

Financing Public Higher Education:
The Impact of Responsibility Center Management on a Public Research University

A Dissertation

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Dedication

In dedication to my wife, Michelle, my partner through life.

Abstract

To explore the impacts on public universities of implementing an incentive-based budgeting system, this dissertation focuses on one university's extensive experience with Responsibility Center Management. The financial and non-financial impacts of Responsibility Center Management will be considered by examining the extent to which commonly held beliefs about Responsibility Center Management are supported by empirical data. Interviews with twenty-one key leaders at the University of Minnesota are the primary data source for understanding the extent to which actual experience supports common beliefs about Responsibility Center Management. Review of financial and other quantitative data, as well as internal documents, also inform the investigation. Responsibility Center Management is found to have a multitude of impacts on the finances and culture of an institution, and interpretation of these impacts is often dependent on one's philosophical views on public higher education. By understanding the actual outcomes and potential pitfalls associated with Responsibility Center Management, university leaders are better informed as they navigate the challenging road ahead for public higher education.

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CHAPTER 1

Introduction

Public universities, like many public organizations, often face constrained governmental support (College Board, 2011; Cheslock & Gianneschi, 2008). During economic downturns, higher education often experiences disproportionately large cuts because demands on social welfare programs increase during recessions, and pre-college education often is shielded from substantial cuts (Zumeta, 2010). The revenue diversity and financial flexibility of the modern public research university are both blessings and curses. Multiple revenue streams provide universities options in addressing declining state support, but the availability of options may enable state legislatures facing deficits to reduce state support to universities. Universities constantly seek to enhance revenues from all sources, but declining state support forces more aggressive action on the part of universities.

The search for additional revenue leads universities in many directions. Enrolling more students, raising tuition and fees, and expanding external sales are just a few of the many actions that universities can take to increase revenues. University leaders may choose particular strategies to increase revenue, and they also can create incentives to encourage leaders throughout the entire institution to search for new revenue and reduce expenses. Hensley, Bava and Brennan (2001) report that prior to the early 2000's, "virtually all universities employed centralized budgetary and planning systems run by senior administrators" (p. 2), but more recently some universities have adopted new incentive-based internal resource allocation systems, often termed Responsibility Center Management (RCM) (Hearn et al., 2006). Through an array of incentive-generating

formulas, RCM is intended to spread responsibility for growing revenues and cost-effective operations throughout the entire institution (Whalen, 2002). According to Hensley, Bava and Brennan (2001), “under RCM, the income, growth, and development of academic units depend on their willingness and ability to control costs while simultaneously providing academic programs of high quality and value to their constituencies” (p. 4). RCM and other incentive-based budget approaches are designed to “integrate budgeting and management decision-making more fully at the level of individual cost centers within institutions” to decentralize management (Hearn et al., 2006, p. 286). In this usage, cost centers represent the organizational units in which an institution chooses to apply financial responsibility and accountability.

While the incentives created by RCM are appealing, in theory, more work is needed to identify the practical implications, both financial and non-financial, of implementing RCM at public universities. Hearn et al. (2006) report that “little empirical research has been conducted on the benefits and challenges of the [incentive-based budgeting systems] approach” (p. 286), and Hensley, Bava and Brennan (2001) tell us that “there is a paucity of research specifically related to the impact, success, and/or failure of RCM systems” (p. 6). This study contributes to the RCM literature by examining the University of Minnesota's experience with RCM. Commonly held beliefs about RCM's impact will be considered by examining the extent to which common beliefs are supported by empirical data. By analyzing multiple aspects of the University of Minnesota's experience, this research draws conclusions and generates hypotheses for further study to improve understanding of how public universities are impacted by RCM.

The scope of the mission of a modern research university is almost without bounds. Vast and ever-expanding areas of research and countless prospective students generate a mission of the modern university that essentially is limitless. Broad missions and competing goals inevitably lead to disagreement in priority-setting within the university community (Birnbaum, 1988). Setting priorities and funding some items to the exclusion of others are enormous challenges, as available funding, unlike goals, has limits. The funding supply will never rise to meet the funding demands of the innumerable and laudable ideas generated within the university community.

Budget constraints are not exclusive to higher education institutions, but, in dealing with limited resources, public universities face unique complexities. While all organizations face funding constraints, the unique characteristics of public universities create peculiar challenges not found in other institutions. Birnbaum (1988) identifies several organizational challenges associated with universities, many of which involve power and authority. Some challenges are reviewed here. In addition to power issues among legislators, trustees, administrators, and faculty that are inherent at public institutions, all U.S. universities face additional constraints and complexities. Public research university funding is exceptionally complex, as diverse revenue streams such as appropriations, athletic ticketing, charitable donations, tuition and myriad external sales must be managed properly. The regulatory environment is highly complex as federal research grants and student aid introduce extensive federal regulation, state appropriations bring state scrutiny and regulation, and connections to foreign institutions and nations introduce further compliance challenges. The public subsidy that allows for the existence of a public university must be considered as potential university activities

are undertaken, because arrangements that benefit any third party are subsidized indirectly by taxpayer funds, and, therefore, are subject to public scrutiny. Universities have a responsibility to educate students who are both customers and a primary revenue source, and the profound responsibility to educate students can be in competition with pressures to improve students' experiences as consumers by, for example, building flashier fitness centers. A tenure system that virtually guarantees ongoing employment creates unique personnel management challenges, particularly when paired with the powerful concept of academic freedom that limits constraints on faculty activities. The concept of shared governance gives faculty and other members of the university community entitlement to substantive input on all university matters. The diversity of stakeholder groups within the university (e.g. current and prospective students, staff, unions and faculty) and outside the university (e.g. alumni, legislators, taxpayers, companies, governments, and society) create an environment in which most decisions are complicated. Ethical dilemmas and conflicts of interest around research create deep divides and controversies, which, particularly in medical fields, can become public and high-profile. Add to this incomplete list of challenges universities' ingrained cultures from centuries of history, and public universities become truly unique organizations. These differences set universities apart from other organizations in terms of internal and external pressures, and simply comparing public universities to other organizations generally is inappropriate.

Universities have borrowed management tools from other types of organizations, many of which have failed (Hearn et al., 2006). Universities can learn from businesses and other organizations, but ultimately an in-depth, nuanced study of universities

themselves is required to understand how a change will impact them. RCM may be an enduring management technique in higher education or a passing fad, but its future should be informed by empirical research on its impact on universities. This research is a study of one institution's extensive experience with RCM.

Universities and the literature use varying terminology to refer to similar incentive-based budgeting systems, for example, responsibility center budgeting (RCB) or responsibility based budgeting (RBB). RCM, RCB, RBB and similar nomenclature are used, at times, to indicate subtle differences among systems and, at other times, interchangeably to refer to incentive-based budgeting systems that decentralize responsibility for revenues and total institutional expenses. Other than maintaining language from original sources, this study will use "RCM," as that is the chosen terminology of the university being studied.

Background

Higher education is in the midst of a well-documented, multi-decade trend to apply business and market principles to universities (Bok, 2003; Rhoades & Slaughter, 1997). This movement, often referred to as academic capitalism or higher education marketization, is altering longstanding financial and cultural aspects of higher education (Rhoades & Slaughter, 1997). The movement gained momentum in the mid-1970's (Bok, 2003; Rhoades & Slaughter, 1997). Bok (2003) suggests that the impetus for the change was universities' realization that their specialized knowledge in teaching and research was extremely marketable. In the 1980's and beyond, there was a great expansion of opportunities for universities to make money by commercializing their

assets (Bok, 2003). Murchison and Pejovich (2012) echo this view, stating that “academic dominance in higher education [in the second half of the last century] created rent-seeking opportunities that in turn produced social, political and economic consequences” (p. 68). Increasing competition amongst universities and the “spirit of private enterprise and entrepreneurship” (Bok, 2003, p. 15) of the 1980’s drove universities to expand commercialization quickly, which was made possible “by a more technologically sophisticated, knowledge-based economy” (Bok, 2003, p. 15).

