiscal year budgets for 2008 and 2009 public community colleges have found a temporary relief from funding shortfalls with ARRA. The ARRA answered public community colleges' budget problems for 2008 and 2009, but was not a permanent fix to the problem of funding.

Community College History of Revenue, Resources, and Finances

Community colleges have been funded in several ways during the past century; they have received funding from cities, counties, and religions as well as major universities and state governments. In the beginning, community colleges were organized as extensions of secondary schools, deriving their support through public school budgets, but that changed when independent community college budgets were organized (Cohen & Brawer, 2008). The process of community college funding evolved when Congress passed the Servicemen's Readjustment Act in 1944, also known as the GI Bill of Rights, and published the 1947 President's Commission on Higher Education for American Democracy, also known as the Truman Commission Report (see Table 2) (Cohen & Brawer, 2008).

The normal pattern for community college funding was for the local district to provide a fixed sum of money per student in attendance, with state aid responsible for a proportionately smaller amount of the funding. For example, in 1918 local funds

provided 94% of the funding with six percent from tuition and fees (see Table 2) (Cohen & Brawer, 2008; AACC, 2009).

The next major resource trend was the shift from local communities funding the colleges to increased state share. This trend started in the 1970s with the passing of California's Proposition 13, which limited assessing property taxes to 1% of the 1975-1976 assessed valuation (Cohen & Brawer, 2008). Shortly after passage of Proposition 13, other states, including Arizona, Colorado, Hawaii, Illinois, Massachusetts, Oregon, and Washington, passed similar legislation. Community colleges found that their major source of funding was capped and therefore had to look for other sources of funding. Within two years of this revenue change, the states became community colleges' main funding source (Cohen & Brawer, 2008).

Table 2

Percentage of Income from Various Sources for Public Two-Year Colleges from 1918 through 2009 (Brawer and Cohen, 2008; American Association Community Colleges, 2009)

Years	Tuition and Fees	Federal funds	State Funds	Local funds	Private funds and Grants	Sales and Service	Other
1918	6	0	0	94	0	n/a	0
1930	14	0	0	85	0	n/a	1
1942	11	2	28	57	0	n/a	2
1950	9	1	26	49	0	n/a	2
1959	11	1	29	44	0	12	2
1965	13	4	34	33	1	6	7
1975	15	8	45	24	1	6	1
1980	15	5	60	13	1	3	3
1990	18	5	48	18	1	7	3
1997	21	5	44	19	1	6	4
2000	20	6	45	20	1	5	4
2009	20	5	38	17	1	1	4

Community College 2009 Revenue, Resources, and Finances

In the twenty-first century, with 82% of community colleges in the public grouping, the majority of community colleges receive their funding from state and local appropriations and tuition and fees (Ratcliff, 1992). According to the AACC, public community colleges received their revenue from state appropriations (38%); local appropriations (17%); tuition and fees (20%); endowments (1%); and a combination of other sources, such as federal, state, and local grants and contracts; auxiliary enterprises; and other income sources (24%) (AACC, 2009). Public community colleges enroll close to seven million full- and part-time students for credit classes, about half of all students in

public higher education, but community college state budgets total about one-sixth of the money that public four-year colleges and universities spend, according to the NCES (Shaffer, 2009).

The majority of revenue for community colleges comes from state and local appropriations, which led to the question of impact when the recession hit the national economy (Pfeffer & Salancik, 2003). America faced a growing crisis in public higher education as the recession played out; at the same time, there was a growing consensus about the urgent need to nearly double the levels of degree attainment (Jones & Wellman, 2009). State governments faced budget gaps that were expected to exceed \$100 billion in the 2009-10 fiscal year and expected to exceed \$350 billion through the end of the 2010-11 fiscal year (Boyd, 2009). With state and local appropriations declining, community colleges were forced to increase tuition and fees, bringing more attention to cost containment practices (Bee & Dee, 2007).

In September 2009, the State of California's Legislative Analyst's Office released the budget figures for fiscal year 2009-10. The report indicated that overall state funding for California state universities, universities of California, and California community colleges would be cut by eight percent for the academic year 2009-10, after adjusting for new federal funding and revenue from student fees. This meant a reduction in Proposition 98 funding (which was the primary support for community colleges) of \$812 million (Wilson et al, 2009).

The largest community college in the nation, Miami Dade College, announced, July 1, 2009, it was effectively capping enrollment for the first time at its then current level of 167,000 students because of deep budget cuts by the Florida legislature (Strauss,

2009). Florida officials said they expected more than 5,000 students to be unable to enroll in any classes that fall and at least 30,000 more to miss out on classes necessary for graduation (Strauss, 2009). San Diego Community College District expected to cut \$10 million from the 2009-10 budget in addition to the \$10 million it eliminated last year and as a result, the district expected to eliminate 117 full-time employee positions and more than 1,300 classes (Strauss, 2009).

Community Colleges and Appropriations

Community colleges are tied closely to local and state governments due to their dependency on funding, so when local and state governments experience economic issues, those issues impact community colleges, and funds are often reduced as a result (Bess & Dee, 2007). In a report by the Rockefeller Institute of Government, state taxes collected by the 50 states dropped by 11.7% during the first quarter of 2009 compared to the same period a year earlier. In the second quarter of 2009, tax revenues in the 50 states dropped a record 16.6%, the second consecutive quarter in which revenues fell more sharply than during any previous time on record. Forty-nine states saw total tax revenues fall during the quarter with 36 states reporting double-digit declines (Marchand, 2009).

A report presented to the National Council of State Directors of Community Colleges by Dr. Steven G. Katsinas, Director of the Education Policy Center at the University of Alabama, discussed local and state appropriations that were being adjusted due to the 2008-09 recession. The report, titled *Funding and Access Issues in Public Higher Education: A Community College Perspective*, discussed the results of a survey

sent out to state directors of community colleges on state appropriations (Gonzalez, 2009; Jaschik, 2009).

The national survey results illustrated that half of the state directors expected to face midyear reductions in their state appropriations. Other key findings from the survey included the following:

- Directors predicted that tuition at community colleges would increase at more than double the rate of inflation for the 2009-10 fiscal year.
- In a period of all-time record enrollments, directors predicted that state operating-budget support for community colleges would decline by one percent in 2009-10 fiscal year.
- By a ratio of 3 to 1, directors said high unemployment was straining the capacity of their community colleges to retrain workers for new jobs.
- Three of four directors in states with spending formulas for community colleges said their states did not fully finance the formulas in the 2008-09 fiscal year (Gonzalez, 2009, p. 2).

The survey results illustrated the issues community colleges faced as their enrollment drastically increased and their budgets were cut. The average tuition increase the directors predicted for the 2009-10 fiscal year was five percent. According to Katsinas (2009), state budget priorities have increased the severe competition that public education has faced for funding and have created the major public-relations challenge that community colleges face to promote the cause of access (as cited in Gonzalez, 2009, p. 2).

Organizational Efficiency to Resource Dependency Theory

Chester Barnard presented his concept on organizational efficiency theory in *Functions of the Executive* (1935). In this book, Barnard discussed establishing and maintaining a system of communication, securing essential services from other members, and formulating organizational purpose and objectives. Herbert Simon authored *Administrative Behavior* in 1957 and used Barnard's observations in a new concept called the Barnard-Simon Theory of Organizational Equilibrium, which refers to the organization's ability to attract sufficient contributions to ensure the organization's survival. The hypotheses from this theory are as follows:

1. An organization is a system of interrelated social behaviors of a number of participants;
2. Each participant receives inducements from the organization for which the participant makes contributions;
3. The participant will continue as long as her or his perception is that the inducements are higher than their contributions;
4. The contribution from all the participants provides the pool of resources from which the organization manufactures the inducements; and
5. An organization is "solvent" only as long as the contributions are sufficient to provide inducements necessary to sustain contributions. (Simon, 1957, p. 43)

Gerald Salancik furthered the study on organizational theory in 1950, but it was not until 1972 that he started working with Jeffrey Pfeffer. In 1974, Pfeffer and Salancik merged their organizational logic and proposed the Resource Dependency Theory. Resource Dependency Theory states that organizations depend on their environments for resources. These organizations cannot produce the necessary resources internally, nor

can they obtain the necessary resources at will from the environment; therefore, they are dependent on the external entities (Pfeffer & Salancik, 2003).

In a Resource Dependency Model, the survival of the organization is dependent on its ability to attract and obtain the necessary resources to operate and maintain it, the ability to control costs and expenditures to make sure resources are appropriate, and to continue to look for alternate sources of revenue. All public higher education institutions (both four-year institutions and two-year community colleges) fall into this area since they are dependent on the external entities for revenue. As community colleges lose revenue in one area, they look for alternatives to maintain operations. In 2009, with the nation moving through a recession, a reduction in local, state, and federal funding significantly impacted community colleges. In a Resource Dependency Model, the survival of the community college is dependent on attracting new resources and controlling expenditures (Pfeffer & Salancik, 2003).

The Resource Dependency Theory studies several areas of organizational functions as they relate back to the organizational operations. One area of focus was on the external demand of social relationships, such as people, groups, and organizations (Pfeffer & Salancik, 2003). The growing external demand of the services provided by the organization requires a continuous need for additional or new external resources. An example of this would be public community colleges, where the institutions sell education in a credit hour or course format. As social relationships continue to demand educational services the need for additional resources to meet the organizations needs also continues to grow.

From the Resource Dependency, the study looks at the importance of the stability of the supply of resource and competition with other entities. A dependent organization with limited alternatives finds it more important to have stability than growth, which could influence whether the organization will continue to survive. The competition for resources can also be seen as an issue with new organizations entering the picture, vying for the same limited resources and social relationships which places the external resources in an unpredictable situation and places the organization in an unstable environment. Using the public community college as an example, the institution is dependent on state and local funding, which has become more unpredictable and this in turn leaves the college more unstable as budgets are cut.

Cost Containment in Higher Education History

The federal, state, and local economies of the 1970s and 1980s placed constraints on colleges and universities, which initiated the discussion of cost containment practices and theories in higher education literature. In the 1990s, the discussion of cost containment strategies slowed as colleges and universities moved into a renewed economy with increased growth and augmented budgets for most institutions. The positive economic change within the economy halted college and university concerns regarding cost savings strategies but did not stop the public, policymakers, and Congress' growing concerns over accountability and costs of higher-education increases throughout the years (Brown & Gamber, 2002).

The studies conducted on cost containment practices in the 1970s and 1980s were relevant at the time for higher education, but over the years the subjects and issues have changed and are considered inappropriate to guide current discussions and decision

making for the twenty-first century (Brown & Gamber, 2002). In the 1990s, colleges and universities started making internal changes due to the increase in technology; growth of information services; demands for accountability and assessment; and changes within the faculty, staff, and administration organizational structures (Brown & Gamber, 2002).

Twenty-First Century Cost Containment

For the literature review on cost containment practices, three significant books and one recent study were reviewed. The books were William Brand Simpson's *Cost Containment for Higher Education: Strategies for Public Policy and Institutional Administration* (1991), Walter Brown and Cayo Gamber's *Cost Containment in Higher Education: Issue and Recommendations* (2002), and William F. Massy's *Honoring the Trust: Quality and Cost Containment in Higher Education* (2003). The study was conducted by Dr. Daniel Hurley and titled *Cost Containment: A Survey of Current Practices at America's State Colleges and Universities* (2008).

An exception to the rule of outdated information was written by economics professor William Brand Simpson. Titled *Cost Containment for Higher Education: Strategies for Public Policy and Institutional Administration* (1991), it was written in a format useful to upper management and administration and helped in understanding cost containment (Simpson, 1991). This cost containment book, according to John Waggaman, did away with the mathematics of economics and relied on a description of policies, practices, and reports from several authors and experts (Waggaman, 1994).

Simpson put together what was viewed as a primary reference for administrators developing their cost containment policies and strategies. Simpson proposes 113 different areas that could be explored for cost containment but did not offer any facts or

information that would guide the reader toward maximizing savings for colleges or universities. The subjects that Simpson discussed included human resources, benefits, tuition policies, purchasing, facility planning, operation costs and faculty personnel, and philosophical and political considerations for administration (Simpson, 1991). The one theme that Simpson repeated over and over in his book Waggaman stated was that “good financial management of academic resources should depend upon policies that provide incentives and thereby motivate both administrators and faculty” (Waggaman, 1994, p. 1).

In Brown and Gamber’s *Cost Containment in Higher Education: Issues and Recommendations*, these authors have discussed larger areas of savings, discussing instructional costs, academic libraries, plant operations, facilities, research universities, student services, and external cost factors (Brown & Gamber, 2002). Brown and Gamber used statistics and references to support the direction and discussions presented in this book, and several key points were made and should be discussed with respect to cost containment.

Brown and Gamber (2002) have discussed instructional costs, including faculty compensation and faculty productivity, but they have addressed only the facts and statistics, such as the breakdown of instructional costs as a percent of total expenditures for both public and private four-year colleges. This review also discusses benefits such as medical insurance and retirement and their impact to the bottom line. Brown and Gamber also discussed future changes that could affect faculty compensation, such as adjunct faculty and union benefits. The next section Brown and Gamber discussed was academic support, which represents approximately 7.6% and 6.1% of total expenditures

from public and private four-year colleges and universities, respectively. In this section, Brown and Gamber have evaluated academic libraries and their acquisitions, technology, and outsourcing. Several good points were made in their discussion on academic libraries and the expenses required to purchase books and journal subscriptions that an institution wants or needs. One problem that Brown and Gamber examined was runaway prices due to a perceived monopolistic environment and price discrimination within the publishing industry. An example given was a subscription to the *Journal of Comparative Neurology*, which cost \$1,920 in 1985 and increased to \$15,000 by the year 2000, which is an increase of 681% in 15 years, or a 45% increase each year (Brown & Gamber, 2002).

Another issue that has significantly affected libraries is the use of technology within the publishing industry. Brown and Gamber (2002) pointed out that there is a benefit to technology, but it comes at a high cost. As colleges and universities have moved into the technological age, more and more services and resources offered by libraries have become technologically based. This cost alone has had an impact, but the change also helped libraries meet their goal to reduce costs over the long run (Brown & Gamber, 2002).

One final issue Brown and Gamber discussed related to academic support was outsourcing of libraries. They stated that many library directors disputed the effectiveness of using outsourcing and felt that cost effectiveness could be achieved without the use of private-sector contractors. The argument against outsourcing was advanced further by suggesting a group consortium with other institutions to help lower the overall cost of purchases (Brown & Gamber, 2002).

Plant operation and facilities represent 6.6% and 6.1% of total expenditures in public and private four-year institutions, respectively. Plant operations include expenditures associated with services and maintenance of grounds and facilities as well as utilities (heat, water, and electricity), fire protection, and property insurance (Brown & Gamber, 2002). One of the key areas in plant operations is the growing cost of deferred maintenance. Deferred maintenance is work that has been scheduled or planned to be completed on facilities or grounds but has been delayed due to lack of funds during the current annual budget cycle. In 1995, it was estimated that colleges and universities had \$26 billion accumulated in deferred maintenance (Brown & Gamber, 2002).

Energy management also has become an important area of concern for colleges, universities, and community colleges because of fluctuating energy prices (see Table 3). The Higher Education Price Index (HEPI) measures the relative average level of prices in a fixed market of goods and services commonly purchased by colleges and universities through current-fund educational and general expenditures, excluding expenditures for research (Commonfund, 2010). HEPI measured price changes, averages, and general inflation affecting colleges in the U.S. (Commonfund). The increase in utilities from fiscal year 2001 to fiscal year 2008 was 58.1% over the seven-year period (Commonfund, 2009). Reviewing plant operations and facilities, Brown and Gamber (2002) noted that colleges and universities have deferred maintenance and energy management to save dollars and used the funds for other operating budgets. This was considered a short-term solution to help offset increasing expenses. Brown and Gamber stated that energy management could have the most current and long-term effect on cost containment in higher education.