Academic capitalism and marketization are broad concepts that manifest themselves in many ways, including revised organizational structures and processes. Gumport (2000) suggests that change was driven, in part, by new academic management’s drawing on “management science and organizational research for its professional ideology” (p. 69). Deem (2001) draws connections between academic capitalism and new managerialism, while noting that the two concepts are different. Academic capitalism refers, primarily, to entrepreneurial work of academics, while new managerialism speaks to organizational changes and internal decision-making processes. Some institutions have propagated academic capitalist incentives through implementation of different approaches to allocating internal resources, and the approach often chosen is responsibility center management (RCM) (Priest et al., 2002). RCM assigns revenues and costs to colleges and other university subunits to assign the financial consequences of local decisions to those making the decisions (Whalen, 1991). According to Hearn et al. (2006), assigning revenues and costs to colleges allows “colleges to benefit directly and immediately from their own revenue increases and cost savings” (p. 288). Such a model is a powerful force, because it explicitly makes generating revenue and managing costs

the responsibility of academic leaders throughout the entire institution. Deem (2001) identifies some principles underlying RCM models when she writes:

“New managerialism is used to refer to the desirability of a variety of organisational changes. These include the use of internal cost centres within a single organisation, an emphasis on competition between cost centres and on the formation of internal markets (for example, academic cost centres might be asked to pay for internally provided laboratory space or information technology services), the encouragement of team working, the introduction of targets and the (sometimes) intrusive monitoring of efficiency and effectiveness...Other features of new managerialism may involve explicit attempts to alter the regimes and cultures of organisations and the values of staff, so that they more closely resemble those found in the private for-profit sector” (pp. 10-11).

The heads of academic units under new managerialism or RCM are not concerned only with academics and research; rather, they lead “budget cost centres” (Deem, 2001), which are organizational units held accountable for their own financial condition. According to Hearn et al. (2006), “the growth and development of an academic unit depends upon its ability to control its costs while delivering value and quality to its stakeholders” (p. 288). When academic heads are granted authority and responsibility for the financial well-being of their colleges, their efforts shift from traditional academic duties to a focus on increasing revenues and managing costs. In a study of deans operating within an RCM system at the University of Lethbridge, Jarvie (2002) found that “deans in this decentralized public university do, in fact, carry out responsibilities not

unlike those of general managers and CEOs, within the confines of their faculties/schools” (p. 119), and “RCB/RCM contributes to a much greater decision making role for deans – affecting their levels of autonomy and accountability, necessitating increased communication, and forcing the awareness of contingent factors at all levels by all parties” (p. 8).

In many ways, RCM is an organizational corollary of the principles of academic capitalism. Rhoades and Slaughter (2004), both critical scholars in the academic capitalist literature, speak directly to universities’ internal budget systems:

“One relatively indirect form of shaping the curriculum lies in a system of budget allocation mechanisms and incentives that involve turning the academy internally into a competitive marketplace for centrally allocated resources...The incentive is to move toward curricular offerings and delivery systems that maximize student numbers and cost efficiencies, even if they are at the expense of educational quality considerations.” (p. 48)

This passage describes aspects of RCM, which assigns tuition dollars to the units responsible for their generation and thereby incentivizes colleges to increase student credit-hour production in a cost-effective manner. It would be unfair to assume that every institution using RCM disregards quality and embraces academic capitalism, particularly because RCM includes decision points that allow institutions to respect traditional academic values and culture. Implementing an RCM system may, however, recalibrate institutional decision-making processes to favor academic capitalist outcomes. RCM represents an overhaul of traditional university financial models in favor of a

methodology that encourages the entire institution to seek revenue and control costs (Whalen, 1991), and the success of each university subunit is connected overtly to its financial performance.

The marketization and academic capitalist movements are reshaping public higher education on many fronts (Bok, 2003; Rhoades & Slaughter, 1997). While public higher education can learn from the business sector, there is risk of unwittingly damaging higher education if principles and practices are imported without a sophisticated understanding of how those changes will impact the unique enterprise that is public higher education. Public universities can and must learn from other sectors, including business, but hasty application of business- and market-oriented approaches risks harming higher education. Hensley, Bava and Brennan (2001) argue that “there is little theoretical understanding or practical experience available to guide administrators and faculty implementing RCM systems at institutions of higher education,” (p. 7) a condition that has changed little since their 2001 study. The research opportunities are vast.

Research Question

This study is intended to enhance understanding of the outcomes and implications of RCM in public universities through analysis of empirical data. Examination of one public research university’s experiences using RCM will inform all university leaders as they make decisions that are vital to the future of the academy. The following research question drives this analysis:

To what extent are common beliefs about Responsibility Center Management (RCM) systems supported by actual outcomes? This study examines the University of

Minnesota's experience with Responsibility Center Management as it relates to six key propositions:

Proposition 1: Responsibility Center Management leads to more total revenue that is spread disproportionately across disciplines.

Proposition 2: Responsibility Center Management leads to expansion of non-traditional revenue streams.

Proposition 3: Responsibility Center Management leads to internal competition among colleges for students and credit hours.

Proposition 4: Responsibility Center Management reveals subsidies.

Proposition 5: Responsibility Center Management creates an adversarial relationship between academic and administrative units.

Proposition 6: Interdisciplinary cooperation declines under Responsibility Center Management.

Outline of the Dissertation

Chapter one introduced the research topic and provided background. Chapter two reviews relevant literature. Chapter three describes the conceptual framework and research methodology used to approach the research question. Chapter four presents research results, and chapter five provides a discussion of implications and limitations of this study as well as suggestions for future research.

CHAPTER 2

Literature Review

Clark Kerr coined the term “multiversity” to convey the expansive and diverse activities of America’s research universities. There are unending resource demands to fund modern research universities’ many laudable activities. Bowen’s (1980) famous, or perhaps infamous, revenue theory of costs, that universities will raise all the revenue they can and spend all they raise, concisely reveals a great deal of truth about university finances. Even during periods of rising revenues, aggressive pursuit of excellence and prestige requires boundless resources (Bowen, 1980), which leads to great challenges in the allocation of internal resources. Universities’ internal resource allocation processes drive institutional decision making and establish priorities, and are, therefore, important to study.

Universities are subject to the same economic realities as every other organization in the world. Universities must secure revenues in political and economic markets to fund their operations, and an internal decision-making framework must distribute those resources across competing priorities. Competition for resources impacts not only the allocations to various university units, but also the culture of the institution. University traditions such as collegiality, academic freedom and decentralized authority are not inherent and eternal characteristics of universities. When the relationships among university units, faculty members and administrators change, the longstanding cultural traditions of universities may be altered in unintended ways.

Internal resource allocation processes establish the relationships among university actors. Internal funding models can emphasize collaboration or competition. Certain

behavior can be financially incentivized, or good citizenship and oversight can be relied upon to elicit desired behavior. Prioritization can be decentralized or units can be bound to centrally-defined goals. Institutional decisions on such matters are revealed in their internal budget models, and these decisions impact both the institution's bottom line and its culture. Academe's financial and cultural futures depend on informed university leaders making wise decisions regarding both universities' interactions with external organizations and markets and their internal processes for distributing resources. Internal budget processes at public universities are the focus of this investigation, but it is first necessary to review higher education's current and historical financial context.