Table 3

Higher Education Price Index Yearly Percent Change from 2002 through 2008

(Commonfund, 2009).

Higher Education Price Index 2002-2008 Yearly Percent Change for Utilities	
Year	Utilities
2002	6.20%
2003	-15.00%
2004	37.50%
2005	8.90%
2006	27.20%
2007	-7.60%
2008	0.90%

Regarding their research on barriers to cost containment, Brown and Gamber (2002) have included recommendations related to the expense of projects. They also discussed allocating funds for both evaluating and conducting basic research, which is costly to institutions, and from their perspective, each institution must evaluate the role research can and should play in accomplishing their mission. They questioned whether university student services should remain viable with an increasing cost structure. They related the cost of student services to the growing level of administrative salaries and suggested that by ensuring that cost increases were explained using hard data, escalations in costs were fully justified.

The final point made was on external cost factors. The authors attempted to determine, through literature, whether state entities had acted as facilitators or barriers to cost containment through the use of higher education policies. In using responsibly centered budgeting or performance-based budgeting, it was recommended by Brown and

Gamber (2002) that when formulating a policy for both methods, state policy makers should pay closer attention to the relationships between additional revenues and incremental costs. In this suggestion, the authors indicated that the state policy did not act as a barrier to cost containment, but it was not a high enough priority to be highlighted in the goals and objectives of performance funding and budgeting initiatives (Brown & Gamber, 2002).

In their final comments, Brown and Gamber (2002) suggested that through research efforts more could be gained if there were more widely publicized discussions of the actual cost containment practices at specific institutions. They stated that no studies have confirmed whether the efforts to contain costs had achieved their objectives or whether those efforts could be duplicated productively by other colleges and universities.

In Massy's book, *Honoring the Trust: Quality and Cost Containment in Higher Education* (2003) this author has responded to the premise that public trust in colleges and universities has eroded significantly in recent years and will continue to do so unless considerable reforms were undertaken. Massy stated that this book represented the primary focus of the research that had been performed during the prior six years before it was published and that as the title asserts, improvements in quality and cost containment were required not only for the well being of individual institutions but more importantly to honor the trust placed in academe by the broader society (Massy, 2004).

Massy (2004) asserted a case for change and discussed the public's erosion of trust in colleges and universities that had occurred. Massy suggested that colleges and universities could be a great deal better than they were without a massive infusion of funds (Massy). He stated that close examination revealed the traditional university's core

services were knowledge creation and dissemination, not educating students at the highest quality possible given the resources. The discussion then moved into what he called “the two seismic shifts in the Post-War era” (Massy, 2009, p. 18). The first shift was the move toward “educational massification” (p. 18), which refers to the movement of higher education as a service provided only for the elite to more of a broad-based enterprise with the GI Bill of Rights, which basically provided a scholarship for every eligible veteran who wanted a college education. The second seismic shift was from massively funded research, which started after 1945, when Vannevar Bush, Provost at MIT, made a case for federally funded science in the public interest (Massy).

Massy (2004) discussed the misunderstandings about how universities function as economic enterprises. In this discussion, Massy used the non-profit economic model to show the erosion of trust. The use of funding was also misunderstood with cross subsidies and contribution margins, where subsidies for one popular group could pay for other not so popular groups (Massy).

Massy (2004) further appraised research, teaching, and faculty productivity and included the administrative lattice, which is how institutions solve problems. Massy elaborated on staff functions and the practice of academic ratcheting, looking at how professors shift their time toward research. A survey conducted by the National Center for Postsecondary Improvement titled *Postsecondary Research Priorities: Improving Institutional Practice and Public Policy* (2002) served as the data-gathering instrument for Massy’s research. The results from this survey demonstrated to Massy that “nearly-unanimous” faculty responses stressed the importance of research in hiring, tenure, promotion, and salary decisions (Massy, 2004, p. 102). Though the faculty indicated they

perceived research as important, one of the respondents mentioned disappointment when denied tenure because of the efforts he devoted to teaching and that he was now focusing exclusively on research to obtain tenure. This was reflected in what has become the common theme in academic literature: research, not teaching. Faculty members who focus exclusively on research have received the majority of the rewards and incentives, which is contrary to the mission of the institution (Massy, 2004).

Massy next focused on technology and the change it brought to higher education. As colleges and universities embraced information technology, they found that it was adding cost without proportionate savings, but this changed, and long-term savings were eventually realized. He believed that cost containment and savings could be simultaneously achieved but held the institutions accountable for the outcome. He suggested that (1) productivity gains can be accomplished if institutions and faculty are willing to work toward the goal and (2) institutions should promote productivity in order to protect themselves competitively (Massy, 2004).

As Massy worked through the issues with research and higher education, he moved into balancing cost containment with the quality of education. To do this, Massy used activity-based costing (ABC) with the quality process, which is referred to as “Q/ABC.” The term “Q/ABC” was invented at Northwest Missouri State University by President Dean Hubbard and Professor Rahl Wood (Massy, 2004, p. 272). Q/ABC examines the activities of faculty, academic leaders, and oversight bodies that are aimed at improving and assuring educational quality and balancing the cost of educational improvements with their impact on quality. Massy (2004) has suggested that Q/ABC will provide new opportunities for improving quality, and at the same it will lower cost and

allow departments to break the perceived proportionality between costs and quality (Massy, 2004).

Higher education typically has approached cost analysis by focusing on the overall cost of teaching and research and not on the individual performing the activities. Without the knowledge of what activities are being performed and at what cost, one cannot gauge efficiency, compensate for the change in prices of inputs, or work intelligently on process improvement. As a result of testing the Q/ABC model at Missouri State University, Massy announced that it did produce meaningful results that could be implemented in subsequent semesters (Massy, 2004).

Massy brings his book to a close by pulling his discussions on teaching, research, and quality together stating that higher education's strategic agenda should be that colleges and universities need to improve their core competency in education. Institutions need to understand what cost consciousness means, which is the relationship between cost, enrollment, and quality (Massy, 2004).

In Daniel Hurley's study on *Cost Containment: A Survey of Current Practices at America's State Colleges and Universities* (2008), Hurley sent a survey with 35 questions to 114 members of the American Association of State Colleges and Universities (see Appendix D). In their responses, nearly all respondents placed high importance on cost containment, and most had implemented cost control strategies in multiple operational areas (Hurley, 2008). The results of the study showed that institutions rely more on support and business functions in their cost controls than on core academic functions. Energy management and consortium purchasing are two of the most common areas of focus for cost containment. The results suggested that multiple opportunities exist for

members to benefit further by implementing additional cost containment practices. Three-fourths of responding institutions were satisfied with their cost containment practices, while the remaining indicated dissatisfaction and a desire to increase progress and realize cost savings (Powers, 2008).

One of the report's main critiques was that despite the importance colleges may place on cost containment, the institutions have not set aside enough resources, such as funding, staff, and time, to carry out cost containment measures. The results showed that 29 of the colleges surveyed regularly quantified and reported cost containment practices, with a mean savings of \$1 million per year, or about \$135 in savings per student annually. Hurley (2008) stated that it is his assumption that cost containment is an innate part of an institution's operation, but universities have not always been compelled in the past to dedicate resources to explain what has been achieved.

Summary

As stated in the introduction, an exhaustive research of the literature has revealed that few studies on the cost containment practices of public community colleges have been conducted. This chapter has reviewed the history of community colleges, enrollment practices, financial reviews, Resource Dependency Theory, and cost containment practices in four-year colleges. Chapter Three includes a description of the methods used in this study to investigate the research questions. It describes the data gathering and data analysis processes and focuses on information gathered using the cost containment questionnaire and information from IPEDS.

Chapter Three

Methodology

Introduction

This chapter reviews the methods that were used to conduct this study on cost containment practices at public community colleges. The chapter is divided into the following sections: research questions, instrumentation, theoretical framework, original survey, design and modification of survey, modification, and questionnaire tested for study, population, unit of analysis, data gathering, analysis, limitations of the study, and summary. To understand and analyze the use of cost containment practices in public community colleges for fiscal year 2008-09, Dr. Daniel Hurley's questionnaire, originally written for public four-year colleges, was modified for use with public community colleges (see Appendix E). Data gathered from this questionnaire were analyzed, similar to Hurley's study, using descriptive analysis. The institutional characteristic variables were analyzed using cross-tabulation analysis to study regional, urbanization, and campus classifications.

Research Questions

This study explored the following research questions:

- 1) What cost containment practices were utilized by public community colleges in the United States?
- 2) What relationship did institutional characteristics of public community colleges have on the cost savings practices of public community colleges?
- 3) What cost containment best practices were reported by public community colleges in the United States?

Instrumentation

The intention of this study was to determine what cost containment practices, if any, public community colleges used in the United States, the relationship between institutional characteristics and cost containment practices, and what cost containment best practices the institutions were practicing. A thorough review of the research literature revealed that there was no research studies conducted on cost containment practices for public community colleges. Therefore, information was gathered on four-year colleges and universities cost containment practices, which including a cost containment study conducted by Dr. Daniel Hurley for fiscal year 2007-08 (Hurley, 2008), and was used to study cost containment practices of public community colleges.

Theoretical Framework

A growing problem for colleges and universities was that state governments faced budget deficits that were estimated at \$34 billion for fiscal year 2008-09 and in excess of \$100 billion for fiscal year 2009-10 (Boyd, 2009). Resource Dependency Theory states that an organization's survival (in this case, public community colleges) is dependent on its ability to attract resources from the environment and to control costs and expenditures in order to make sure those resources are appropriate (Bess & Dee, 2007; Pfeffer & Salancik, 2003). The largest dependency, or revenue, for community colleges was from state governments (38%), tuition and fees (20%), and local taxes (17%) (AACC, 2009). Since colleges received 38% of their revenue from the state, they were dependent on the state, but because state funding has been decreasing nationally, colleges have become more dependent on consumers—i.e., the public, who demanded that tuition and costs be contained (Pfeffer & Salancik, 2003).

Original Survey

After reviewing Hurley's cost containment survey, permission was requested from Dr. Hurley to use his questionnaire to survey public community colleges. Hurley granted permission and supplied the full questionnaire and notes related to his study to the researcher. The original cost containment questionnaire was designed for four-year colleges and universities for use in fiscal year 2007-08 and was sent to 420 institutional members of the American Association of State Colleges and Universities (AASCU) (Hurley, 2008).

Design of Survey

The purpose of the survey was to elicit the opinions of a sample of community college presidents about their attitudes, opinions, behaviors, or practices in certain areas related to cost containment practices. For the purposes of this study, Hurley's original questionnaire was modified to elicit information about cost containment practices at public community colleges. The cost containment questionnaire, re-titled Public Community College Cost Containment Questionnaire (PC4 Questionnaire), used a cross-sectional design to gather data at one point in time (Creswell, 2005). This questionnaire was administered nationally and consists of 101 data elements within 43 questions. It contains a combination of multiple-choice, Likert-type, closed-ended, and open-ended questions. The questions were organized into nine sections, which are displayed in the following tables. A brief description of the questions, the information collected, and the purpose is presented in the tables below (see tables 4-12).

Section I of the PC4 Questionnaire contains five questions and focuses on cost containment practices related to institutional aspects (see Table 4).

Table 4

Summary of PC4 Questionnaire Section I, Institution on Cost containment

Question No.	Information Collected	Purposes
1	Division/office with primary responsibility	To determine value of cost containment to each institution
2	Level of importance	To assess the level of institution's significance
3	Level of institutional funding	To provide information on institutional support for cost containment
4	Primary source for ideas and strategies	To identify areas of information sources for institutional
5	Institutions satisfaction with cost containment strategies	To determine level of satisfaction with overall cost containment use at institutions.

Section II of the PC4 Questionnaire contains 14 multiple-choice questions and focuses on areas of savings relevant to cost containment (see Table 5). Questions 6, 8, 10, 12, 14, and 16 focused on 31 specific areas of cost containment, and questions 7, 9, 11, 13, 15, and 17 focused on the dollars saved in each of the 31 detailed areas. The last two questions (18 and 19) asked if there were any other areas of savings and, if so, what they were.

Table 5

Summary of PC4 Questionnaire Section II, Detailed Areas of Cost Containment

Question No.	Information Collected	Purposes
6,8,10,12,14,16	Detailed area of savings across institutional	To gather institutional detailed areas of cost containment
7,9,11,13,15,17	Assessed value of savings	To assessed value of savings for each detailed area of cost containment
18	To attain if there are other areas cost containment	To evaluate if there are additional detailed areas of assessment at the institution
19	Additional detailed areas	To gathering the additional areas of assessment

Section III of the PC4 Questionnaire contains two questions and focuses on institutional reporting at public community colleges (see Table 6).

Table 6

Summary of PC4 Questionnaire Section III, Institutional Reporting on Cost Containment

Question No.	Information Collected	Purposes
20	Institutional reporting of cost containment	To assess if the institution is reporting on cost containment practices on a regular basis
21	Institution quantifying cost savings	To conclude whether the institution is quantifying the values of savings for cost containment

Section IV of the PC4 Questionnaire contains four questions and focuses on public community college participation in a consortium (see Table 7). Specifically, this

section seeks information about whether institutions belong to a consortium and the rationale for their choice. It also seeks information about areas of savings experienced by institutions that belong to a consortium as well as the effectiveness of the consortium.

Table 7

Summary of PC4 Questionnaire Section IV, Institutional Consortium on Cost

Containment

Question No.	Information Collected	Purposes
22	Institution belonging to a consortium	To ascertain whether institution belongs to a consortium
23	Why institution does belong to a consortium	To determine why institution does not belong to determine why
24	The goods and services that institution purchases	To gather what goods and services that are purchased through the consortium membership
25	Effectiveness of the consortium	To determine the level of effectiveness of the consortium for the institution

Section V of the PC4 Questionnaire contains five questions and focuses on institutional employees (see Table 8). In this section, four questions focus on employees and cost containment, and one question focuses on student involvement and cost containment.

Table 8

Summary of PC4 Questionnaire Section V, Institutional Employees on Cost Containment

Question No.	Information Collected	Purposes
26	Employees involved on cost containment	To determine if the institution has a program for employee participation
27	Enthusiasm of employees in program	To assess how enthusiastic employees have been about cost containment program
28	Reward employees	To determine whether college reward or recognize employees for cost containment
29	What form of rewards are used	To determine what types of rewards that employees receive from the institution for cost containment
30	Do students participate in the program	To determine if student participate in the cost containment program at the institution

Section VI contains five questions and focuses on the use of outside consultants at public community colleges (see Table 9). In this section, the questions seek to determine whether the college has used outside consultants, whether these consultants have been effective, and whether the college has implemented their recommendations.

Table 9

Summary of PC4 Questionnaire Section VI, Outside Consultant on Cost Containment

Question No.	Information Collected	Purposes
31	Use of an outside consultant	To determine if institution is using an outside consultant for cost containment
32	Determine what areas were studied	To determine what overall areas were analyzed by consultant for the institution
33	Effectiveness of consultant	To determine how effective the outside consultant was for services provided.
34	Was the outside consultant plan implemented	To determine if institution implement the outside consultant recommendations
35	Recommendations result in savings	To determine if the outside consultants plan result in cost savings to the institution

Section VII contains three questions and focuses on the influence of other areas of savings on cost containment (see Table 10).

Table 10

Summary of PC4 Questionnaire Section VII, Other Areas of Savings on Cost

Containment

Question No.	Information Collected	Purposes
36	Changes in cost containment in the next five years	To determine what the institution see as the most significant area of development over the next five years
37	High yielding cost containment initiative	To gather a high yielding cost containment imitative that your institution has used for cost containment
38	Cost containment best practice	To provide a best practice cost containment area that your institution has used for reallocation of resources.

Section VIII contains three questions and focuses on fiscal budgets, savings, and the percent of revenue related to their institution (see Table 11).

Table 11

Summary of PC4 Questionnaire Section VIII, Budgets, Dollar Savings, and Percent of Revenue for Public Community Colleges

Question No.	Information Collected	Purposes
39	Total budget for fiscal year 2008-09	To determine what was the total value of the institutional budget for fiscal year 2008-09
40	Dollars saved for fiscal year 2008-09	To determine what was the dollars saved in using cost containment practices for fiscal year 2008-09
41	Percent of revenue for fiscal year 2008-09	To gather the percent of appropriations for revenue for fiscal year 2008-09

Section IX contains two questions and focuses on endowment resources available to public community colleges (see Table 12). In this section institutions were asked if they use endowments to reduce expenditures and what value they use.

Table 12

Summary of PC4 Questionnaire Section IX, Endowment Resource for Public Community Colleges

Question No.	Information Collected	Purposes
42	Use of endowments at institution	To determine if institution uses endowments to reduce college expenditures
43	Dollar value of endowments	To gather the dollar value of endowment expending by institution.

Modification

After analyzing Hurley's cost containment questionnaire, it was determined that the dates contained within the PC4 Questionnaire needed to be changed. This study was modified to be a national study on cost containment practices of public community colleges for fiscal year 2008-09. Eight questions were also added, six focusing on dollars saved and two endowment questions. These changes increased the number of questions in the questionnaire from 35 to 43

Questionnaire Tested for Study

In 2007-08, Hurley sent out his cost containment questionnaire to 420 institutional members of the AASCU. In doing so, Hurley tested the use of this questionnaire in a national setting for colleges and universities, ensured the effectiveness and efficiency of the questionnaire, and eliminated any biases or non-compliance issues that might have existed.

Because Hurley's cost containment survey was sent out to 420 colleges and universities, the PC4 Questionnaire met the requirement of sending out a prescreen survey to a selected population. Additionally, because the cost containment questionnaire has been used at public colleges and universities, potential biases and non-compliance issues that might exist for this study at public community colleges have been minimized.

Population

The population for this cost containment study was public community colleges. The AACC (2010) identified 1,177 community colleges in the United States. In this analysis, it was determined that certain economic factors could affect the population and

influence the results. Of these 1,177 community colleges, 158 were independent (private), profit-oriented community colleges that receive private funding, and 31 were tribal community colleges (which are federally grant funded), resulting in 988 public community colleges that are state and locally funded (AACC, 2009). The final selection for the cost containment population was based on the public community college population. It should be noted that within the 988 public community colleges, seven military colleges were identified and eliminated from the population, due to federal funding, which brought the population of public community colleges to 981.

Unit of Analysis

This national study used a cross-sectional survey design to gather information on current attitudes, beliefs, opinions, and practices of public community colleges. The goal of the survey was to gather high-level information that was available to chief fiscal officers and presidents. The unit of analysis for this study was presidents of public community colleges, who could forward the questionnaire to the chief fiscal officer or administrator of his or her choosing (Creswell, 2005). To gather the electronic information using the cost containment survey, two sources were used: the 2010 Higher Education Directory (Higher Education Publication, 2010), and the Integrated Postsecondary Education Data System (IPEDS) (2010).

Data Gathering

The PC4 Questionnaire was entered into Vovici, an online survey system (see Appendix C). Attached to the PC4 Questionnaire were a letter from the student researcher (see Appendix A) and an endorsement letter from Dr. George R. Boggs,

President and CIO of the AACC (see Appendix B). Follow-up reminders were sent out three times at two-week intervals.

Out of 940 successfully electronically transmitted PC4 Questionnaires from Vovici, 159 responses were received, a response rate of 16.9%. The Vovici response rates were low, so the questionnaire was sent by U.S. mail followed by one follow-up reminder. Out of 800 successfully postal mailed PC4 Questionnaires, 102 responses were received, a response rate of 10.9%. The mailed results were added to the Vovici results for a total of 261 responses, a response rate of 27.8% (see Table 13).

Table 13

System Results for Public Community College Cost Containment Questionnaire

System	Base Count	Success	Bounce	Responses	Percent Rate
Vovici	981	940	19	159	16.9%
Mail	800	----	---	102	10.9%
Total		940		261	27.8%

Analysis

The data gathered from this survey were relative to cost containment practices. Dollars saved by the institutions and appropriations and resources of each institution were identified and transferred to a Microsoft Excel spreadsheet. Additionally, data variables collected for the institutional characteristics were gathered from the National Center for Educational Statistics (NCES) using IPEDS.

The research methods for this study included descriptive statistical techniques as well as cross tabulation analysis. The descriptive statistics used most often were the

central tendency, which is the mean, median, mode, and frequency distributions using percentiles and percentile ranks.

Cross tabulation analysis was conducted on institutional characteristics. To study the institutional characteristics of public community colleges, this study looked at three groups of variables, which were geographic region, degree of urbanization, and Carnegie classification 2005: size and setting. Cross tabulation analysis was used to identify the relationship between the level of importance community colleges placed on cost containment practices and three institutional characteristic variables.

Limitations of the Study

Limitations to this study were tied to the methodology applied and the survey. The questionnaire was designed for public four-year colleges, modified for public community colleges, and sent by electronic and direct mail to 940 public institutions, with 261 colleges responding. The questionnaire itself consisted of 43 questions and requested information from fiscal year 2008-09.

The length of the survey may have been a hindrance to college personnel, resulting in the low response rate of 27.8%. The fiscal year was an issue for many respondents who wanted to give information on the 2009-10 fiscal year instead. Fiscal year 2008-09 was chosen so the results could be cross tabulated with the latest available information from IPEDS, to answer the question whether institutional characteristics played a role in cost savings.

The Likert-type questions did not contain enough deviation in the responses to distinguish a reliable differential. The lack of variation among the response options had a

tendency to lean the answers in a positive direction, i.e. extremely important, very important, important, not important, or not at all important.

Summary

For this study, a cross-sectional, national assessment questionnaire was utilized. A questionnaire on cost containment practices designed by Hurley for public four-year institutions was slightly modified to inquire about a specified time frame and the public community college population. Following these modifications, the questionnaire was subsequently renamed PC4 Questionnaire. Hurley's survey was successful at identifying cost containment practices at four-year colleges and universities, and it was expected to do the same for public community colleges. A cross-tabulation analysis was conducted that examined institutional characteristics (i.e., size, location, and Carnegie classification) to determine whether there was a relationship to cost containment practices.

Chapter Four

Findings

Introduction

The purpose of this study was to (1) determine whether public community colleges practice cost containment, (2) identify if institutional characteristics play a role in cost-savings practices of public community colleges, and (3) identify best practices related to cost containment. This chapter presents an analysis of the survey responses from the population, interprets the findings, and provides responses to the three research questions.

Overview of Findings

The first research question [RQ1] focused on the cost containment practices community colleges use when faced with increasingly tight budget constraints. The results indicated that community colleges practice cost containment. The usages employed by community colleges to achieve cost containment can be organized into six main categories that include 31 detailed areas of cost containment. The results indicated that community colleges are practicing cost containment in these 31 detailed areas, from a low of 12% to a high of 52%. A review of each of the six main categories identified (1) the detailed areas in which most community colleges focused their cost containment activities during fiscal year 2008-09, (2) the detailed areas in which most community colleges considered applying future cost containment strategies, and (3) the detailed areas in which community colleges planned to employ no cost containment strategies. This review of the six main categories is then followed by a study of the dollar savings per category for cost containment practices. The next section reviewed was the detail areas

of each category and the dollars savings that public community colleges have attained. Finally, the usage of consortiums and outside vendors was reviewed.

The second research question [RQ2] focused on whether specific institutional characteristics of public community colleges influenced cost containment practices. The results indicated that each of the three institutional characteristic variables used in this study did, in fact, influence cost containment practices (97%). (1) The results indicated that the importance of cost containment practices varied among geographic regions. In particular, the Southeast region reported that cost containment was important more frequently than did other regions. (2) The results further indicated that the importance of cost containment varied based on degree of urbanization. More specifically, Rural-Fringe colleges reported that cost containment was important more frequently than did other types of colleges. (3) The results indicated that the importance of cost containment varied based on Carnegie classification. Colleges with the Carnegie classification of Associate's-Public Rural-serving medium reported that cost containment was important more frequently than did colleges with other Carnegie classifications.

The third research question [RQ3] focused on cost containment's best practices that community colleges indicated were most important. The results indicated that cost containment efforts focused on energy management more frequently than any other category (followed by the category of contracts and purchases).

Cost Containment Practices by Usage at Public Community Colleges [RQ1]

Information was gathered and analyzed from 14 survey questions to determine whether cost containment practices were being employed by public community colleges in the United States. These cost containment practices can be organized into six main categories: Salaries and Benefits, Staffing Levels, Business Services/Processes, Academic and Extracurricular Programming, Student Services, and Facilities and Infrastructure.

When asked about the six main categories in which cost containment strategies were practiced, respondents selected one of four choices: “Relied upon,” “Analyzed,” “Not yet considered,” or “Will not consider.” These choices represent the degree to which colleges practice cost containment strategies in each of the six main categories (facilities and infrastructure, staffing levels etc.). A response of “Relied upon” indicates that a specific category of cost containment practices is currently in use. A response of “Analyzed” indicates that colleges have explored the possibility of applying cost containment strategies in that category. A response of “Not yet considered” indicates that colleges may have interest in applying cost containment strategies in that category in the future. A response of “Will not consider” indicates that colleges will not consider applying cost containment strategies in that category.

Cost Containment Practices by Category. Table 14 summarizes the percentage of responses in each of the six main categories and ranks the six main categories based on the percentage of responses in the “Relied upon” column. Table 14 indicates that the response selected most often was “Analyzed,” indicating that an average of 39% of public community colleges have analyzed cost containment practices in one or more of

the six main categories. The next response selected most frequently was “Relied upon,” indicating that an average of 29% of public community colleges have been and currently are using cost containment practices in one or more of the six main categories. The top three categories in which respondents indicated they “Relied upon” cost containment practices are Facilities and Infrastructure (39%), Staffing Levels (36%), and Academics & Extracurricular (28%).

Table 14 further shows that Salaries and Benefits is the category in which the highest percentage of respondents (19%) indicated that they “Will not consider” implementing cost -containment practices, followed by the category of Business Services/Processes (17%).

Table 14

Rank Ordered by Relied Upon Level on Cost Containment Categories

Cost Containment Categories Averages	Relied Upon	Analyzed	Not yet considered	Will not Consider
Facilities & Infrastructure	39%	40%	16%	5%
Staffing Levels	36%	43%	15%	6%
Academic & Extracurricular	28%	37%	25%	10%
Salaries & Benefits	27%	37%	17%	19%
Business Services/Process	24%	37%	23%	17%
Student Services	21%	45%	23%	11%
Total Category Average	29%	39%	21%	11%

In order to identify the categories in which community colleges were practicing cost containment as well as categories in which they were seeking to implement changes, the categories of “Relied upon” and “Analyzed” were combined and the percentages were rank ordered (see Table 15).

Table 15

Rank Ordered by Relied Upon Plus Analyzed Category Averages

Cost Containment Categories Averages	Relied Upon + Analyzed	Not yet considered	Will not Consider
Facilities & Infrastructure	79%	16%	5%
Staffing Levels	79%	15%	6%
Student Services	66%	23%	11%
Academic & Extracurricular	65%	25%	10%
Salaries & Benefits	64%	17%	19%
Business Services/Process	61%	23%	17%
Total Category Average	68%	21%	11%

Table 15 shows the level of importance that public community colleges placed on cost -containment practices. From this table, it can be seen that an average of 79% of the respondents indicated they had implemented or considered implementing cost containment practices in the categories of Facilities & Infrastructure and Staffing Levels. An average of five percent of responses indicated that colleges “Will not consider” implementing cost containment practices in the category of Facilities & Infrastructure, and slightly more at six percent indicated that they “Will not consider” implementing cost containment practices in the category of Staffing Levels. However, at 95% and 94% for Facilities & Infrastructure and Staffing Levels respectively, community colleges are more likely to look in these categories than the other main categories for cost containment practices. Together, Tables 14 and 15 indicate the level of importance that public community colleges placed on current and future cost containment practices.

Cost Containment Practices by Category Dollars. Table 16 indicates the actual dollar amounts that were saved in each of the six main categories. Community colleges achieved cost containment of more than \$63 million in the category of Academic &

Extracurricular, more than \$58 million in the category of Salaries & Benefits, and more than \$32 million in the category of Staffing Levels. Table 16 shows that the three categories that contain the highest total dollars saved represent more than 75% (\$154.59 million) of the overall cost containment savings (\$206.12 million).

Table 16

Rank Order by Cost Containment Dollar Savings

Category	Total Dollars Saved	Response Rate
Academic & Extracurricular	\$63,425,396	27%
Salaries & Benefits	\$58,747,879	22%
Staffing Levels	\$32,329,079	15%
Business Services/Process	\$27,573,972	17%
Facilities & Infrastructure	\$18,381,500	13%
Student Services	\$5,663,500	6%
Total Dollars Saved	\$206,121,326	100%

Summary of Cost Containment Practices by Category. The results showed that while these colleges (as a group) indicated that they practiced cost containment strategies in the order of importance represented in Table 14 and Table 15, the rank order of the categories in which they actually saved the most money differed. In other words, the responses reflected in Tables 14 and 15 suggest that colleges currently implement or plan to implement cost containment strategies in the categories of Facilities & Infrastructure and Staffing Levels. However, when the actual dollars saved as a result of implementing cost containment were added to the results, the leading areas of utilization changed, indicating that the highest dollar savings were realized in the categories of Academic & Extracurricular and Salaries & Benefits (see Table 16). Table 17 shows the

rank order of categories in which the highest dollar savings were realized compared to the rank order of categories in which the most respondents indicated they have implemented or will implement cost containment strategies.

Table 17

Summary of Leading Categories for Cost Containment Savings

Cost Containment Categories	Total Dollar Savings	Relied Upon	Relied Upon + Analyzed
Academic & Extracurricular	1	3	4
Salaries & Benefits	2	4	5
Staffing Levels	3	2	2
Business Services/Process	4	5	6
Facilities & Infrastructure	5	1	1
Student Services	6	6	3

These findings demonstrate that the categories in which the community colleges collectively reported that they practiced cost containment strategies differed from the categories in which they actually experience the highest dollar savings.

Cost Containment Practices by Detail Areas. This section reports the results of the survey according to the detailed areas within each of the six main categories. The results for each main category are presented individually and further subdivided in detailed areas within each main category.

The Salaries and Benefits category contains seven detailed areas: (1) compensation-faculty, (2) compensation-administration, (3) compensation-staff, (4) health insurance benefits, (5) retirement benefits, (6) overtime pay, and (7) other fringe benefits. The results showed that cost containment practices were implemented more frequently in four detailed areas than the category average for “Relied upon”:

compensation-faculty (34%), compensation-administration (38%), compensation-staff (34%), and overtime pay (32%) (see Table 18). The retirement benefits detailed area, received the lowest percentage of “Relied upon” responses (12%), indicating that community colleges were less likely to use retirement benefits for cost containment, than any other detailed area within the six categories.

Community colleges were looking at Salaries and Benefits for current or future change. In studying the “Analyzed” column of Salaries and Benefits, the five areas analyzed most for current or future cost containment included compensation-faculty at 38%, compensation-administration at 37%, compensation-staff at 40%, overtime pay at 39%, and other fringe benefits at 40%.