Financial Context of Higher Education: The Federal Role

The funding of public universities has a complex, centuries-long history, and each state and institution has its own unique story. The U.S. federal role has been limited when compared to that of many national governments, yet when the federal government has acted, its impact has been substantial. The Morrill Act of 1862, the Hatch Act of 1887, the Smith-Lever Act of 1914, and the Smith-Hughes Act of 1917 were important milestones in public higher education's history (Brubacher & Rudy, 1997). The federal government began the now longstanding policy of providing financial support to students when the National Youth Administration awarded a total of \$93 million to over 620,000 students from 1935 to 1943 (Brubacher & Rudy, 1997). After this, the Servicemen's Readjustment Act of 1944 and Public Law 550 of 1952, which included educational provisions for Korean War veterans, provided billions of dollars to support veterans pursuing higher education (Brubacher & Rudy, 1997). During this period, the

educational enterprise of universities became increasingly reliant on federal money, and the federal government's role in funding university-based research also grew. Federal research funding at universities tripled during the 1950's (Brubacher & Rudy, 1997). As the federal government emerged as the primary funder of higher education, commissions were formed to reexamine the federal government's contributions to higher education. In 1946, President Truman appointed a commission chaired by George F. Zook, president of the American Council on Education, and, in 1956, President Eisenhower appointed a commission chaired by Devereaux C. Josephs, the New York Life Insurance Company's chairman of the board (Brubacher & Rudy, 1997). The commissions made many recommendations, yet it was not until 1965 that the federal government enacted the first Higher Education Act, which made a lasting commitment to supporting higher education directly as well as through grants and loans to students (Brubacher & Rudy, 1997). Brubacher and Rudy (1997) report that "the federal government had emerged by 1972 as the principal financier of America's programs of higher education" (p. 237).

Financial Context of Higher Education: State Support

In addition to relying on federal support via financial aid to students, public institutions depend heavily on direct state support. An appropriate first question is, "Why do states financially support public universities?" Toutkoushian and Shafiq (2009) identify several reasons. First, states may hope to remedy perceived higher education market failures and inequities. While many argue that it is appropriate that governments intervene in markets for public goods (Toutkoushian & Shafiq, 2009), higher education delivery is not a public good, according to Toutkoushian and Shafiq (2009), as "the

provision of education does not fall into this category [public goods] because students can be excluded from receiving the service” (p. 47). Toutkoushian and Shafiq (2009) do, however, recognize positive externalities associated with higher education, which may justify a governmental subsidy because higher education otherwise would be under-produced. Finally, state support for higher education can be seen as simply elected officials’ response to the desires of the electorate (Toutkoushian & Shafiq, 2009).

In contrast to the stability of federal loans and grants to students, state appropriations are subject to substantial annual variations. Higher education takes disproportionately large cuts when states face budget shortfalls because demands on social welfare programs increase during recessions, and pre-college education is often shielded from substantial cuts (Zumeta, 2010). Unlike a typical state agency, higher education institutions typically have financial reserves on which to fall back (Callan, 2002). Higher education institutions can turn to other revenue streams, primarily tuition (Callan, 2002), to replace lost appropriations, thereby allowing the state to direct limited resources to other needs (Zumeta, 2010). Okunade (2004) quantifies the state aid-tuition connection in finding that “a 10% increase in tuition and fees saves the state about 3.1% in appropriations to higher public education” (p. 136). In addition to lost appropriations, economic downturns also place additional fiscal constraints on higher education institutions, such as restricted access to credit and higher borrowing costs (Zumeta, 2009).

Even in normal economic circumstances, states find it increasingly difficult to fund higher education robustly. In addition to tight state budgets, Cheslock and Gianneschi (2008) mention “competing priorities, public resistance to increasing state

levies, and prohibitions on deficit spending” as challenges to high levels of state support for public higher education (p. 208). The budgetary challenges pushing state support downward can be addressed through tuition and fee increases, but there must be a natural limit to the longstanding trend of rising tuition and fees, as demand for higher education is not perfectly inelastic (Cheslock & Gianneschi, 2008). Perpetually rising tuition leads to rising student debt as well as limiting access to higher education, both topics of great concern to university leaders and the public.

Scholars have examined the real-world experiences of higher education institutions during recessions, which are critical to understanding modern public higher education finance. Examining the most recent recession, the College Board (2011) finds:

“State appropriations per full-time equivalent (FTE) student declined by 9% in inflation-adjusted dollars between 2007-08 and 2008-09, by 6% in 2009-10, and by 4% in 2010-11. Average tuition and fees at public four-year colleges rose by 9% beyond inflation in 2009-10 and by 7% in 2010-11.

“After increasing by 6% in the 1980s and by 5% in the 1990s, state appropriations per FTE student declined by 23% in inflation-adjusted dollars over the decade from 2000-01 to 2010-11.” (College Board, 2011, p. 18)

The College Board data imply a logical linkage leading from recession to declining state support to rising tuition, which leads to higher student debt. Cheslock and Gianneschi (2008) find that “the purchasing power of state appropriations per full-time equivalent student in 2003-04 reached its lowest point in the 30-year period ending that

year” (p. 208). Cheslock and Gianneschi (2008) suggest that not only do declining appropriations directly reduce available resources, but they also indirectly impact universities’ abilities to raise other revenues by a phenomenon termed the Matthew Effect (Merton, 1968), essentially that the rich get richer. In addition to increasing current wealth, saving generates dynamic feedback because “[saving] increases future asset income, *cet. par.*, which supports increased future spending or saving or both” (Winston, Carbone & Hurshman, 2001, p. 8). If universities’ resources are constrained, they not only lose current income, their capacity to raise future income also is reduced. In their study of higher education institutional wealth, Bradburd and Mann (1993) find that public universities, even compared to private institutions, are quite wealthy if their wealth is considered comprehensively, but their wealth is “heavily concentrated in the form of government appropriations” (p. 485). Bradburd and Mann (1993) also find a “potentially devastating effect on public institutions of significant reductions in government support to higher education” (p. 485).

The difficulty for state legislatures to fund public higher education consistently is not a recent phenomenon. Writing in 1997, Hossler, et al. compare state higher education funding to Homer’s Sisyphus, who was sentenced forever to push a large stone up a hill only to have it roll back down *ad infinitum*. At times, higher education finds generous support from state legislatures, only to have that support removed when legislatures faces budgetary challenges. Hossler, et al. (1997) categorize these challenges as either economic or based in public policy. Economic challenges are those that cause the state to have less money to allocate, while public policy challenges lead to higher education receiving a declining share of the state budget due to competing priorities (Hossler, et al.,

1997). A recession, for example, is an economic challenge, while increasing healthcare demands represent a public-policy challenge. These challenges go hand-in-hand, as economic challenges exacerbate existing public-policy challenges, which can lead to public higher education receiving a smaller piece of a shrinking pie. Substantial reductions in state support push institutions toward alternative resource streams. Public universities' access to alternative revenue streams is both a blessing and a curse. Non-state revenue streams offer universities alternatives during difficult times, but they also allow states the luxury of reducing state support due to the existence of the alternative revenue sources.

The most immediately available “alternative source” is tuition. Hossler, et al. (1997) find that between 1983 and 1992, the average cost to a public university undergraduate increased by 22.8%, more than three times the rate of increase of family incomes, which reveals the multi-decade tuition trend that continues to the current day. An implication of this shift from state support to tuition is that higher education is increasingly perceived as a more private and less public good (Hossler, et al., 1997). This diminished governmental commitment to higher education combined with competition within higher education and accountability have reached a level that lead some to proclaim a “new normal,” an essentially permanent change in the higher education environment that requires new paradigms (Bruininks, Keeney & Thorp, 2010). In many ways, this echoes Breneman's 1993 assessment that:

“Higher education is moving into a new era of permanently diminished financial support, and...it is vital that college and university leaders, trustees, state and federal policy officials, corporate and foundation

officials, opinion leaders and informed citizens engage in discussion, planning, and action consistent with a new reality.” (p. 5)

The “new normal” and “new era” are essentially the same phenomenon viewed from perspectives nearly twenty years apart. While “new” is no longer an appropriate descriptor, the dramatic language expresses the depth of concern the higher education community has for its financial future.