Areas in which community colleges indicated that they will not consider implementing cost containment practices are indicated in the “Will not consider” column. Respondents indicated that they would not consider implementing cost containment practices in the areas of retirement benefits (36%), health insurance benefits (26%), and other fringe benefits (19%). The percentage of the “Will not consider” responses within the Salaries & Benefits category is among the highest across all six categories. Respondents also indicated that they would not consider implementing cost containment practices in the areas of faculty (18%), staff (13%), overtime pay (13%), and administration (11%).

Table 18

Rank Ordered Salaries & Benefits Category Details and Percent Results

SALARIES & BENEFITS	Relied Upon	Analyzed	Not Yet Considered	Will not consider
Compensation Administration	38%	37%	14%	11%
Compensation Faculty	34%	38%	10%	18%
Compensation Staff	34%	40%	13%	13%
Overtime pay	32%	39%	16%	13%
Health Insurance benefits	23%	36%	15%	26%
Other fringe benefits	17%	40%	25%	19%
Retirement benefits	12%	27%	25%	36%
Salaries & Benefits Average	27%	37%	17%	19%

The category of Staffing Levels was divided into three detailed areas: (1) faculty, (2) administration, and (3) general staffing. Respondents indicated that relied upon implementing cost containment practices in the areas of administration (37%), general staffing (37%), and faculty staffing (36%). All three areas were within two percentage points of each other in the “Relied upon” column (see Table 19). The fact that response frequencies were relative equal in each of these detailed areas suggests that public community colleges implemented cost containment practices in all three detailed areas within this category.

Respondents indicated that they analyzed cost containment practices in the areas of general staffing (44%), administration staffing (43%), and faculty staffing (41%). All three areas were within three percentage points of each other in the “Analyzed” column. This suggests that all three of these detailed areas are being examined and that community colleges implemented cost containment practices in each of these detailed areas.

Areas in which community colleges indicated that they will not consider implementing cost containment practices are indicated in the “Will not consider” column. Respondents indicated that they would not consider implementing cost containment practices in the areas of faculty staffing (10%), administration staffing (4%), and general staffing (4%). The low percentages in this column suggest that a large number of the community colleges surveyed, 90% to 96%, for faculty staffing and administration staffing respectively, may be considering implementing cost containment practices in this category.

Table 19

Rank Ordered Staffing Levels Category Details and Percent Results

STAFFING LEVELS	Relied Upon	Analyzed	Not Yet Considered	Will not consider
Administration staffing levels	37%	43%	17%	4%
General staffing levels	37%	44%	15%	4%
Faculty staffing levels	35%	41%	14%	10%
Staffing Levels Average	36%	43%	15%	6%

The category of Business Services/Processes was divided into six detailed areas: (1) bookstore operations, (2) dining hall/food service/residence hall, (3) information technology/computing, (4) cashiering/financial services, (5) vending services, and (6) consortium purchasing. Respondents indicated that they relied upon cost containment practices in two primary areas: consortium purchasing (34%) and bookstore operations (28%). The percentage of responses in these two areas was above average (24%). Respondents also indicated that they relied upon cost containment practices in the areas of information technology/computing (23%) vending services (22%), dining hall/food services/residence hall (21%) and cashiering/financial services (11%). This suggests that

in the Business Services/ Practices category, most community colleges were not implementing cost containment practices in these detailed areas (see Table 20).

Within the Business Services/Processes category, 34% of community colleges indicated that they used consortium purchases to achieve institutional savings. In a separate survey item from the PC4 Questionnaire, respondents were asked whether their community college belonged to a consortium and whether their membership in such a consortium was effective. The results indicated that 111 institutions were members of a consortium, and 90% of those 111 institutions indicated that membership in their respective consortia was effective in helping to implement cost containment practices.

Areas in which community colleges indicated that they have analyzed cost containment practices are indicated in the “Analyzed” column. Respondents indicated that they have analyzed the implementation of cost containment practices in the areas of information technology/computing (50%) and cashiering and financial services (41%). Based on the percentage of responses in these two areas, they can be considered potentially effective areas in which community colleges can achieve current and future savings. Respondents further indicated that they analyzed cost containment practices in the area of information technology/computing more than any other area within all six categories.

Areas in which community colleges indicated that they will not consider implementing cost containment practices are indicated in the “Will not consider” column. Respondents indicated that they would not consider implementing cost containment practices in the areas of dining hall/food service/residence hall (32%), vending services (19%), bookstore operations (19%), cashiering and financial services (14%), consortium

purchasing (10%), and information technology/computing (6%). More so, it should be noted that the lowest “Will not consider” areas are also the highest areas of consideration for cost containment, such as information technology/computing (6%) which indicates 94% will consider for cost containment.

Table 20

Rank Ordered Business Services/Processes Category Details and Percent Results

BUSINESS SERVICES/PROCESSES	Relied upon	Analyzed	Not yet Considered	Will not Consider
Consortium purchasing	34%	30%	25%	10%
Bookstore operations	28%	35%	18%	19%
Information technology/computing	23%	50%	22%	6%
Vending services	22%	33%	26%	19%
Dining hall/food service/residence hall	21%	30%	17%	32%
Cashiering and financial services	14%	41%	31%	14%
Business Services/Process Average	24%	37%	23%	17%

The category of Academic & Extracurricular Programming was divided into 10 detailed areas: (1) extracurricular programs (non-athletic), (2) athletic programs, (3) class sizes, (4) course offerings, (5) course loads, (6) program discontinuation/consolidation, (7) departmental mergers, (8) joint degree offerings w/ other institutions, (9) distance/online learning, and (10) utilization of contingent faculty. Respondents indicated that they relied upon cost containment practices at above-average (28%) rates in five detailed areas: distance/online learning (45%), utilization of contingent faculty (42%), class sizes (40%), course offerings (37%), and program discontinuation/consolidation (32%). However, respondents also indicated that they relied upon cost containment practices at percentage rates that were well below average in four detailed areas: departmental mergers (16%), joint degree offerings with other institutions (16%),

extracurricular programs (non-athletic) (15%), and athletic programs (15%) (see Table 21).

Areas in which community colleges indicated that they have analyzed cost containment practices are indicated in the “Analyzed” column. Respondents indicated that they have analyzed the implementation of cost containment practices in the areas of distance/online learning (45%), utilization of contingency faculty (42%), class sizes (40%), course offerings (37%), program discontinuation/consolidation (32%), course loads (27%), departmental mergers (16%), joint degree offerings with other institutions (16%), extracurricular programs (non-athletic) (15%), and athletic programs (15%).

Areas in which community colleges indicated that they will not consider implementing cost containment practices are indicated in the “Will not consider” column. Respondents indicated that they would not consider cost containment practices at above-average (10%) rates in four detailed areas: athletic programs (22%), extracurricular programs (non-athletic) (16%), departmental mergers (13%), and course loads (10%).

Table 21

Rank Ordered Academic & Extracurricular Category Details and Percent Results

ACADEMIC & EXTRACURRICULAR PROGRAMMING	Relied upon	Analyzed	Not yet Considered	Will not Consider
Distance/online learning	45%	38%	15%	2%
Utilization of contingent faculty	42%	27%	22%	9%
Class sizes	40%	37%	15%	8%
Course offerings	37%	42%	15%	6%
Program discontinuation/consolidation	32%	44%	19%	4%
Course loads	27%	44%	19%	10%
Departmental mergers	16%	35%	36%	13%
Joint degree offerings w/ other institutions	16%	34%	41%	9%
Extracurricular programs (non-athletic)	15%	32%	36%	16%
Athletic programs	15%	35%	28%	22%
Academic & Extracurricular Average	28%	37%	25%	10%

The category of Student Services was divided into two detailed areas: (1) student services non-academic and (2) student services academic related. Respondents indicated that they relied upon cost containment practices at an above-average (21%) rate in the area of student services non-academic (22%) and a below average rate in the area of student services academic related (19%) (see Table 21).

Areas in which community colleges indicated that they have analyzed cost containment practices are indicated in the “Analyzed” column. Respondents indicated that they have analyzed cost containment practices in the areas of student services non-academic (45%) and student services academic related (45%). These results suggest that community colleges did not rely upon Student Services to achieve cost containment but were considering these as areas in which to apply future savings.

Areas in which community colleges indicated that they will not consider implementing cost containment practices are indicated in the “Will not consider” column. Respondents indicated that they would not consider cost containment practices at an above-average (11%) rate in the area of student services academic related (12%) and a below-average rate in the area of student services non-academic related (10%).

Table 22

Rank Ordered Student Services Category Details and Percent Results

STUDENT SERVICES	Relied upon	Analyzed	Not yet Considered	Will not Consider
Student services nonacademic	22%	45%	23%	10%
Student services academic-related	19%	45%	24%	12%
Student Services Average	21%	45%	23%	11%

The category of Facilities & Infrastructure was divided into three detailed areas: (1) facilities and infrastructure, (2) grounds keeping, (3) energy management. Respondents indicated that they relied upon cost containment practices at an above-average (39%) rate in the area of energy management (52%) and a below-average rate in the area of grounds keeping (28%) (see Table 23). Respondents indicated that they relied upon cost containment practices in the area of energy management more than any other area within all six categories. Other findings from the PC4 Questionnaire further indicated that energy management was the most frequently indicated cost containment practice, saving public community colleges more than \$10 million in fiscal year 2008-09.

Areas in which community colleges indicated that they have analyzed cost containment practices are indicated in the “Analyzed” column. Respondents indicated

that they have analyzed cost containment practices in the areas of grounds keeping (45%) facilities and infrastructure (41%), and energy management (33%).

Table 23

Rank Ordered Facilities & Infrastructure Category Details and Percent Results

FACILITIES & INFRASTRUCTURE	Relied upon	Analyzed	Not yet Considered	Will not Consider
Energy management	52%	33%	12%	3%
Facilities and infrastructure	35%	41%	18%	6%
Grounds keeping	28%	45%	20%	6%
Facilities & Infrastructure Average	39%	40%	16%	5%

Cost Containment Practices by Dollar Savings in Detail Areas. The six main categories were divided into 31 detailed areas. This section reports the top 15 detailed areas in which public community colleges realized cost savings. Table 24 shows that the top three detailed areas in which community colleges experienced the greatest dollar savings were distance online learning (\$28.22 million), compensation of faculty (\$19.75 million), and faculty staffing levels (\$15.02 million).

In studying the results of these detailed areas, it can be seen that savings were realized in certain detailed areas more than others within each category. For example, the leading area within the Academic & Extracurricular category was distance online learning, which represented more than 44% of the category total dollars saved. Likewise, the leading area within the Salaries & Benefits category was compensation faculty (32%), and the leading area within the Staffing Levels category was faulty staffing levels (46%).

Table 24

Total Dollars Saved for Cost Containment Areas and Percent of Total

Category	Cost Containment Area Savings	Total Dollars	Percent of Total
Academic & Extracurricular	Distance/online learning	\$28,220,500	3%
Salaries and Benefits	Compensation Faculty	\$19,753,481	6%
Staffing Levels	Faculty Staffing Levels	\$15,027,976	5%
Salaries and Benefits	Compensation Staff	\$14,213,996	6%
Salaries and Benefits	Health insurance benefits	\$14,175,500	4%
Facilities & Infrastructure	Energy management	\$10,658,000	7%
Salaries and Benefits	Compensation Administration	\$10,604,902	7%
Staffing Levels	General Staffing Levels	\$9,479,210	5%
Academic & Extracurricular	Utilization of contingent faculty	\$8,400,000	3%
Business Services/Process	Consortium purchasing	\$8,306,958	3%
Business Services/Process	Bookstore operations	\$7,992,789	3%
Academic & Extracurricular	Course Offerings	\$7,910,177	3%
Staffing Levels	Administration Staffing Levels	\$7,821,893	5%
Business Services/Process	Information technology/computing	\$7,495,925	4%
Facilities & Infrastructure	Facilities and infrastructure	\$6,605,500	7%

Cost Containment Practices by Consortiums and Outside Consultants. This section reports the results of the survey related to cost containment practices associated with consortiums and outside consultants. According to the survey results, 46% of the responding community colleges indicated that their involvement with consortiums helped them to contain costs more effectively. The respondents also indicated that involvement with consortiums were 90% effective in saving the college funds.

According to the survey results, 38% of the responding community colleges indicated that they used outside consultants. Of those community colleges that used outside consultants, 86% found the process to be very effective, and 69% implemented a

plan to reduce costs and increase savings. Of the community colleges that implemented a plan, 57% saved their institutions money.

Public community colleges were asked to identify their institutions' primary source for cost containment ideas and strategies. The institutions identified the following three areas as their three primary sources: fellow institutional colleagues/staff (34%), individuals at other higher education institutions (24%), and professional meetings/associations (18%). Respondents were also asked to identify their level of satisfaction with their current cost containment programs. This survey found that a little more than half (61%) of the community colleges were satisfied while a little more than a quarter (26%) were very satisfied. This indicates that a vast majority (87%) of public community colleges were satisfied with their cost containment programs.

Cost Containment Practices and Institutional Characteristics [RQ2]

This section reports the results of the survey related to the relationship among cost containment practices and institutional characteristic variables. Three specific institutional characteristic variables were examined: (1) geographic region, (2) degree of urbanization, and (3) Carnegie classification 2005. In addition to investigating the relationship between these three institutional characteristic variables and cost containment practices, a PC4 Questionnaire question was selected, and a simple cross tabulation analysis was conducted. The cross tabulation analysis was conducted using responses from the following PC4 question: "How important is the issue of cost containment to your institution's overall strategic plan?" The response ranges offered for this question were "extremely important" (EI), "very important" (VI), "important" (I), "not very important" (NVI), and "not important at all" (NI at all). The survey yielded

261 institutional responses, and 236 (90%) of the surveys returned included responses to this question.

Based on the IPEDS data, the following institutional characteristics were known about the population surveyed; distribution of institutions in eight geographical regions, the number of institutions in 12 categories reflecting the degree of urbanization in the area served by the institution, and the number of community colleges in each of the nine 2005 Carnegie classification groups for publically funded institutions. These same three characteristics were analyzed for the respondent group, the 236 community colleges, that responded to the survey.

Across tabulation of the three institutional characteristics which are geographic region, degree of urbanization, and Carnegie classification was completed. In this cross tabulation the original population characteristics were compared to the characteristics of the responding group. The results demonstrate that the respondents matched the population very closely in almost all categories. The community colleges who responded to the cost containment survey reflect the national characteristics of community colleges.

Geographical Region Cross Tabulation. The first institutional characteristic variable examined was geographic region. The results of the cross tabulation indicated that community colleges as a group considered cost containment very important. In fact, 97% of the responses indicated that cost containment is important (14%), very important (36%), or extremely important (47%). A total of 3% of the responses indicated that community colleges considered cost containment as not very important (3%) or not important at all (0%) (see Table 25).

Table 25

Geographic Region and Importance of Cost Containment Cross Tabulation

Geographic Region	EI	VI	I	NVI	NI at all	Total Reply	% of Total Reply
New England	4	3	1	0	0	8	3%
Mid East	13	9	4	0	0	26	11%
Great Lakes	16	17	5	0	0	38	16%
Plains	10	11	3	1	0	25	11%
South East	31	30	7	2	0	70	30%
South West	8	7	9	1	0	25	11%
Rocky Mountains	2	3	0	1	0	6	3%
Far West	26	6	5	1	0	38	16%
Totals	110	86	34	6	0	236	100%
% of Totals	47%	36%	14%	3%	0%	100%	

The highest response rate by percentage was provided by the South East region, which provided 30% of the total number of responses. This response rate was almost twice the response rate of any other region. The next highest response rate was provided by the Great Lakes region (16%) and the Far West region (16%), followed by the Mid East region (11%), the Plains region (11%), and the South West region (11%). The lowest response rates were provided by the New England region (3%) and the Rocky Mountains region (3%). These results suggest that the importance of cost containment (as indicated by the response rates to the survey) varied among community colleges across the country.