Within higher education, there is a common perception that declining state support led directly to higher tuition, yet this and other conventional wisdom have been questioned. Some scholars question the theory that competing public programs are siphoning funding from higher education, and some scholars offer other perspectives on the meme that higher education has suffered dramatic reductions in public funding. The common belief that pre-college education and healthcare compete with higher education for resources in a zero sum game is suspect in light of a positive correlation between higher education funding and each of these variables (Weerts & Ronca, 2006). Okunade (2004) finds that higher education appropriations are positively correlated with state prison spending, but negatively correlated with Medicaid spending. Weerts and Ronca (2006) also find that private grants are positively correlated with state support, a finding counter to the belief of many that private sources are supplanting state support. Rather, Weerts and Ronca’s (2006) work suggests that “for every additional dollar received from private sources, the state is projected to increase funding by approximately \$1.00” (pp. 948-949). Despite widely held conventional wisdom, there are areas of incomplete understanding regarding the relationship between state support for higher education and other spending categories.

The varying perspectives on state support for higher education are facilitated by a lack of agreement on fundamental metrics (Trostel & Ronca, 2007); for example, should state support be measured in real or nominal dollars, and should it be normalized by student head counts, full-time equivalent students, student credit hours, or not at all? The answer is, clearly, that various analyses call for different metrics, but one also can choose metrics to serve one's goals, and, as a highly political issue, methodological rigor can struggle against political expediency in higher education finance. Further to this point, higher education scholars must seek objectivity as they study an area in which they are insiders with a personal stake. As long as agreement on the problem definition and basic facts remains elusive, there is little chance for agreement on grander conclusions and proper courses of future action (Immerwahr, Johnson & Gasbarra, 2008). Immerwahr, Johnson, and Gasbarra (2008) conclude that the country has yet to come to agreement on the basic definition of the problems facing higher education, a vital precursor to solutions.

Much has been written about state support for public higher education (Weerts & Ronca, 2006; Okunade, 2004; Cheslock & Gianneschi, 2008; Bradburd & Mann, 1993), and while there is considerable agreement, there also is a strong contrarian argument, as well as empirical evidence that contradicts conventional wisdom. Though there is disagreement on many points, the multi-decade trend of rising tuition (Massy & Wilger, 1992; College Board, 2011) shows that public universities are not receiving a level of state support that matches their perceived needs. The power of this statement, however, is limited if one accepts Bowen's (1980) assertion that universities have insatiable appetites for revenues to fund their many meritorious goals. Under Bowen's principle,

public support can *never* reach a level that matches universities' unbounded desires. Even a university enjoying generous increases in state support would seek to increase tuition to fund even more initiatives within the university.

Financial Context of Higher Education: Tuition and Student Debt

Universities may have an unrelenting desire for resources, but Bowen's (1980) revenue theory of costs does have its limits. Tuition revenue is bounded both by the ability and willingness of students to pay, as well as political acceptance of tuition levels. Tuition payments are underwritten largely by federal loan programs, and, using media coverage as a barometer, public concern about student debt levels is high and rising (Thompson, 2012; CNBC, 2012; Zaitchik, 2012). According to the Congressional Budget Office (CBO), federal student loan volume has grown dramatically in recent years, quadrupling from an outstanding loan volume of \$149 billion in 2000 to \$630 billion in 2009 (CBO, 2010). From 1990-2009, federal student loan volume increased at an average annual rate of 9% (CBO, 2010). During this period, charges for tuition, fees, room and board grew at an annual rate considerably exceeding the rate of inflation. According to the College Board (2011), from 2001 to 2012, "published in-state tuition and fees at public four-year colleges and universities increased at an average rate of 5.6% per year beyond the rate of general inflation" (p. 13). Volumes can be written about properly apportioning the cause of this phenomenon, but it is a basic fact that in recent decades tuition at public universities has risen considerably faster than the rate of inflation, as has student debt.

Hanley (2005) notes the rising burden on students to fund public universities via tuition payments. While he finds a concomitant increase in student aid, Hanley (2005) points out that aid has shifted from grants to loans and from need-based to merit-based, raising access concerns. Fascinating debates about related concepts, such as the high-tuition, high-aid model, and, as the media often puts it, “Is college still worth it?” a question that dates back to at least 1992 (Massy & Wilger, 1992), are beyond the scope of this study, but are important areas for further research and dialogue.

Financial Context of Higher Education: Costs

For many, the deep concern over rising tuition rates leads directly to rising college costs. Johnstone (2009) asserts that rapidly rising costs are “the fundamental financial problem of higher education all over the world” (p. 2). Bowen (1980) provides an important fundamental principle that should underlie all examinations of costs. Bowen (1980) tells us that “the unit costs of particular institutions are thus determined in large part by the amount of money they are able to raise, not necessarily by some rational determination of the minimal amount needed to provide services of acceptable quality” (p. 22). Particularly when facing constrained resources from one source, universities first seek additional revenues from other sources; if they cannot generate sufficient total revenues, then “increased attention must be paid to the expense side of the ledger” (Breneman, 1993, p. 11). Consistent with Breneman’s expectation, universities have devoted attention to their costs, and higher education scholars and other observers have studied their actions. Murchison and Pejovich (2012) connect the trend of rising tuition to increasing costs. They attribute rising costs to increasing academic salaries paired with

declining teaching loads, which fell from four to two courses per semester during the 1960's and 1970's. These trends led universities to pay higher salaries to more faculty members who taught less. Massy and Wilger (1992) find "little doubt" that increasing costs are the main factor driving tuition higher, and they suggest that "rising salaries and the prices of other inputs, increased government regulation, micromanagement, and cost shifting" underlie the cost trends (p. 361). Concern over rising costs is not new. Writing in 1993, Breneman cites "steadily rising costs" resulting from four factors: 1) an enormous supply of internal ideas in search of funding, 2) a dearth of productivity gains and rising administrative costs, 3) high inflation in the cost of higher education inputs, and 4) Bowen's revenue theory of costs. Massy and Wilger (1992) also identify cost disease, the growth force, and the administrative lattice as challenges to higher education cost control; each of these deserves attention.

Cost disease theory, a theory that traces back to at least the mid-1960s work of William G. Bowen and Baumol (Archibald & Feldman, 2006), has been considered by many scholars (Leslie & Rhoades, 1995; Massy & Wilger, 1992). Archibald and Feldman (2006) tell us that "cost disease is based on the idea that technological progress that increases labor productivity (and thus reduces unit cost) is not randomly distributed across industries over time" (p. 6). Labor-intensive, service industries often find productivity gains difficult to achieve without compromising quality (Archibald & Feldman, 2006). Archibald and Feldman (2006) articulate the problem as follows:

"Despite their lagging productivity, personal service industries have to compete for workers with goods-producing industries. Because they are experiencing technological progress, the goods-producing industries will

be giving substantial wage increases to their workers. The only way that service industries can compete for workers is by raising wages also, and this causes the prices of services to rise much more rapidly than the prices of goods.” (pp. 6-7)

A classic example that demonstrates cost disease is a string quartet performance, as there is no technological advancement that can increase the productivity of a performing string quartet, at least none that avoids compromising the product (Massy & Wilger, 1992). As other industries improve productivity, string quartet performances become relatively more expensive. If one imagines the traditional model of higher education – a faculty member instructing a group of students in a classroom – it is easy to see parallels. Cost disease causes the natural rate of increase for higher education costs to be greater than the rate of general inflation, though modern communications technologies arguably loosen the grip of cost disease on higher education.