Degree of Urbanization Cross Tabulation. The second institutional characteristic variable examined was the degree of urbanization. A cross tabulation was conducted to examine the relationship between the degree of urbanization of community colleges and the importance these colleges placed on cost containment.

The results of the cross tabulation indicated that community colleges as a group—despite their degree of urbanization—considered cost containment practices as an important strategy. In fact, 97% of the responses indicated that cost containment is important (14%), very important (36%), or extremely important (47%). A total of 3% of the responses indicated that community colleges across all degree of urbanization considered cost containment as not very important (3%) or not important at all (0%).

The results also indicated that rural, fringe institutions provided the highest percentage of responses (23%) to questions concerning cost containment. Community colleges classified as “city, small” (11%); “suburb, large” (11%); and “town, remote” (11%) provided the next highest percentage of responses (see Table 26).

Responses from community colleges within each of the four general urbanization classifications (city, rural, urban, and town) were consolidated. The results indicated that the highest percentage of responses related to cost containment were provided by rural community colleges (34%), followed by city community colleges (30%), town community colleges (21%), and suburban community colleges (15%). The results suggest (as indicated by response rates to the survey) that community colleges classified as rural found cost containment more important than did other community colleges based on their degree of urbanization.

Table 26

Degree of Urbanization and Importance of Cost Containment Cross Tabulation

Degree of Urbanization	EI	VI	I	NVI	NI at all	Total Responses	% of Total
City: Large	13	2	5	0	0	20	8%
City: Midsize	12	5	8	1	0	26	11%
City: Small	9	13	1	2	0	25	11%
Rural: Distant	15	5	2	0	0	22	9%
Rural: Fringe	18	29	6	2	0	55	23%
Rural: Remote	3	0	1	0	0	4	2%
Suburb: Large	13	9	4	0	0	26	11%
Suburb: Midsize	5	0	0	0	0	5	2%
Suburb: Small	0	2	2	0	0	4	2%
Town: Distant	9	8	3	1	0	21	9%
Town: Fringe	1	1	1	0	0	3	1%
Town: Remote	12	12	1	0	0	25	11%
Total Response	110	86	34	6	0	236	100%
% of Total	47%	36%	14%	3%	0%	100%	

Carnegie Classification 2005 Cross Tabulation. The third institutional characteristic variable examined was the Carnegie classification. A cross tabulation was conducted to examine the relationship between the Carnegie classification of community colleges and the importance these colleges placed on cost containment.

The results of the cross tabulation indicated that community colleges as a group—despite their Carnegie classification—considered cost containment practices as an important strategy. In fact, 97% of the responses indicated that cost containment is important (14%), very important (36%), or extremely important (47%). A total of 3% of the responses indicated that community colleges within all Carnegie classifications considered cost containment as not very important (3%) or not important at all (0%)

The results also indicated that colleges classified as Associate's-Public Rural-serving Medium provided the highest percentage of responses (35%), followed by Associate's-Public Rural-serving Large (14%) and Associate's-Public Suburban-serving Single Campus (14%) (see Table 27).

Table 27

Carnegie Classification 2005 and Importance of Cost Containment Cross Tabulation

Carnegie Classification 2005	EI	VI	I	N VI	NI at All	Total Reply	% of Total Reply
Associate's-Public 2-year colleges under 4-year universities	3	2	1	0	0	6	3%
Associate's-Public Rural-serving Large	13	13	7	1	0	34	14%
Associate's-Public Rural-serving Medium	33	39	6	3	0	81	35%
Associate's-Public Rural-serving Small	13	6	2	0	0	21	9%
Associate's-Public Special Use	0	0	2	0	0	2	1%
Associate's-Public Suburban-serving Multi-campus	12	6	4	0	0	22	9%
Associate's-Public Suburban-serving Single Campus	17	12	4	1	0	34	14%
Associate's-Public Urban-serving Multi-campus	15	6	5	0	0	26	11%
Associate's-Public Urban-serving Single Campus	4	2	3	1	0	10	4%
Total	110	86	34	6	0	236	100%
% of Total	47%	36%	14%	3%	0%	100%	

Cost Containment Practices by Institutional Best Practice [RQ3]

In addition to exploring the utilization of cost containment practices and the relationship among institutional characteristic variables, this study also explored cost containment best practices reported by community colleges. Data regarding cost containment best practices was gathered from the PC4 Questionnaire, interpreted, and

organized into a simple matrix (see Table 28). Survey results indicated that community colleges employed cost containment best practices in seven primary areas: energy management (43%), contracts/purchasing (19%), insurance changes (12%), class sizes and course offerings (11%), retirement and wage freezes (9%), adjuncts (5%), and consortium (2%). The number of responses in the first four areas comprised 85% of the total number of survey responses related to cost containment best practices.

Table 28

Public Community Colleges Summarized Best Practices

Specific Cost Containment Practice	Total
Energy Management	43%
Contracts/Purchasing	19%
Insurance Changes	12%
Class Sizes, Course Offerings	11%
Retirement/Wage Freezes	9%
Adjuncts	5%
Consortium	2%

The respondents indicated that they focused on energy management as a cost containment measure, and 55% of those respondents indicated their savings came through energy practices, audits, and consortiums. Community colleges indicated that they employed a variety of simple cost containment practices, such as simple changes from light retrofits with energy efficient light bulbs, conducting energy audits, changing windows and doors to achieve more insulation efficiency, and tinting outside windows. Community colleges also indicated that they also employed a variety of more complex changes, such as installing new HVAC systems, boilers systems, and geothermal and solar power systems. In the contract and purchasing areas, community colleges reported that they engaged in rebidding purchasing contracts, practiced centralized purchasing and

distribution, shared services, and reduced expenditures. In the area of insurance policy changes, the results indicated that 35% of the respondents employed a reduction in health insurance to achieve cost containment savings while the remaining community colleges considered achieving cost containment goals through self-insurance, athletic insurance, and consortium insurance discounts.

Public community colleges indicated that they did not rely heavily on consortiums as a cost containment best practice (2%). However, the results from the PC4 Questionnaire indicated that more than one-third (38%) of the respondents used consortiums and that nearly all of them (90%) indicated that consortiums were very effective. This discrepancy can be partially accounted for by the fact that most institutions consider consortiums as a component of purchasing rather than a best practice.

In studying research question three, results illustrate that public community colleges have indicated what they see as their best practice for cost containment. These results do not necessarily relate back to the first research question findings of what areas the institutions are using for cost containment practices, such as energy management and consortium usages.

Summary

Chapter Four includes the results of the study in three sections: cost containment practices used at public community colleges, cost containment practices and institutional characteristics, and cost containment best practices. The results indicate that (1) public community colleges have practiced cost containment strategies, (2) cost containment practices were important based on institutional characteristics, and (3) public community

colleges have employed cost containment best practices. Chapter Five includes a discussion of the results in more detail, provides implications of this study, and suggests recommendations for future studies.

Chapter Five

Discussions, Recommendations, and Conclusions

Introduction

Cost containment research has been conducted on cost containment practices employed by four-year colleges and universities, but no research has been conducted on the ways that community colleges have employed cost containment practices. Chapter Five provides a review of the study, presents a summary of the results, and provides recommendations for further research on cost containment practices of public community colleges. Chapter Five closes with a summary of the contribution to the research literature provided by this study.

Recapitulation of the Research

The purpose of this study was to explore cost containment practices employed by community colleges within the U.S. More specifically, this study was conducted to develop an understanding of whether institutions practiced cost containment at a time of declining state funding, record enrollment, and double-digit tuition increases. As community colleges continued to make financial adjustments based on decreased revenues, they also responded to calls from the public, state legislatures, and Congress to control costs and implement cost containment practices. This study queried community college presidents to discover whether those institutions utilized cost containment practices and to what extent they found these practices to be important. The results indicated that cost containment practices have been employed by community colleges.

Community colleges have maintained a policy of open enrollment since the 1960s and experienced record enrollment increases even though states were forced to cut

funding to the institutions due to the recent economic recession. These events placed public community colleges in jeopardy in terms of funding reductions and budget cuts. To meet the growing enrollment demand and still provide access without cutting the quality of higher education, institutions were forced to examine the possibility of increasing tuition and fees or reducing operating costs. Since there is a gap in the literature base focusing on documented history of cost containment practices at public community colleges, the question of whether cost containment was practiced among community colleges was posed.

To explore the opinions of community college presidents about cost containment practices, Dr. Daniel Hurley's questionnaire (originally administered to public four-year colleges for the AASCU (2008)), was modified for administration to public community colleges. The revised version of Hurley's questionnaire was then re-titled *Public Community College Cost Containment Questionnaire (PC4 Questionnaire)* and was distributed to 981 public community colleges across the United States to gather information about cost containment practices for fiscal year 2008-09. The PC4 Questionnaire was distributed by electronic format and U.S. mail, which resulted in 261 successful responses—a response rate of 27.8%. This study used a cross-sectional survey design to gather current attitudes, beliefs, opinions, and practices. The Integrated Postsecondary Education Data System (IPEDS) was used to gather data on institutional characteristics. After the surveys were returned, data from the survey responses were recorded and cross tabulated.

Overview of Research Questions Discussions

In this section, the results of the PC4 Questionnaire findings were analyzed in response to the three primary research questions posed for this study. Research Question 1 explores the use of cost containment practices by community colleges in six main categories and 31 detail areas. This section-presents the results and discusses the extent to which the categories of the highest dollar savings achieved differs from the categories public community colleges indicated they most frequently implemented cost containment practices.

Research Question 2 explores the importance of cost containment practices at community colleges and whether institutional characteristics play a role in the implementation of these cost containment practices. In response to Research Question 2, this section presents the results and discusses the importance and the extent to which cost containment practices vary among geographic regions, degree of urbanization, and Carnegie classification.

Research Question 3 explores the use of cost containment best practices at community colleges and looks at which of these best practices was most often implemented. Public community colleges indicated that energy management was the number-one area in which cost containment practices were most often implemented, with the majority of energy management projects requiring up-front investments that would yield cost savings in the future.

Discussion of Cost Containment Practice by Usage

A survey was administered to public community colleges across the United States. The survey included 31 questions designed to elicit information about the areas in

which these community colleges currently implemented, planned to implement, or planned not to implement cost containment practices. The response options for these 31 questions included “relied upon,” “analyzed,” “will consider,” and “will not consider.” In summarizing the average number of responses, community colleges indicated that they had “Analyzed” (39%), “Relied upon” (29%), “Not yet considered” (21%), and “Will not consider” (11%) cost containment practices in specific detail areas. The cost containment practices that community colleges relied upon reflect the areas in which public community colleges were currently focusing on to achieve cost containment savings.

The results indicated that more than one third (39%) of respondents analyzed cost containment practices, while just over one quarter (29%) relied upon cost containment practices, showing that public community colleges were practicing cost containment. This suggests however that public community colleges were considering implementing cost containment practices more than they were actually implementing them. One reason for this is related to the economic downturn. A national study conducted by Dr. Steven G. Katsinas, Director of the Education Policy Center at the University of Alabama, found that state directors expected to face midyear reductions in their state appropriations for fiscal year 2008-09. Additionally, in a period of all-time record enrollments, directors predicted that state operating budget support for community colleges would decline in 2009-10 fiscal year (Gonzalez, 2009).

As public community colleges responded to budget cuts for fiscal year 2008-09 they prepared for further cuts from the state and local governments, community colleges also focused on future reductions. Community colleges focused on future cost reductions to minimize the impact of budget cuts and analyze future savings plans for fiscal year

2009-10. The results showed that those public community colleges were using (29%) and pursuing (39%) cost containment practices.

Discussion of Cost Containment Usage Dollars Savings Detail

Research Question 1 explored the use of cost containment practices in six main categories and 31 detail areas. An analysis of the cost containment practices by public community colleges in the 31 detailed areas and the total number of dollars saved in those detailed areas revealed some interesting findings. Community colleges indicated that they experienced dollar savings in online learning (\$28.22 million), compensation of faculty (\$19.75 million), and faculty staffing levels (\$15.02 million). However, community colleges reported on the survey that they practiced cost containment strategies in different areas than those in which they saved the most dollars. For example, rather than online learning, community colleges indicated more frequently that they employed cost containment practices in energy management (52%). In terms of actual dollar savings, energy management was considered the sixth area of savings (\$10.65 million). This discrepancy could be due to the up-front costs of more complex energy management programs, such as purchasing geo-thermal heating units, purchasing solar powered systems, and installing HVAC systems.

The difference between the reported emphasis on these detail areas and the total number of dollars saved in those detailed areas suggests that public community colleges experienced a perceived savings in the area of energy management, but in reality, they saved more real dollars in areas such as online classes, faculty salaries, and faculty staffing levels. Another reason for this difference could be that the dollars saved from energy management changes were not shared in the survey by the community colleges or

that the primary areas of cost containment reflected the time frame when the survey was distributed (fiscal year 2009-10) compared with the time frame reflected in by the survey questions (fiscal year 2008-09). To understand what the public community colleges were recalling when answering this question further study needs to be conducted that extends the history of changes relative to energy management and cost containment.

Discussion of Consortium and Outside Vendors Usages

The usage of consortiums and outside vendors show that community colleges have been practicing cost containment. When an institution joins a consortium it can take the institution a year or more to research areas in which to save money. Time is required to study various options for implementing cost containment practices, the costs associated with joining the consortium, and determining which departments will utilize the consortium services. Once an institution becomes a member of a consortium, time is also required to implement changes, train staff, and follow through to completion any recommended modifications.

Outside vendors also need to analyze operations and efficiencies of community colleges in order to make recommendations for cost containment practices. This analysis could require community colleges to work with vendors for up to a year before cost containment plans can be organized and implemented.

With this understanding of consortium and outside vendors it can be seen that public community colleges must have been practicing cost containment prior to the implementation of this study. Since community colleges were queried about cost containment practices for fiscal year 2008-09, it is reasonable to conclude that public community colleges have been practicing cost containment prior to 2008-09 (i.e., at least

fiscal year 2007-08 or earlier). In this area more studies need to be conducted to identify the history and use of these groups and services relative to cost containment.

Discussion of Cost Containment Practices by Institutional Characteristics

Research Question 2 explored institutional characteristic variables with respect to cost containment practices. This section discusses these institutional characteristic variables and explains the relationship between the cost containment practices and the three institutional characteristic variables: geographic region, degree of urbanization, and Carnegie classification.

Discussion on Geographic Region. The first institutional characteristic variable was geographic region. The 50 states were divided into eight regions with each geographic region comprised of six or seven states. Since each geographic region is influenced by its individual states' economies, as well as the national economy, the level of cost containment importance fluctuated from a low of 3% to a high of 30%, even with regions adjacent to each other. These fluctuations suggest a relationship between the institutional characteristic of geographical region and the importance of cost containment. The Rockefeller Institute of Government reported that state taxes collected by the 50 states dropped by 11.7% for fiscal year 2008-09 compared to the same period a year earlier (Marchand, 2009), which demonstrates that the national economy influences each state and, in turn, each geographic region.

In summary, it can be seen that the states' economies influence cost containment practices employed in various geographical regions. It can also be concluded that states' economies also have an impact on cost containment practices within each region, but further research is need to determine whether cost containment is a normal practice with

each geographical region, whether any fluctuations are the result of the economic downturn, and whether other influences may be present.

Discussion on Degree of Urbanization. The second institutional characteristic variable is degree of urbanization, which defines where community colleges are placed relative to the location of the communities they serve.