Massy and Wilger (1992) also identify the growth force as a cause of higher education cost growth. New knowledge does not replace old knowledge; instead, new discoveries lead to new areas of study, yet the “old knowledge remains relevant” (Massy & Wilger, 1992, p. 366). The result is Massy and Wilger’s (1992) “growth force,” whereby universities constantly seek to expand to new areas of knowledge without compromising the traditional areas. Forward-looking universities, therefore, are on a permanent trajectory of expansion and growth.

The “administrative lattice” also is noted by Massy and Wilger (1992) as a contributor to cost growth. They cite administrative professionalism and consensus management as aspects of the administrative lattice. Consensus management, a norm

throughout higher education, is time consuming, makes assigning accountability difficult, and reinforces an aversion to risk (Massy & Wilger, 1992). As administrative staffs have grown and become professionalized, more highly trained people have been attracted to higher education administration (Massy & Wilger, 1992), which increases both the quality and cost of administration.

Archibald and Feldman (2006) quantitatively test the strength of two competing theories of rising costs: cost disease and Bowen's revenue theory of costs. Having previously discussed both, neither will be restated. By studying historical price indices, Archibald and Feldman (2006) find that higher education's cost per student "follows a time path very similar to the time path of other personal service industries that rely on highly educated labor" (p. 27). From this, they conclude that cost disease is a more dominant cause of rising costs than Bowen's revenue theory of costs. While they acknowledge the existence of some higher education specific factors, Archibald and Feldman (2006) find the data to support the theory of cost disease, not Bowen's revenue theory of costs, as the driver of higher education cost increases.

A long-standing criticism from external and even internal observers is a multi-decade trend of rising administrative costs at higher education institutions. Higher education critics connect many of higher education's alleged deficiencies to excessive increases in administrative expenditures at the expense of other priorities (Leslie & Rhoades, 1995). Brinkman and Leslie (1985) point out two problems with studying higher education costs. First, they tell us that the word "cost" has many different meanings, which leads to their second problem – the challenge "of interpreting cost data unambiguously" (Brinkman & Leslie, 1985, p. 2).

Defining administrative costs is a challenge, yet Leslie and Rhoades (1995) find that “by essentially any measure, administrative costs in colleges and universities have risen dramatically during the past two decades” (p. 187). Leslie and Rhoades (1995) identify several causes of increasing administrative costs, including: an increased focus on expanding alternative revenue streams, increased state and federal regulatory requirements, increased organizational complexity, administrators’ taking on formerly faculty-held responsibilities, growth in consensus management, and the self-perpetuating growth of the administration itself. Institutional theory and resource dependence theory are connected to rising administrative costs (Leslie & Rhoades, 1995). Related to institutional theory, Leslie and Rhoades (1995) point to coercive isomorphism as a force behind the establishment of new administrative offices to address compliance with expanding governmental regulations. Resource dependency theory drives the same outcome because public universities are dependent on governmental resources, so they seek to comply with their funders’ requirements (Leslie & Rhoades, 1995). As universities expand non-governmental revenue streams, resource dependency theory suggests that universities will establish additional structures to complement the newly prominent non-governmental funders (Leslie & Rhoades, 1995). Gumport (2000) points out that:

“The cultivation of a plurality of resources to reduce existing dependencies has long been seen as a prudent course for organizations, but has gained greater currency for public higher education in the contemporary era where dependence on funding from state appropriations has created financial challenges.” (p. 77)

Resource dependency theory raises the risk that by expanding multiple revenue streams, universities are expanding revenues while creating a dependency relationship with multiple external organizations. Resource dependency theory tells us that one should not expect an institution dependent on governmental funding to look like an institution reliant upon funding from other external organizations.

Leslie and Rhoades (1995) suggest that as “the administration” has grown, an “us and them” attitude has developed, and this organizational distance between administration and the academic core prevents those with budget authority (the administration) from having direct knowledge of the academic operations. With this distance comes some distrust, and the financial needs of the administration itself become more real to budgetary decision makers, themselves administrators, than the more abstract needs as articulated by the academic units. As Leslie and Rhoades (1995) put it, “budgetary decision makers first take care of their own needs and the needs of those they know well” (p. 204). The budget authority structure is called out by Leslie and Rhoades (1995) as a key aspect of the problem:

“No matter what the explanations are for cost increases, there is still the need to determine and to change *how* choices are made, that is, to specify the *mechanisms* by which budgetary choices are made and administrative costs are increased and to introduce measures that will mitigate against the unchecked operation of these mechanisms.” (p. 207)

The root causes of administrative cost increases are many, and they have been articulated by multiple scholars and senior administrators. Leslie and Rhoades’ (1995) attention to the internal decision-making processes and authority is well-placed. Little is

gained by questioning specific budgetary and administrative decisions, but progress can be made by ensuring that institutional decisions are legitimized by decision-making processes that properly balance financial needs with academic traditions and culture.

Financial Context of Higher Education: Accountability

When an industry experiences an increase in costs concurrent with a decrease in traditional revenues, non-traditional revenues must be secured to avoid bankruptcy. By most accounts, for decades higher education has faced stagnant, at best, state support, so non-traditional revenue sources have been pursued. With additional outside revenue comes additional outside review. Some suggest that external scrutiny damages higher education, because they view freedom from external pressure to be fundamental to the past and future success of American universities. Others, however, find it reasonable that universities be accountable stewards of external funding (Knapp, 2009). When state support is on the decline, other funders rise in prominence and become difficult to ignore. External funders of the nation's higher education enterprise feel increasingly entitled to exert influence on the academy. University funders such as governments, students, parents, and donors will contribute money to higher education only if they have a suitable degree of confidence that their money will be well-spent, which has led to, as described by Knapp (2009), an "era of hyperaccountability" (p. 1). Higher education is and will continue to be scrutinized by external parties, particularly those providing funding, and the spending decisions of universities are often subject to criticism.

Hoff (2009) says, "'Accountability' has become a new unquestioned shibboleth" (p. 206). While frankly acknowledging that "higher education *is* highly inefficient and

wasteful,” (p. 215), Hoff (2009) does not consider “micromanagement from governing authorities” to be the solution (p. 216). Rather, Hoff (2009) sees the answers coming from within higher education itself. No matter the preferences of those in the higher education community, growth in non-traditional revenue streams will result in increased review and accountability. Students and parents feel the empowerment of consumers, while benefactors, corporate donors, and taxpayers expect their contributions to higher education to be spent in ways *they* consider wise. University funders are becoming less deferential to the spending wisdom of universities.

Financial Context of Higher Education: Transition to Modern Higher Education

Finance

The financial concepts already discussed have manifested throughout higher education’s history. To summarize recent developments, in the mid-20th century, post-World War II veterans’ policies and Cold War federal research dollars fueled rapidly expanding higher education revenue bases and enrollments. Some view this period of massification as a Golden Age of higher education during which there was “particular euphoria” due to expanding student bodies, budgets, and research portfolios (Garvin, 1980, p. 20). In the late-1970’s, higher education finance began to change dramatically. State support for public institutions stagnated (Zumeta, 2010), and universities were unwilling or unable to reduce costs. Ambitious public institutions sought to expand their activities by increasing tuition charges, which was facilitated by the availability of federal grants and loans. An insatiable desire for resources and constraints on the rate of tuition increases led institutions, beginning in the late 1970’s and 1980’s, to pursue non-

traditional revenue streams aggressively as modern higher education finance emerged.

Leslie and Rhoades (1995) write that, “in the 1980s, as shares of revenues from state appropriations declined, institutions of higher education increased their search for additional funds in a manner quite consistent with historic patterns that are characteristic of the private, for-profit sector” (pp. 192-193). Along with additional external funding came expectations from and accountability to outside funders. The changes in university finances, traditions, and culture have been detailed in the body of literature commonly referred to as academic capitalism (Rhoades & Slaughter, 1997) or the closely related commercialization of higher education (Bok, 2003). Bok (2003) articulates the scope of the concept of higher education commercialization in writing:

“Some writers speak expansively of commercialization to include a wide range of behaviors and trends, notably (1) the influence of economic forces on universities...; (2) the influence of the surrounding corporate culture (e.g., the increased use on campuses of terms such as CEO, bottom line, or brand name); (3) the influence of student career interests on the curriculum...; (4) efforts to economize in university expenditures (hiring more adjunct teachers) or to use administrative methods adapted from business; or (5) attempts to quantify matters within the university that are not truly quantifiable, such as trying to express matters of value in monetary terms rather than qualitatively.” (p. 3)

This study addresses these developments in the management of public universities, specifically, how they manifest themselves in the internal decision-making and budgetary models of public universities.

Modern Higher Education Finance: The Influence of Academic Capitalism

In *The University of Utopia*, former president of the University of Chicago Robert Hutchins (1953) describes, in his view, an ideal system of higher education. He asserts higher education's purpose to be the development of a responsible and wise citizenry, a particularly critical element of democratic society. Writing about Hutchins' views, Hoff (2009) says "that universities have pursued both funding and enrollments on the basis of values Hutchins considered anathema – materialistic, greed-centered values" (p. 212). In a number of ways, the academic capitalism movement, taken to its extreme, is the polar opposite of Hutchins' ideal. Scholars, politicians, administrators, the press, and other higher education observers have made value judgments on every aspect of academic capitalism. A review of the history of the movement will be interwoven with some of the critiques.

Bok (2003) traces the beginnings of university commercialization and the closely related concept of academic capitalism to the mid-1970s, writing that "since 1975, however, universities have been much more aggressive than they previously were in trying to make money from their research and educational activities" (p. vii). Bok (2003) worries that "commercialization may be changing the nature of academic institutions in ways we will come to regret" (p. x). Rhoades and Slaughter (1997) take the recession of 1973 to be a "convenient marker" of the beginning of the movement toward academic capitalism (p. 12). In his 2003 book, Bok suggests that the impetus for the change was universities' realization that their specialized knowledge in teaching and research was extremely marketable. There was money to be made by charging more for instruction, patenting research discoveries, consulting with industry, and even licensing their logos

(Bok, 2003). While Bok (2003) accepts that appropriation reductions contributed to universities' motivation to expand their revenue streams, he asserts that this was not the primary driver of higher education commercialization. As previously discussed, universities have an insatiable desire for resources to fund their expansive activities; the genesis of that desire pre-dates the 1970s. The change, according to Bok (2003), was a great expansion of opportunities for universities to make money by commercializing their assets in the 1980s and beyond. Murchison and Pejovich (2012) echo this view in stating that "academic dominance in higher education [in the second half of the last century] created rent-seeking opportunities that in turn produced social, political and economic consequences" (p. 68). An important milestone was the enactment of the Bayh-Dole Act in 1980, which made it easier for universities to profit from discoveries even when the research was publicly funded (Bok, 2003). Increasing competition among universities and the "spirit of private enterprise and entrepreneurship" of the 1980s drove universities to expand commercialization quickly, which was made possible "by a more technologically sophisticated, knowledge-based economy" (Bok, 2003, p. 15).

Gumport (2000) provides additional perspective on the evolution of academic capitalism in suggesting that since 1975 "knowledge in...universities has been reorganized along a utilitarian trajectory," which facilitated higher education's shift from a social institution into an industry (p. 68). Gumport (2000) suggests three related mechanisms came together to drive the change. First, academic management came to power that drew on "management science and organizational research for its professional ideology" (p. 69). Second, post-WWII academic massification gave way to "academic consumerism" (p. 69), specifically the concept of student-as-consumer and the

accompanying empowerment. Third, academic disciplines and personnel became “re-stratified” on the basis of “use-value and exchange value of particular knowledges in the wider society” (p. 69). Gumport (2000) finds universities as free markets for the exchange of ideas to be threatened if academic subjects and personnel are subject to market forces. Gumport (2000) sees “competing institutional logics” that are difficult to reconcile (p. 69). Tension and conflict created by layering a commercial paradigm on long-standing institutional traditions are recurring themes in the literature.

Concerns about business principles encroaching on academia are nothing new, and there is an inherent tension when business ideas are applied to higher education (Bruininks, Keeney & Thorp, 2010). Writing in 1918, Veblen warned “that the ideals of scholarship are yielding ground, in an uncertain and varying degree, before the pressure of businesslike exigencies” (Veblen, 1918, p. 142). Hutchins (1953) finds “the love of money at the bottom of the disintegration of the American university” (p. 41). Writing even earlier, in 1908, as quoted by Bok (2003), John Jay Chapman, a Harvard alumnus, wrote that “the men who control Harvard today are very little else than businessmen, running a large department store which dispenses education to the millions” (p. 19). An overarching concern of Veblen and others is that higher education principles and ideals will be compromised for the sake of money, and “the verdict of the market will supplant the judgment of scholars” (Bok, 2003, p. 19). Gumport (2000) describes her personal concern by writing, “I fear that the things I care most about will be deemed inefficient, inflexible, and thus no longer affordable” (p. 70).

On the other side of the issue, some are encouraged by the commercialization of higher education, as they prefer the reduced dependence on governmental funding, the

strengthened connection between university research and products for the public, and universities' increased accountability to taxpayers, students and other external groups (Bok, 2003). Lee and Rhoads (2004) acknowledge that entrepreneurship in higher education may serve the social good and improve public accountability by engaging industry and university researchers in solving practical problems and improving economic productivity. Entrepreneurialism benefits universities experiencing revenue shortfalls, as entrepreneurial successes can subsidize institutional administrative and operating costs (Lee & Rhoads, 2004). Partnerships between industry and universities can benefit students, too, as students find themselves more closely linked to prospective employers throughout their academic careers (Lee & Rhoads, 2004). Schuetze (2007) assigns authors to three camps. First, there are those who assert that closer relationships with external parties such as government and industry are appropriate and even overdue. Second, there are those who defend universities' traditional form. And, third, there are those who describe the process and "typically avoid ethical and normative questions (Shuetze, 2007, p. 438).

Bok (2003) considers when the influences of business and commercial principles are advantageous to higher education versus detrimental by asking a key question. Referring to university decision makers, Bok (2003) asks, "How can they decide when to heed the call of the marketplace and when to refuse its allure?" (p. 32). The benefits of commercialization, according to Bok (2003), include increased revenue and incentives that induce universities to act in a manner consistent with public wishes. To university leaders facing budgetary challenges, commercialization appears as an opportunity to reverse their institution's fortunes and increase or at least maintain their prestige. The

attraction is great and, in many, ways defensible, yet Bok (2003) points out that the tangible benefits are countered with intangible costs, which include, 1) a deteriorating educational product, as universities cut instructional costs and raise prices, relying on naïve students to use institutional reputation rather than educational quality to drive their decisions; 2) a shift from liberal arts to vocational training, as the profit motive drives both university decisions and is instilled in its students; and 3) compromises in academic freedom, as the traditional prerogative of faculty members to freely and openly investigate areas of their choosing gives way to financial metrics to assess their productivity and contributions to the institution.

Bok (2003) raises two other concerns that necessitate further consideration. First, layering a profit motive on top of a centuries-old culture that values and protects extraordinary freedom for faculty members to direct their activities is particularly troublesome. Bok (2003) articulates this risk as follows:

“Professors were known to exploit graduate students, shirk their collegial duties, and even refuse to talk about their research long before opportunities arose to make a profit from such behavior. But money adds another reason – and an especially potent one at that – for putting selfish interests and private pursuits above responsibilities to students and colleagues.