Since each degree of urbanization or area is influenced by the state and local economies, as well as the national economy, the level of cost containment importance fluctuated from a low of 1% in towns to a high of 23% in rural areas. A summary of the results shows that rural areas (34%) find cost containment most important, followed closely by those within cities (30%), then towns (21%), and finally suburbs (15%). These fluctuations suggest a relationship between the institutional characteristic of urbanization and the importance of cost containment. The Rockefeller Institute of Government reported that state taxes dropped by 11.7% for fiscal year 2008-09 and that local tax revenue declined by 2.8% (Boyd & Dadayan, 2009; Marchand, 2009), which demonstrates that the national economy influences each state and local economy, and in turn, each degree of urbanization.

From these results, it can be seen that the state and local economies influence cost containment practices employed in community colleges within regions that feature varying degrees of urbanization. Further research is needed to determine whether cost containment is a normal practice within each degree of urbanization, whether any fluctuations are the result of the economic downturn, and whether other influences may be present.

Discussion on Carnegie Classification. The last institutional characteristic variable is Carnegie classification, which defines the type of institution based on a number of criteria, such as urbanization, types of degrees offered, and size of the institution. The results of the data analysis based on Carnegie classification closely follows the results of the data analysis based on the degree of urbanization. Since each locale is influenced by its state and local economy, the level of importance that community colleges placed on cost containment practices fluctuated based on Carnegie classifications from a low of 1% to a high of 35%. These fluctuations suggest a relationship between the institutional characteristic of Carnegie classification and the importance of cost containment.

Within each Carnegie classification, we can only interpret the degree of urbanization from the information gathered in this study. Community colleges in rural (58%) areas indicated that cost containment practices were most important, followed by suburban (23%) and then finally urban (14%). One reason for this distribution is that rural areas with a smaller tax base are more disadvantaged and therefore have a stronger drive to contain costs. Since state taxes dropped by 11.7% for fiscal year 2008-09 and local tax revenue declined by 2.8% (Boyd & Dadayan, 2009; Marchand, 2009), it seems reasonable to conclude that community colleges within each Carnegie classification were impacted by the state and local economies.

Based on these results, it can be seen that the state's economy influences cost containment practices employed within each local area. It can also be concluded that the state and local economies impact cost containment practices in various Carnegie classifications, but further research is needed to determine whether types of degrees

offered or size of the institution influence cost containment. Further research is also needed to determine whether cost containment is a normal practice with each Carnegie classification, whether any fluctuations are the result of the economic downturn, and whether other influences, may be present.

Discussion of Cost Containment Practice by Institutional Best Practice

Research Question 3 explored best practices for cost containment among community colleges. In asking public community colleges for their best practice the question becomes why the community college selected the practice they selected as their best practice. This discussion examines several reasons why community colleges decided to focus their cost containment best practices only on certain areas and the future impact of those decisions.

The results indicated that the majority of public community colleges focused on energy management as the top area of savings by a two-to-one ratio. The fact that institutions apply cost containment best practices in the area of energy management can be interpreted in light of the fact that this area neither directly nor significantly impacts the students or employees of the institution. Energy management may also be an attractive area in which to implement cost containment best-practice strategies because of its long-term potential. However, there are no initial savings by the institution when employing cost containment practices within the area of energy management. An example was provided by one of the respondents, who stated that the institution was replacing the HVAC systems and installing energy saving light bulbs. In this example the college had to expend resources on equipment and lights prior to achieving any cost savings for the institution.

The second area in which community colleges indicated that they implemented cost containment best practices was changes in college contracts. This area, just as in the area of energy management, community colleges will accrue future savings over time and not achieve immediate savings. This study found that public community colleges were not only practicing cost containment, but were also exploring future savings while analyzing areas of cost containment. This strategy seemed to be apparent not only in the area of energy management, but also in the area of contract management—i.e., community colleges realized that savings would not be immediate but rather these savings would occur in the future as budgets become more restricted and sources of revenue diminish.

Based on the results of this study, it can be seen that cost containment practices were employed with the best practices assumed by the respondents to be in the areas of energy management and contract management. These cost containment practices often do not result in immediate savings, but future saving do occur with little impact on students and employees. However, public community colleges do not always have the resources to commit to these cost saving practices. To further this understanding of the relationship between cost containment and best practices more research and further studies should be conducted to determine why each institution chose the practice that they chose as their best practice and why it was important to their institution.

Discussion of Summary of Findings

It was confirmed that public community colleges were practicing cost containment savings, but a study of the literature found that other economic factors also influenced institutions and their cost containment strategies. The findings indicated that

institutions were accelerating their efforts on cost containment practices because of anticipated future state and local budget cuts. The discussion of the research questions demonstrated that public community colleges did not just look at budget cuts for fiscal year 2008-09, but were implementing long-term cost containment practices based on potential future budgets.

Discussion of Hurley's Study versus Public Community College Study

In 2008 Hurley conducted a study on cost containment practices of four-year state colleges and universities. Hurley's questionnaire was used to gather information on public community colleges' cost containment practices. Since both studies used the same questionnaire a comparison of the two studies brought forth new information.

The first comparison was the level of importance that institutions placed on the importance of cost containment followed by satisfaction with the institution's cost containment activities. The four-year state colleges indicated that they found the level of importance of cost containment extremely important (41%), very important (41%), and important (18%), for a sum total of importance at 100%. In a comparison to the four-year state colleges, public community colleges found the level of importance of cost containment extremely important (46%), very important (36%), and important (15%), with a sum total of importance at 97%. This shows that both the four-year state colleges and public community colleges found that cost containment was a very important practice of the institutions.

The second area that was examined was energy management. The four-year state colleges indicated that they found energy management was relied upon at 83% and analyzed at 15% with 3% not yet considered. The results of the public community

colleges indicated that energy management was relied upon at 39%, analyzed at 40%, not yet considered at 16%, and will not consider at 5%. In comparison it can be seen that four-year institutions found energy management more important than public community colleges. In further study of the results of the detail area findings from the four-year state colleges, it can be seen that they placed a higher value on current term savings than on future term savings.

It can be seen from comparing the Hurley cost containment study to the public community college cost containment practice study that several areas have the same results such as the level of importance, but it can also be noted that some results display a marked difference such as in the detail areas. This comparison shows that as both the four-year colleges and the public community colleges do function along the same line, with respect to source of revenue and the environment in higher education, they also function different internally establishing the current and future needs of the institutions from different perspectives.

Discussion of Theoretical Framework

The literature research in Chapter Two discussed the theoretical framework for this study which is the Resource Dependency Theory. In this theory an organization's survival is dependent on their ability to attract resources from their environment and to control costs and expenditures (Bess & Dee, 2007; Pfeffer & Salancik, 2003).

Public community colleges fall into this category, because they are dependent on external entities for revenue, such as state and local governments. The largest source of revenue or dependency, for community colleges was from state governments at 38% and local taxes at 17% (AACC, 2009).

In fiscal year 2008-09 the economy fell into a national recession. State and local governments were facing their own economic down turn with reports from the Rockefeller institute stating that overall state tax collections declined by 11.7% and that local tax revenue had declined by 2.8%, for fiscal year 2008-09 (Boyd & Dadayan, 2009; Marchand, 2009). State and local governments were anticipating budget gaps that were expected to exceed \$100 billion in the fiscal year 2009-10, with future estimates expected to exceed \$350 billion over the next three years (Boyd, 2009).

Due to the recession, state and local governments were cutting funding for higher education, impacting public community colleges' sources of revenue. With little opportunity to find new sources of funding and the public becoming more and more vocal about being able to afford tuition and fee increases, community colleges were forced to make do with the resources available and increase efficiencies.

Public community colleges indicated that they were practicing cost containment for fiscal year 2008-09 at a rate of 29% of the responding institutions. More so, community colleges anticipated additional state and local budget cuts in the future, with 39% of institutions looking at further cost containment savings and the establishment of savings programs.

In this discussion of the Resource Dependency Theory, public community colleges were impacted by the downturn of the economy, with state and local budgets reduced. Trying to minimize the public's concern that college costs were spinning out of control (Immerwahr et al., 2009b), with tuition and fee increases, the institutions decided to control costs and expenditures. From this study it can be determined that public

community colleges were following the Resource Dependency Theory and controlling cost and expenditures by practicing cost containment savings.

Recommendations

The purpose of this study was to add to the current literature on the cost containment practices implemented by public community colleges. The results indicate that public community colleges do practice cost containment, but there remain several areas that should be explored further. This study explored whether public community colleges employed cost containment practices in six main categories and 31 detail areas. These 31 areas seemed to cover the majority of the campus and were considered acceptable for the study. After completing the survey and reviewing the resulting answers, it became apparent that the areas covered in the questionnaire did not cover the entire range in which community colleges could be implementing cost containment practices. As a result, it is suggested that further research be conducted into additional areas that public community colleges could employ for cost containment. For example, William Brand Simpson's (1991) book *Cost Containment for Higher Education: Strategies for Public Policy and Institutional Administration* (which is often viewed as a primary reference for administrators developing their cost containment policies and strategies) proposes 113 different areas that could be explored for cost containment.

Reading through Simpson's suggestions and researching through the areas that were asked about in the PC4 Questionnaire, it can be seen that there are areas that colleges are utilizing for cost savings and there are areas that were not considered. For example, safety and security services, health services and facilities, institutional purchases, utilities, libraries, and outsourcing services, are just a few areas in which cost

containment practices could be examined in future studies. Future studies in this area would enhance the understanding of cost containment areas of savings and add to the growing information on successful practices.

A second area that should be studied further is institutional characteristics. In this study, three different institutional characteristic variables were explored: geographical region, degree of urbanization, and Carnegie classification. The results indicated that public community colleges found it important to use cost containment practices (97%) and that institutional characteristics do influence cost containment practices.

On average, about six states comprise each region. The states in the South East region indicated more frequently that they found cost containment practices to be important. Because all 50 states were faced with an economic downturn and have dropped 11.7% in revenue for fiscal year 2008-09, it can be concluded that the results are related to their economies (Boyd & Dadayan, 2009; Marchand, 2009). To confirm these findings, further research needs to be conducted on state revenues and their losses based on geographic region.

In terms of the degree of urbanization, rural locations indicated more frequently that they found cost containment practices to be important. These results could be related to the local economies where these community colleges were located, which were down by an average of 2.8% (Boyd & Dadayan, 2009). Other factors also could have influenced the results, such as the scarcity of resources in some areas or the availability of resources in other areas that are more or less remote (Boyd & Dadayan, 2009). To confirm these findings, further research needs to be conducted on local revenues and their impact on community colleges based on their degree of urbanization. It is recommended

that both geographic region and degree of urbanization be further studied in connection with state and local economies to understand their full impact on these institutional characteristics. Through this research, a better understanding of cost containment practices at public community colleges would be understood for college administrators.

A third area that should be studied further is institutional best practices related to cost containment. In this area, public community colleges indicated what they perceived to be their cost containment best practices. Community colleges indicated that energy management was the most important area in which they implemented cost containment best practices, followed by contracts and purchasing. These results differ in terms of the actual dollars saved in these areas. In terms of actual dollars saved, the area of energy management ranked fifth. This suggests that college administrators are pursuing cost containment in a variety of areas, but what college administrators perceive to be their institution's best practice is different from actual dollars saved. The determination of what a best practice is could be related to what administrators see as a growing area of concern with the reduction of state and local budgets. Further research on institutional best practices would help provide a better understanding of why certain areas were considered best practices.

Future Studies

This study has confirmed that public community colleges are indeed practicing cost containment. Many areas have been identified in which new research could be explored. This study focused on the utilization of cost containment practices. It explored 31 detailed areas in which community college employed cost containment practices, but Simpson (1991) identified 113 different areas that could be considered. Potential areas

for exploration that can add significant savings to community colleges include academics, safety and security services, and library services. A key for future research could be found in Simpson's recommended list.

Other research areas that were not explored in this research that should be considered include the following: the relationship of cost containment to other factors of interest, cost containment affects on academic programs, whether cost containment influences changes in full-time equivalency, reasons why rural areas seem to place a higher value on cost containment, and the ways in which outsourcing is impacting institutions.

A final recommendation is to study additional community colleges based on other types of classification systems—for example, independent or private, tribal, military-based, and federal community colleges. Further research in areas of policy or requirements at the state and federal level should also be explored. As more institutions are implementing cost containment practices, research on the impact, incentive, and direction these policies and procedures are having on various institutions could prove invaluable.

Future Value for Presidents: New Revenue Generation. This study of cost containment practices has opened new doors for public community college presidents and administrators that are experiencing state budget cuts and reductions in current revenue. As this study is reviewed presidents and administrators will discover what public community colleges have found to be significant contributions with cost containment practice savings, both now and in the future and will consider efficiencies and potential opportunities for new revenue within their institutions. As they implement cost

containment practices, working through state budget reductions, the changing environment will force the institutions to find new sources of revenue. Some examples of future sources of revenue could be; increases in tuition and fees, local levies to pay for colleges, increases in state taxes, endowments, and new profit centers within the college, just to name a few. In conclusion, it is further recommended that future studies be conducted that will parallel this study on cost containment practices and the Resource Dependency Theory and look at new environments and avenues for revenue sources.

Public Community College Strategic Planning. Public community college administrators have shared in this study, what they have been using as well as what they are considering in the near future for cost containment practices. As more and more presidents and administrators are driven to cost containment practices, whether through the results of the national recession or state and local budget cuts, these institutions will be looking for direction and guidance that will meet their economic needs and goals.

This study, though it meets the objective of sharing what public community colleges have practiced and saved on cost containment, also assists in providing direction and guidance for institutions that are looking into cost containment practices. As presidents and administrators continue to strive towards creating cost containment savings, public community colleges need to refocus on policies and practices that are being conducted at the institutions.

Presidents and administrators will need to create strategic plans, develop policies and procedures, and set goals, which faculty and staff can use for future direction and guidance. Academic and administrative departments will start to develop policies and procedures that not only will implement cost containment practices but provide

efficiencies of the operations. Establishing strategic goals for the institution provides knowledge and understanding not only to the staff and faculty, but to the community as a whole, overcoming the public's concern that college costs are spinning out of control (Immerwahr et al., 2009b).

Limitation to the Study

There were three noted limitation to this study. The first limitation was the questionnaire length. Dr. Hurley's original survey included 35 questions and achieved a response rate of 27.1%. The PC4 Questionnaire included an additional eight questions, bringing the total number of questions to 43, with a response rate of 27.8%. In review of comments from emails received by the respondents, one drawback was the length of the survey.

The second limitation of the study was the fiscal year under examination. Through emails, respondents requested to give current data as opposed to past data that the questionnaire required. However, fiscal year 2008-09 was selected as the target year for this study to correspond with the latest IPEDS information and institutional characteristic variables. A quick explanation to the respondents resolved these issues, but the data requested was not included on all of the returned surveys.

Finally, there was a limitation in how some Likert style questions were worded. Some respondents considered the response options to be similar and did not use the entire range of options.

Conclusions

In concluding this study, it can be reaffirmed that institutions were practicing cost containment, have plans to continue in the future and that there is a relationship between

cost containment practices and institutional characteristics. As the public, state legislatures, and Congress were pressuring institutions to contain costs and prove fiscal responsibility, public community colleges were already implementing efficiencies and providing cost saving measures. Institutions were pursuing other avenues for enhancement of ideas through employee reward programs, consortiums for purchasing, energy and technology programs, and employing consultants on cost saving strategies—all of which were validated through the questionnaire responses.

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Appendix A

Introduction Letter to Institutional Presidents

January 1, 2010

Dear [Presidents name],

My name is Christopher Bauerschmidt. I am a doctoral student in higher education administration at the University of Toledo. I am in the data-gathering phase of my dissertation and am requesting your assistance in completing my research.