“Such self-serving tendencies are particularly harmful to universities, since faculty members enjoy unusual freedom...academic communities work well only when professors voluntarily choose to give generously of their time to help their institution, colleagues, and students. It is this

willingness to do more for others than the job officially requires that is at particular risk in an age when able scientists and scholars have so many opportunities to seek fame and fortune in the outside world.” (pp. 114-115)

In this passage, Bok articulates how the traditions of academia can break down to the point of dysfunction when new financial models and incentives are applied to universities with persistent cultural norms. Murchison and Pejovich (2012) address the same phenomenon in writing about the agency problem regarding faculty free time:

“The real problem is that professors can choose to allocate free time to non-academic activities. While many university professors are sticking with academic pursuits (teaching, research, spending time with students, etc.) others seek consulting jobs that often double their incomes.” (p. 69)

Combining the historical tradition of faculty independence with new opportunities for personal enrichment highlights, again, the problem of layering a new financial system on top of an entrenched culture. Faculty members traditionally have great freedom over their activities, freedom they are understandably loath to concede. Yet, new opportunities to consult, invent, and even found startup ventures create tension when effort that is compensated by taxpayers and tuition is spent pursuing interests, financial and otherwise, beyond the core academic missions of the institution.

A final concern of Bok (2003), and perhaps the most poignant, is that the strong reputation and public trust that universities previously enjoyed is eroding, which was a concern of Massy and Wilger as far back as 1992. Public universities continue to rely

heavily on governmental support, but commercialization risks breaking the public trust.

Gumport (2000) views the issue as follows:

“I see an ongoing struggle, where public higher education is increasingly using market discourse and managerial approaches to restructure in an attempt to gain legitimacy; yet, in so doing, they may end up *losing* legitimacy by changing their business practices to such a degree that they move away from their historical character, functions, and accumulated heritage as educational institutions.” (p. 87)

Some worry that the public trust already is broken. Many in higher education recognize a centuries-old compact whereby states fund public higher education and universities serve societal needs and ensure broad accessibility, but the public sees traditional university commitments to teaching and discovery being replaced by less noble goals (Couturier, 2005). The “moonshiner’s request,” as stated by Hoff (2009), to “put the money on the stump and run” (p. 216), is unthinkable without a great deal of public trust. Absent this trust, universities are subject to external scrutiny of their actions, including academic decisions, terms of faculty employment, and topics of research – areas traditionally viewed as the exclusive jurisdiction of universities themselves. Bok (2003) goes as far as saying, “The university’s reputation for scholarly integrity could well be the most costly casualty of all” (p. 117). The loss of the public trust is an extreme price to pay for commercialization, and it would irreversibly alter universities and their societal positions.

Many scholars have written about the commercialization movement, and there is a considerable body of literature in opposition to nearly all aspects of academic capitalism.

Especially influential are Slaughter, Rhoades, and Leslie. Rhoades and Slaughter (2004) point to the loss of state support as a key driver of the move toward academic capitalism. They write that, “public colleges and universities faced with a major loss in state support – now develop, market and sell a wide range of products commercially in the private sector as *a basic source of income*” (p. 37). Rhoades and Slaughter (2004) observe a “fundamental change” in the relationship between states and higher education, and the lines between the private not-for-profit, private for-profit, and public sectors is fading (p. 38). They recognize a shift in priorities away from “expansion of knowledge” and toward “potential revenue generation” (p. 38). Rhoades and Slaughter (2004) are troubled by the imposition of corporate management structures and new decision-making processes on universities, and they see faculty losing authority even over academic matters. Faculty, students, and others are viewed as revenue sources, and universities invest in them differentially based upon their perceived revenue-generating potential (Rhoades & Slaughter, 1997). They see nothing short of the privatization of public higher education (Rhoades & Slaughter, 1997), but the risks of “academic capitalists are publicly underwritten” (p. 14). They draw a parallel between the health care sector and higher education, seeing both as having inflated costs due to governmental subsidies (Rhoades & Slaughter, 1997). In the case of higher education, the subsidies take “the form of fee waivers, loans, grants, and fellowships,” as well as research funding (Rhoades & Slaughter, 1997, p. 14). The traditionally public nature and spirit of public universities are in conflict with the revenue-seeking methods associated with academic capitalism. Rhoades and Slaughter (2004) identify internal budgetary systems, the

primary focus of this paper, as an aspect of the problem. Already introduced above, this critical passage is repeated:

“One relatively indirect form of shaping the curriculum lies in a system of budget allocation mechanisms and incentives that involve turning the academy internally into a competitive marketplace for centrally allocated resources...The incentive is to move toward curricular offerings and delivery systems that maximize student numbers and cost efficiencies, even if they are at the expense of educational quality considerations.” (p. 48)

This budgetary model, often termed Responsibility Center Management, attributes tuition to the units responsible for their generation, which incentivizes colleges to increase student credit hour production in a cost effective manner.

Rhoades (2003) places particular concern on a shift away from a shared governance system in which faculty members have influence on important institutional decisions. Years ago, Alpert (1985) saw faculty attention to institutional governance wane as their entrepreneurial activities increased. In the academic capitalism literature, Rhoades (2003) sees the “foreign values” of the private sector being imposed on higher education (p. 9). Rhoades (2003) views the academic capitalism movement as more profound than a focus on efficiency or generating more revenue; he sees it as a dramatic change to university culture:

“The challenge is more than merely a means of generating new revenues for institutions; **capitalism, academic style, is a cultural system.** It is not just an external threat, as many critics have written, it is an internal one.

Capitalism shapes peoples' consciousness, the way we think and talk about and define ourselves. This is true not only of more and more central administrators, of presidents who see themselves as CEOs, and would like to be paid accordingly. It is also true, increasingly, of more and more faculty, who see themselves as independent small businessmen, with their faculty salaries as their secure sinecures." (Rhoades, 2003, p. 10)

(Emphasis in original)

From an academic capitalist perspective, productivity is equivalent to revenue generation and some disciplines subsidize others (Rhodes, 2003). Gradually, people throughout the institution undergo a shift in mindset as the culture becomes focused on revenue generation and efficiency. Rhoades (2003) notes that academic capitalism is layered on top of existing governance structures; for example, faculty senates are not abolished, but new structures (e.g. advisory boards, new university offices, and committees) are created and supersede the older governing structures. The collision of new and old governing structures is another example of the tension created by academic capitalism when traditional cultural norms and authority structures are in conflict with a new paradigm.

Like Rhoades and Slaughter (2004), Hanley (2005) points to "fiscal scarcity" as driving academic capitalism (p. 3). When there is a scarcity of internal resources, competition for external resources intensifies (Hanley, 2005). Availability of external resources, however, is not distributed equitably across disciplines. For this reason, disciplines with close industry ties and robust external funding opportunities become favored, which tends to shift resources away from the humanities and toward the

“technoscience disciplines” (Hanley, 2005, p. 3). Lee and Rhoads (2004) find faculty entrepreneurship to be most prevalent in biology, engineering and the physical sciences, though humanities and fine arts faculty engage in entrepreneurial activities in the form of “freelance work” (p. 754). Many within higher education are troubled by the unequal distribution of external funding opportunities across disciplines, as this places differential values on some areas of knowledge, a concept anathema to many scholars.

Academic capitalism is a broad concept that manifests itself in many ways, including revised organizational structures and processes. Some institutions have implemented new models for allocating internal resources, often generally termed Responsibility Center Management (RCM), that assign revenues and costs to colleges and other university subunits to bring the financial consequences of local decisions to those making the decisions. Such a model is a powerful force, because it explicitly makes generating revenue and managing costs the responsibility of academic leaders throughout the entire institution. Deem (2001) writes about “new managerialism,” which refers to the application of private sector management techniques to public organizations (p. 10). As presented above, Deem (2001) identifies the basic principles underlying RCM models when she writes about new managerialism. The heads of academic units under new managerialism, or an RCM system, become more financially oriented, which can lead to a shift in effort from traditional academic duties to a focus on increasing revenues and managing costs.