I am conducting a descriptive comparative study of the role and involvement of public community colleges on cost containment practices. In order to collect the data to support my thesis, I am asking for your cooperation in this study, which will require an administrator to complete an on-line survey of how your college deals with cost containment practices.

My preliminary work to date indicates that public four-year colleges and universities have been surveyed and studied, with respect to cost containment practices, but that there have not been any studies on public community colleges. This study will fill the gap in the literature on public community colleges and bring to the front what public community colleges are practicing on cost containment.

This study will follow Dr. Daniel Hurley's study on public four-year colleges and universities and was endorsed by George Boggs, the President of the American Association of Community Colleges. This research could benefit public community colleges and other associations like AACC.

Enclosed below is the web address for the survey.

Thank you for your assistance. I appreciate your valuable time and consideration in assisting me with this study.

Sincerely,

Christopher Bauerschmidt

Appendix B

Dr. George R. Boggs Endorsement Letter



One Dupont Circle, NW
Suite 410
Washington, DC 20036

www.aacc.edu
[T] 202-728-0200
[F] 202-833-2467

April 2010

Dear Colleague:

I am writing to strongly encourage your response to the enclosed University of Toledo survey on cost containment.

As you know, community colleges across the country are struggling to deal with enrollment surges in the face of funding cuts. Yet, there is no clear understanding of how the colleges as a whole are responding in order to reduce costs. The information provided by the survey should prove useful as we advocate for increased funding for our colleges and as we make the case that community college leaders are making responsible, tough decisions under very difficult circumstances.

The American Association of State Colleges and Universities recently conducted a similar survey with a high response rate. I hope that we also have a high community college response rate. Thank you for your consideration.

Sincerely,

A handwritten signature in black ink that reads "George R. Boggs". The signature is written in a cursive style.

George R. Boggs
President and CEO

Appendix C

Electronic Questionnaire



Public Community College Cost Containment Questionnaire

This study is an effort to quantify and describe cost containment activities at America's public community colleges. We believe this is an important undertaking in this new era of greater public expectations and challenging finances.

The purpose of this study is to determine the current state of cost containment practices within the public community colleges, with a concurrent focus on improving the quality of academic outcomes. The hope is to identify successful cost saving actions and policies, and in the process record a list of highly replicable best practices.

Please determine the most appropriate individual(s) at your institution to complete this survey. It is appropriate to have the chief business officer, chief academic officer, and additional representatives who oversee cost containment activities coordinate the completion of this survey as a single institutional response.

PLEASE COMPLETE THIS SURVEY BY _____.

Thank You!

1) What division/office at your institution has primary responsibility for cost containment strategic planning?

- No specific entity is primarily responsible
- Provost/Chief Academic Officer
- System office (individual institution not responsible)
- President's office
- Equally shared among divisions
- Business office/Comptroller's office/Chief Financial Officer
- Other (please specify)

If you selected other, please specify

2) How important is the issue of cost containment to your institution's overall strategic plan? (Please select one)

- Extremely important
- Very important
- Important
- Not very important
- Not important at all

3) How would you characterize the extent to which institutional resources (allocation of funds, staff, and time) have been explicitly set aside for identifying and implementing cost containment measures?

- Significant extent
- Moderate extent
- Minimal extent
- No resources have been set aside

4) What have been your institution's primary sources for cost containment enhancement ideas and strategies? (Select all that apply)

- Fellow institutional colleagues/staff
- Individuals at other higher education institutions
- Professional meetings/associations (please identify in comments field below)
- Outside vendors and independent nonprofit organizations (please identify in comments field below)
- Publications (please identify in comments field below)
- Cannot identify primary source/one does not exist
- Other (please specify)

If you selected other, please specify

5) How satisfied are you with your institution's ability to identify, assess, and implement highly effective cost containment strategies?

- Very satisfied
- Adequately satisfied
- Unsatisfied
- Very unsatisfied

6) Listed below are areas that institutions may utilize to contain costs. Please indicate to which degree your institution has evaluated them.

**6) SALARIES & BENEFITS for Fiscal Year 2008-09
(Please select one per row)**

	Relied upon	Analyzed	Not yet considered	Will not consider
Compensation – Faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compensation – Administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compensation – Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health insurance benefits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Retirement benefits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overtime pay	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other fringe benefits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7) Please indicate estimated dollar savings from Salaries and Benefits for Fiscal Year 2008-09.

Compensation – Faculty \$ _____
 Compensation – Administration \$ _____
 Compensation – Staff \$ _____
 Health insurance benefits \$ _____
 Retirement benefits \$ _____
 Overtime pay \$ _____
 Other fringe benefits \$ _____

**8) STAFFING LEVELS, on a per-student basis, for Fiscal Year 2008-09.
(Please select one per row)**

	Relied upon	Analyzed	Not yet considered	Will not consider
Faculty staffing levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Administration staffing levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
General staffing levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9) Please indicate estimated dollar savings from Staffing Levels, with respect to students, for Fiscal Year 2008-09.

Faculty staffing levels \$ _____
 Administration staffing levels \$ _____
 General staffing levels \$ _____

Listed below are areas that institutions may utilize to contain costs. Please indicate to which degree your institution has evaluated them.

**10) BUSINESS SERVICES/PROCESSES for Fiscal Year 2008-09.
 (Please select one per row)**

	Relied upon	Analyzed	Not yet considered	Will not consider
Bookstore operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dining hall/food service/residence hall operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information technology/computing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cashiering and financial services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vending services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consortium purchasing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11) Please indicate estimated dollar savings from Business Services and Processes for Fiscal Year 2008-09.

Bookstore operations \$ _____
 Dining hall/food service/residence hall operations \$ _____
 Information technology/computing \$ _____
 Cashiering and financial services \$ _____
 Vending services \$ _____
 Consortium purchasing \$ _____

12) ACADEMIC & EXTRACURRICULAR PROGRAMMING for Fiscal Year 2008-09
(Please select one per row)

	Relied upon	Analyzed	Not yet considered	Will not consider
Extracurricular programs (non-athletic)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Athletic programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Class size	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Course offerings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Course loads	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Program discontinuation/consolidation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Departmental mergers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Joint degree offerings with other institutions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Distance/online learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Utilization of contingent faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13) Please indicate estimated dollar savings from Academic & Extracurricular Programming for Fiscal Year 2008-09.

Extracurricular programs (non-athletic)	\$ _____
Athletic programs	\$ _____
Class size	\$ _____
Course offerings	\$ _____
Course loads	\$ _____
Program discontinuation/consolidation	\$ _____
Departmental mergers	\$ _____
Joint degree offerings with other institutions	\$ _____
Distance/online learning	\$ _____
Utilization of contingent faculty	\$ _____

14) Listed below are areas that institutions may utilize to contain costs. Please indicate to which degree your institution has evaluated them.

14) STUDENT SERVICES for Fiscal Year 2008-09.
(Please select one per row)

	Relied upon	Analyzed	Not yet considered	Will not consider
Student services – academic-related	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student services – nonacademic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15) Please indicate estimated dollar savings from Student Services for Fiscal Year 2008-09.

Student services – nonacademic \$ _____
 Student services – academic-related \$ _____

**16) FACILITIES & INFRASTRUCTURE for Fiscal Year 2008-09.
 (Please select one per row)**

	Relied upon	Analyzed	Not yet considered	Will not consider
Facilities and infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grounds keeping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17) Please indicate estimated dollar savings from Facilities and Infrastructure for Fiscal Year 2008-09.

Facilities and infrastructure \$ _____
 Grounds keeping \$ _____
 Energy management \$ _____

18) Are there additional areas your institution uses to contain costs?

- Yes
- No

19) If "Yes", for Question #18, please indicate what areas.

20) Does your institution report on its cost containment/efficiency enhancements on a regular basis?

- Yes
- No

21) Does your institution attempt to quantify cost savings on a regular basis?

- Yes
- No

22) Does your institution belong to a consortium of other institutions to contain costs? (If answer is "yes," please note, survey will skip to question #24.)

- Yes
- No

**23) If not, what are the reasons your institution does not belong to a consortium?
(Select all that apply, then please note, survey will skip to question #26.)**

- Legal restrictions by state/state system
- Able to negotiate favorable terms independent of consortia
- Potential consortium partners not available in geographic area
- Other (please specify)

If you selected other, please specify

24) What goods/services does your institution purchase as a consortium member?

- Course/program sharing and/or instruction sharing, perhaps through a consortium-based "virtual campus"
- Computer services/information technology
- Retirement benefits
- Other employee fringe benefits
- Financial services
- Fleet management
- Student transport
- Institution-owned vehicles, non-student-transport
- Janitorial supplies
- Legal services
- Library resources (including subscription services)
- Mailing
- Office supplies
- Printing
- Research/medical/laboratory supplies
- Security services (e.g., escort/van ride services, patrol services)
- Communications/other equipment
- Other types of security services/equipment
- Student physical health/wellness services
- Health insurance
- Casualty insurance
- Liability insurance
- Life insurance
- Property insurance
- Worker's compensation insurance
- Other type of insurance
- Student mental health services
- Training services (IT or other)
- Utilities
- Other (please specify)

If you selected other, please specify

25) How effective would you consider your consortium participation to be as a cost containment strategy?

- Extremely effective
- Very effective
- Effective
- Not very effective
- Not effective at all

26) Does your institution have in place a process by which employees are encouraged to forward recommendations on cost containment/efficiency? If answer is "no," please note, survey will skip to question #30.

- Yes
- In-Process
- No

27) How enthusiastic have employees been about participating in the program?

- Very enthusiastic
- Somewhat enthusiastic
- Neutral
- Somewhat unenthusiastic
- Very unenthusiastic
- Unable to determine

28) Does your institution reward or otherwise officially recognize employees whose recommendations on cost containment/efficiency are adopted?

- Yes
- No

29) If your Institution rewards, in what form are rewards or recognition provided?

- Cash award
- Certificate/plaque
- Commendation cc'd to HR office
- Employee recognition event
- Mention in institutional communications (e.g., staff newsletter, Web site)
- Other (please specify)

If you selected other, please specify

30) Do students participate significantly in cost containment efforts at your institution, whether via voting on how mandatory nonacademic student fees should be spent, serving on committees, or in other ways?

- Yes
- No

31) Has your institution utilized the services of an outside vendor, consultant, or nonprofit organization to analyze potential cost containment solutions? If answer is "no" please note, survey will skip to question #36.

- Yes
- No

32) What areas were studied by the vendor?

- Salaries and benefits
- Staffing levels
- Business services/processes
- Academic programs, offerings, and services/processes
- Student services
- Facilities and infrastructure
- Group purchasing
- None/analysis in process
- Other (please specify)

If you selected other, please specify

33) How effective was the consultant organization?

- Extremely effective
- Very effective
- Effective
- Not very effective
- Not effective at all

34) Did you implement the consultant's recommendations?

- Yes
- No
- In Process
- Not Sure

35) Did the consultant's recommendations result in cost savings for your institution?

- Yes
- No
- Too early to determine
- Not Sure

36) What do you see as the most significant developing issue in cost containment (as part of improving institutional productivity) for institutions over the next 5 years (whether at your own institution or in general)?

37) Can your institution share a specific cost containment initiative that has yielded positive results, providing cost savings, improved services, and which is highly replicable at the institutional or system level?

38) Can your institution provide an example of a cost containment best practice that has allowed for a reallocation of resources that were used to enhance student access and/or success?

39) What was your institutions total budget for fiscal year 2008-09?

\$ _____

40) What dollar savings did your institution incur in fiscal year 2008-09 from cost containment practices?

\$ _____

41) Please indicate the percentage of revenue that your college is receiving from subsidies and tuition and the level of change from Fiscal Year 2008-09?

Federal Appropriations	_____	%
State Appropriations	_____	%
Local Appropriations	_____	%
Tuition and Fees	_____	%
Endowment	_____	%
Other	_____	%

42) Did your institution use endowment resources to reduce college expenditure?


- Yes
- No

43) If "yes" please indicate dollars expended.

\$ _____

Appendix D

Mailed Questionnaire



THE UNIVERSITY OF
TOLEDO
1872

Public Community College Cost Containment Practices Questionnaire

Christopher Bauerschmidt
537 Parkway East
Oregon, Ohio 43616

Dear President,

My name is Christopher Bauerschmidt. I am a doctoral student in higher education administration at the University of Toledo. I am in the data-gathering phase of my dissertation and am requesting your assistance in completing my research.

I am conducting a descriptive comparative study of the role and involvement of public community colleges on cost containment practices. In order to collect data to support my dissertation, I am asking for your assistance, which will require an administrator to complete a survey on how your college deals with cost containment practices.


My preliminary work indicates that the cost containment practices of public four-year colleges and universities has been surveyed and studied, but there have not been any studies on public community colleges. This study will fill the gap in literature and bring to the foreground what cost containment practices public community colleges are utilizing.

This study follows Dr. Daniel Hurley's survey on public four-year colleges and universities and was endorsed by George Boggs, President of the American Association of Community Colleges. This research could benefit public community colleges and other associations like AACC.

Thank you, I appreciate your time and consideration. If there are any questions with this survey, please contact Christopher Bauerschmidt at Christopher.Bauerschmidt@Rockets.utoledo.edu.

Sincerely,

Christopher Bauerschmidt



AMERICAN ASSOCIATION
OF COMMUNITY COLLEGES

One Dupont Circle, NW
Suite 410
Washington, DC 20036
www.aacc.nche.edu
[T] 202-728-0200
[F] 202-833-2467

Dear Colleague:

I am writing to strongly encourage your response to the enclosed University of Toledo survey on cost containment. As you know, community colleges across the country are struggling to deal with enrollment surges in the face of funding cuts. Yet, there is no clear understanding of how the colleges as a whole are responding in order to reduce costs. The information provided by the survey should prove useful as we advocate for increased funding for our colleges and as we make the case that community college leaders are making responsible, tough decisions under very difficult circumstances.

The American Association of State Colleges and Universities recently conducted a similar survey with a high response rate. I hope that we also have a high community college response rate. Thank you for your consideration.

Sincerely,

George. R. Boggs
President and CEO
April 2010



Public Community College Cost Containment Questionnaire

This survey is gathering estimated values, best examples, and "ballpark" figures and should take about 10 minutes to complete. Please return by August 27, 2010, by faxing to: 937-424-4653.

Thank You!

- 1) What division/office at your institution has primary responsibility for cost containment strategic planning? (Please select one)
 - No specific entity is primarily responsible
 - Provost/Chief Academic Officer
 - System office (individual institution not responsible)
 - President's office
 - Equally shared among divisions
 - Business office/Comptroller's office/CFO
 - Other (please specify) _____

- 2) How important is the issue of cost containment to your institution's overall strategic plan? (Please select one)
 - Extremely important
 - Very important
 - Important
 - Not very important
 - Not important at all

- 3) How would you characterize the extent to which institutional resources (allocation of funds, staff, and time) have been explicitly set aside for identifying and implementing cost containment measures? (Please Select one)
 - Significant extent
 - Moderate extent
 - Minimal extent
 - No resources have been set aside

- 4) What have been your institution's primary sources for cost containment enhancement ideas and strategies? (Select all that apply)
 - Fellow institutional colleagues/staff
 - Individuals at other higher education institutions
 - Professional meetings/associations (identify in comments field below)
 - Outside vendors and independent nonprofit organizations (identify in comment field below)
 - Publications (identify in comment field below)
 - Cannot identify primary source/one does not exist
 - Other (please specify) _____

- 5) How satisfied are you with your institution's ability to identify, assess, and implement highly effective cost containment strategies? (Please select one)
 - Very satisfied
 - Adequately satisfied
 - Unsatisfied
 - Very unsatisfied

Listed below are areas that institutions may utilize to contain costs. Please indicate to which degree your institution has evaluated and the estimated savings in the space provided.

6) SALARIES & BENEFITS for Fiscal Year 2008-09 (Please select one per row) #7

	Relied upon	Analyzed	Not yet considered	Will not consider	
a) Compensation – Faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
b) Compensation – Administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
c) Compensation – Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
d) Health insurance benefits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
e) Retirement benefits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
f) Overtime pay	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
g) Other fringe benefits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____

8) STAFFING LEVELS on a per-student basis, for Fiscal Year 2008-09. (Please select one per row) #9

	Relied upon	Analyzed	Not yet considered	Will not consider	
a) Faculty staffing levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
b) Administration staffing levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
c) General staffing levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____

10) BUSINESS SERVICES/ PROCESSES for Fiscal Year 2008-09. (Please select one per row) #11

	Relied upon	Analyzed	Not yet considered	Will not consider	
a) Bookstore operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
b) Dining hall/food service/residence hall operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
c) Information technology/computing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
d) Cashiering and financial services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
e) Vending services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
f) Consortium purchasing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____

12) ACADEMIC & EXTRACURRICULAR PROGRAMMING for Fiscal Year 2008-09 (Please select one per row) #13

	Relied upon	Analyzed	Not yet considered	Will not consider	
a) Extracurricular programs (non-athletic)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
b) Athletic programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
c) Class size	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
d) Course offerings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
e) Course loads	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
f) Program discontinuation/consolidation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____
g) Departmental mergers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$ _____



Public Community College Cost Containment Questionnaire

Listed below are areas that institutions may utilize to contain costs. Please indicate to which degree your institution has evaluated and the estimated savings in the space provided.

12) *cont'd*

- | | | Relied upon | Analyzed | Not yet considered | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|----------|
| h) Joint degree offerings with other institutions | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | \$ _____ |
| i) Distance/online learning | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | \$ _____ |
| j) Utilization of contingent faculty | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | \$ _____ |

14) STUDENT SERVICES for Fiscal Year 2008-09. (Please select one per row)

- | | | Relied upon | Analyzed | Not yet considered | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|----------|
| a) Student services – academic-related | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | \$ _____ |
| b) Student services – nonacademic | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | \$ _____ |

16) FACILITIES & INFRASTRUCTURE for Fiscal Year 2008-09. (Please select one per row)

- | | | Relied upon | Analyzed | Not yet considered | |
|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
| a) Facilities and infrastructure | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | \$ _____ |
| b) Grounds keeping | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | \$ _____ |
| c) Energy management | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | \$ _____ |

18) Are there additional areas your institution uses to contain costs?

- Yes No

19) If "Yes", for Question #18, please indicate what areas. _____

20) Does your institution report on its cost containment/efficiency enhancements on a regular basis?

- Yes No

21) Does your institution attempt to quantify cost savings on a regular basis?

- Yes No

22) Does your institution belong to a consortium of other institutions to contain costs? (If answer is "yes," skip to question 24.)

- Yes No

23) If not, what are the reasons your institution does not belong to a consortium? (Select all that apply, then please skip to question #26.)

- Legal restrictions by state/ state system
- Able to negotiate favorable terms independent of consortia
- Potential consortium partners not available in geographic area
- Other (please specify) _____

24) What goods/services does your institution purchase as a consortium member? (Select all that apply)

- Course/program sharing and/or instruction sharing
- Computer services/information technology
- Retirement benefits
- Other employee fringe benefits
- Financial services
- Fleet management
- Student transport
- Institution-owned vehicles, non-student-transport
- Janitorial supplies
- Legal services
- Library resources (including subscription services)
- Mailing
- Office supplies
- Printing
- Research/medical/laboratory supplies
- Security services (e.g., escort/van ride services, patrol)
- Communications/other equipment
- Other types of security services/equipment
- Student physical health/wellness services
- Health insurance
- Casualty insurance
- Liability insurance
- Life insurance
- Property insurance
- Worker's compensation insurance
- Other type of insurance
- Student mental health services
- Training services (IT or other)
- Utilities
- Other (please specify) _____

25) How effective would you consider your consortium participation to be as a cost containment strategy? (Please select one)

- Extremely effective
- Very effective
- Effective
- Not very effective
- Not effective at all

26) Does your institution have in place a process by which employees are encouraged to forward recommendations on cost containment/efficiency? If answer is "no," please skip to question #30.

- Yes In-Process No



Public Community College Cost Containment Questionnaire

27) How enthusiastic have employees been about participating in the program? (Please select one)

Very enthusiastic
 Somewhat enthusiastic
 Neutral
 Somewhat unenthusiastic
 Very unenthusiastic
 Unable to determine

28) Does your institution reward or otherwise officially recognize employees whose recommendations on cost containment/efficiency are adopted?

Yes No

29) If your Institution rewards, in what form are rewards or recognition provided?

Cash award
 Certificate/plaque
 Commendation, cc'd to HR office
 Employee recognition event
 Mention in institutional communications (e.g., staff newsletter, Web site)
 Other (please specify) _____

30) Do students participate significantly in cost containment efforts at your institution whether via voting on how mandatory nonacademic student fees should be spent, serving on committees, or in other ways?

Yes No

31) Has your institution utilized the services of an outside vendor, consultant, or nonprofit organization to analyze potential cost containment solutions? If answer is "no" please skip to question #36.

Yes No

32) What areas were studied by the vendor? (Select all that apply)

Salaries and benefits
 Staffing levels
 Business services/processes
 Academic programs, offerings, and services/processes
 Student services
 Facilities and infrastructure
 Group purchasing
 None/analysis in process
 Other (please specify) _____

33) How effective was the consultant organization? (Please select one)

Extremely effective Not very effective
 Very effective Not effective at all
 Effective

34) Did you implement the consultant's recommendations?

Yes In-Process No Not Sure

35) Did the consultant's recommendations result in cost savings for your institution?

Yes In-Process Too early to determine
 Not Sure

36) What do you see as the most significant developing issue in cost containment (as part of improving institutional productivity) for institutions over the next 5 years (whether at your own institution or in general)?

37) Can your institution share a specific cost containment initiative that has yielded positive results, providing cost savings, improved services, and which is highly replicable at the institutional or system level?

38) Can your institution provide an example of a cost containment best practice that has allowed for a reallocation of resources that were used to enhance student access and/or success?

39) What was your institutions total budget for fiscal year 2008-2009?

\$ _____

40) What dollar savings did your institution incur in fiscal year 2008-2009 from cost containment practices?

\$ _____

41) Please indicate the percentage of revenue that your college is receiving from subsidies and tuition and the level of change from Fiscal Year 2008-09?

a) Federal Appropriations	_____ %
b) State Appropriations	_____ %
c) Local Appropriations	_____ %
d) Tuition and Fees	_____ %
e) Endowment	_____ %
f) Other _____	_____ %

42) Did your institution use endowment resources to reduce college expenditure?

Yes No

43) If "yes" please indicate dollars expended.

\$ _____

**Please fax results by August 27, 2010 to
937-424-4653. Thank You!**

Appendix E

Original Questionnaire

The survey should take approximately 10 minutes to complete.

1) What division/office at your institution has primary responsibility for cost containment strategic planning?

- No specific entity is primarily responsible
- Provost/Chief Academic Officer
- System office (individual institution not responsible)
- President's office
- Equally shared among divisions
- Business office/comptroller's office/Chief Financial Officer
- Other (please specify) _____

2) How important is the issue of cost containment to your institution's overall strategic plan?

- Extremely important
- Very important
- Important
- Not very important
- Not important at all

3) How would you characterize the extent to which institutional resources (allocation of funds, staff, and time) have been explicitly set aside for identifying and implementing cost containment measures?

- Significant extent
- Moderate extent
- Minimal extent
- No resources have been set aside

4) What have been your institution's primary sources for cost containment enhancement ideas and strategies? Select all that apply.

- Fellow institutional colleagues/staff
- Individuals at other higher education institutions
- Professional meetings/associations (please identify in comments field below)
- Outside vendors and independent nonprofit organizations (please identify in comments field below)
- Publications (please identify in comments field below)
- Cannot identify primary source/one does not exist
- Other (please specify) _____

5) How satisfied are you with your institution's ability to identify, assess, and implement highly effective cost containment strategies?

- Very satisfied
- Adequately satisfied
- Unsatisfied
- Very unsatisfied

Listed below are areas institutions may utilize to contain costs. Please indicate to which degree your institution has evaluated them according to the following scale: a) Relied upon for cost containment; b) Analyzed for cost containment but not implemented; c) have Not yet considered for cost containment d) Will not consider for cost containment, and e) Dollars Saved. Note: Dollar saved is for fiscal year 2008-09.

6) SALARIES & BENEFITS

	Relied upon	Analyzed	Not yet considered	Will not consider	Dollars Saved
Compensation – Faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Compensation – Administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Compensation – Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Health insurance benefits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Retirement benefits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Overtime pay	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Other fringe benefits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$

7) STAFFING LEVELS (on a per-student basis)

	Relied upon	Analyzed	Not yet considered	Will not consider	Dollars Saved
Faculty staffing levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Administration staffing levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
General staffing levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$

8) BUSINESS SERVICES/PROCESSES

	Relied upon	Analyzed	Not yet considered	Will not consider	Dollars Saved
Bookstore operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Dining hall/food service/residence hall operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Information technology/computing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Cashiering and financial services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Vending services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Consortium purchasing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$

9) ACADEMIC & EXTRACURRICULAR PROGRAMMING

	Relied upon	Analyzed	Not yet considered	Will not consider	Dollars Saved
Extracurricular programs (non-athletic)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Athletic programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Class size	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Course offerings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Course loads	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Program discontinuation/consolidation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Departmental mergers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Joint degree offerings with other institutions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Distance/online learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Utilization of contingent faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$

10) STUDENT SERVICES

	Relied upon	Analyzed	Not yet considered	Will not consider	Dollars saved
Student services – nonacademic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Student services – academic-related	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$

11) FACILITIES & INFRASTRUCTURE

	Relied upon	Analyzed	Not yet considered	Will not consider	Dollars Saved
Facilities and infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Groundskeeping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$
Energy management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	\$

12) Are there additional areas your institution uses to contain costs?

- Yes No

If yes, please specify: _____

13) Does your institution report on its cost containment/efficiency enhancements on a regular basis?

Note: If you respond "no," please move to question #16.

- Yes No

14) Does your institution attempt to quantify cost savings on a regular basis?

Note: If you respond "no," please move to question #16.

- Yes No

15) Does your institution belong to a consortium of other institutions to contain costs?

Note: If you respond "yes," please move to question #18.

- Yes No

16) If not, what are the reasons your institution does not belong to a consortium?

Select all that apply, then *please skip to question #20.*

- Legal restrictions by state/state system
- Able to negotiate favorable terms independent of consortia
- Potential consortium partners not available in geographic area
- Other, please specify: _____

17) What goods/services does your institution purchase as a consortium member?

- | | |
|---|--|
| <input type="checkbox"/> Course/program sharing and/or instruction sharing, perhaps through a consortium-based “virtual campus” | <input type="checkbox"/> Janitorial supplies |
| <input type="checkbox"/> Computer services/information technology | <input type="checkbox"/> Legal services |
| <input type="checkbox"/> Retirement benefits | <input type="checkbox"/> Library resources (including subscription services) |
| <input type="checkbox"/> Other employee fringe benefits (please specify) _____ | <input type="checkbox"/> Mailing |
| <input type="checkbox"/> Financial services | <input type="checkbox"/> Office supplies |
| <input type="checkbox"/> Fleet management | <input type="checkbox"/> Printing |
| <input type="checkbox"/> Student transport | <input type="checkbox"/> Research/medical/laboratory supplies |
| <input type="checkbox"/> Institution-owned vehicles, non-student-transport | <input type="checkbox"/> Security services (e.g., escort/van ride services, patrol services) |
| <input type="checkbox"/> Health insurance | <input type="checkbox"/> Communications/other equipment |
| <input type="checkbox"/> Casualty insurance | <input type="checkbox"/> Other types of security services/equipment (please specify) |
| <input type="checkbox"/> Liability insurance | <input type="checkbox"/> Student physical health/wellness services |
| <input type="checkbox"/> Life insurance | <input type="checkbox"/> Student mental health services |
| <input type="checkbox"/> Property insurance | <input type="checkbox"/> Training services (IT or other) |
| <input type="checkbox"/> Worker’s compensation insurance | <input type="checkbox"/> Utilities |
| <input type="checkbox"/> Other type of insurance (please specify) _____ | <input type="checkbox"/> Other (please specify) _____ |

18) How effective would you consider your consortium participation to be as a cost containment strategy?

- Extremely effective
- Very effective
- Effective
- Not very effective
- Not effective at all

19) Does your institution have in place a process by which employees are encouraged to forward recommendations on cost containment/efficiency? *Note: if you respond "no" or "in process," please move to question #24.*

- Yes
- No
- In Process

20) How enthusiastic have employees been about participating in the program?

- Very enthusiastic
- Somewhat enthusiastic
- Neutral
- Somewhat unenthusiastic
- Very unenthusiastic
- Unable to determine

21) Does your institution reward or otherwise officially recognize employees whose recommendations on cost containment/efficiency are adopted?

- Yes
- No

22) In what form are rewards or recognition provided?

- Cash award
- Certificate/plaque
- Commendation cc'd to HR office
- Employee recognition event
- Mention in institutional communications (e.g., staff newsletter, Web site)
- Other (please specify): _____

23) Do students participate significantly in cost containment efforts at your institution (whether via voting on how mandatory nonacademic student fees should be spent, serving on committees, or in other ways)?

- Yes
- No

24) Has your institution utilized the services of an outside vendor, consultant, or nonprofit organization to analyze potential cost containment solutions? *Note: if you respond "no, please move to question #30.*

- Yes No

25) What areas were studied by the vendor?

- Salaries and benefits
- Staffing levels
- Business services/processes
- Academic programs, offerings, and services/processes
- Student services
- Facilities and infrastructure
- Group purchasing
- None/analysis in process
- Other (please specify): _____

26) How effective was the consultant organization?

Please utilize the comment field to explain your response.

- Extremely effective
- Very effective
- Effective
- Not very effective
- Not effective at all

27) Did you implement the consultant's recommendations?

- Yes No In process Not sure

28) Did the consultant's recommendations result in cost savings for your institution?

- Yes No Too early to determine Not sure

29) What do you see as the most significant developing issue in cost containment (as part of improving institutional productivity) for institutions over the next 5 years (whether at your own institution or in general)?

30) Can your institution share a specific cost containment initiative that has yielded positive results, providing cost savings, improved services, and which is highly replicable at the institutional or system level?

If available, please provide the URL for the site housing this information, or an email address for the person from whom it may be requested.

31) Can your institution provide an example of a cost containment best practice that has allowed for a reallocation of resources that were used to enhance student access and/or success?

32) What was your institutions total budget for fiscal year 2008-09?

\$ _____

33) What dollars savings did your institution incur in fiscal year 2008-09 from cost containment practices?

\$ _____

34) Please indicate the percentage of revenue that your college is receiving from subsidies and tuition and the level of change from fiscal year 2008-09?

Fiscal Year
2008-09 Percent

State Appropriations: _____

Local Appropriations: _____

Tuition and Fees: _____

Endowment: _____

Other: _____

35) Did your institution use endowment resources to reduce college expenditure?

Yes No

If "yes" please indicate dollars expended _____

RESPONDENT INFORMATION

Please provide your contact information so that we may follow-up with you regarding your responses and for the purpose of obtaining best practices information.

The data collected in this survey will not be made public or shared with outside organizations.

Name: _____

Title: _____

Institution: _____

Email address: _____

Thank you!

Your institution's participation in this survey is greatly appreciated. We will be releasing key findings and recommendations stemming from this survey in XXXXXXXXXXXX.