In many ways, RCM systems are the organizational embodiment of the principles of academic capitalism. It would be unfair to assume that every institution using RCM embraces all aspects of academic capitalism, because RCM contains multiple levers that

allow institutions to respect and value traditional academic values and culture. RCM systems may, however, adjust decision-making processes to encourage academic capitalist outcomes. RCM overhauls traditional university financial models to decentralize responsibility across the institution for revenue generation and cost control, and the success of each unit becomes connected to its financial performance.

Responsibility Center Management

Responsibility Center Management is a popular variant of a broader class of resource allocation systems that can be generally termed incentive-based budget systems. Other incentive-based systems include responsibility center budgeting (RCB) and revenue responsibility budgeting (RRB). The differences in names and acronyms may seem subtle, but Priest et al. (2002) find that the differences in what a university chooses to call its incentive-based budget system can reflect the university's "values, aspirations, priorities, and political realities" (p. 2).

As Whalen (2002) points out, all approaches to budgeting provide leaders with incentives. Each institution that adopts an incentive-based model adjusts the details and often the name to meet its institutional preferences, but the models all seek to create a detailed resource allocation system that creates financial incentives for local decision makers to maximize revenues and minimize costs. This study is focused specifically on RCM systems, defined as: a budget model that assigns all or nearly all revenues and expenses to university subunits and thereby assigns to subunits, primarily colleges, decision-making authority, responsibility, and accountability via the financial incentives that are built into the budget model.

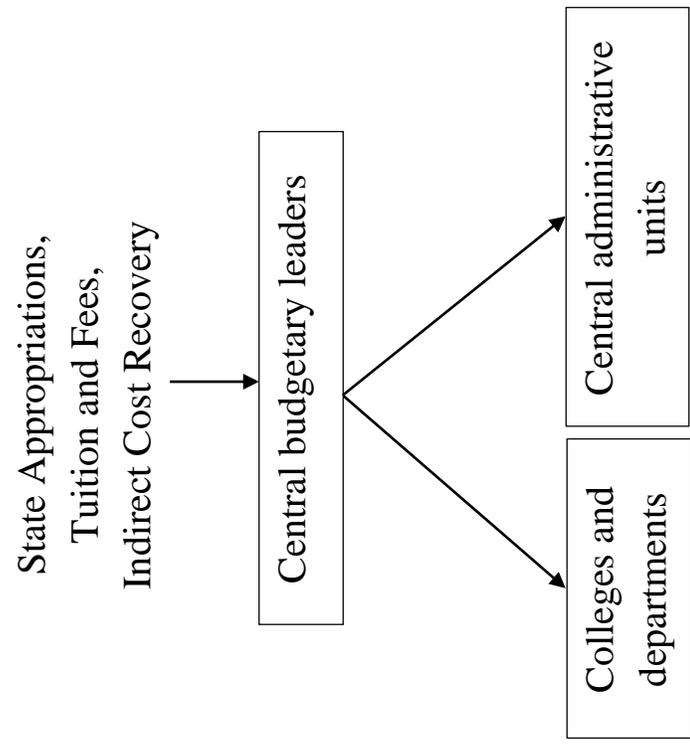
Responsibility Center Management: Comparisons to Traditional Budget Processes

Budgeting in any large organization is a complex matter. Public universities face additional complicating factors, such as tuition and governmental appropriations, student loans and grants, endowments, research funding, and powerful traditions and culture. Massy (1996) highlights three particular budgeting challenges facing higher education. First, there is cross-subsidization across university subunits, and it flows largely from undergraduate teaching to graduate teaching and research. Second, one department's decisions impact other departments. In other words, there are externalities associated with departmental decisions. Third, there are principal-agent problems; the preferences of staff differ from those of their managers, and the preferences of colleges differ from those of central administration. Different budget models address these and other challenges in various ways.

The traditional approach to university budgeting is an incremental operations and maintenance (O&M) allocation process (Priest et al., 2002), whereas an RCM model is a detailed, decentralized resource allocation system that encourages local decision makers to weigh the broad institutional ramifications of their decisions. Within a traditional, incremental university budget model, central administration is expected to secure revenues and allocate them to university subunits as expense budgets (Lang, 1999), which typically are adjusted incrementally each year. Subunits then spend the allocations in pursuit of their various missions.

Figure 1: A Comparison of a Traditional and a Responsibility Center Management Budget Model

A Traditional University Budget Model at a Public University



A Responsibility Center Management Budget Model at a Public University

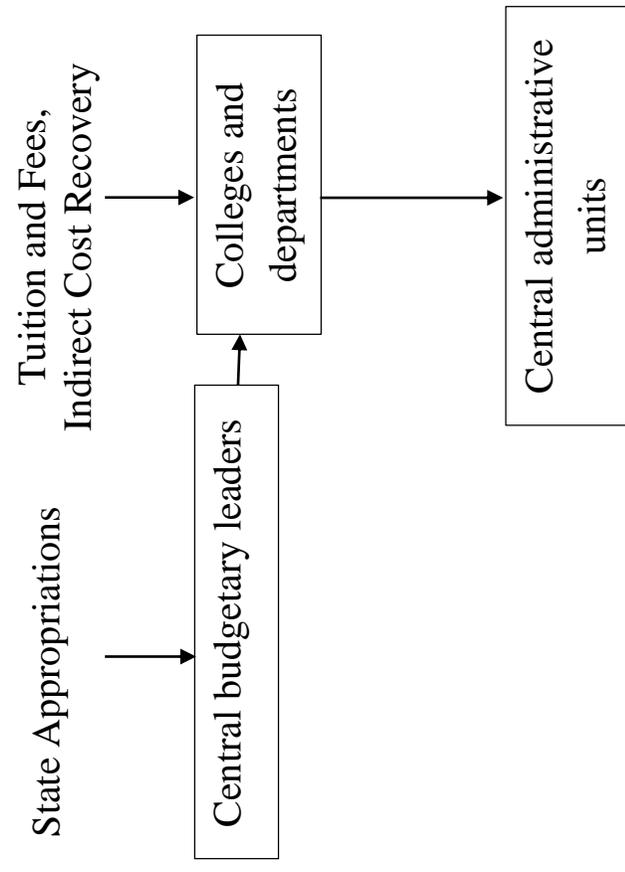


Figure 1 compares a traditional university budget model with an RCM budget model. The left side of Figure 1 depicts a simple resource allocation model, whereby central leaders collect all institutional revenues and allocate them to subunits. Strategic university leaders may consider subunit productivity and other metrics to assess subunits during the budget process, and they may adjust allocations based on such analysis. There is no direct linkage, however, between revenue generation and operations and maintenance allocations within a traditional university budget model.

On a small scale, traditional resource allocation models may be satisfactory. When, however, an institution becomes so complex that central authorities cannot comprehend the workings of the subunits, information asymmetries enter the system and reduce the efficiency of centralized budgeting (Wilson, 2002). Massy (1996) recognizes the limitations of centralized budgeting in suggesting a fundamental challenge facing university leaders: “how to decentralize budget-making authority without abandoning institution-level values and priorities” (p. 5). To some, RCM is the answer.

The right side of Figure 1 depicts a generic and simplified RCM system in which revenues flow to the units responsible for their generation, and central administrative unit costs, often termed cost pools, are covered by assessments to the revenue-generating units. Under RCM, colleges: 1) directly receive tuition, fees, and indirect cost recovery, 2) pay the full institutional costs associated with their actions via cost pools, and 3) are allowed to retain balances from one year to the next, so they are inherently incentivized to operate as efficiently as possible and take actions that expand institutional revenues while minimizing institutional costs. RCM models have been used in private universities for decades, and in the context of: 1) declining state support, 2) increasing dependence on

earned revenues, and 3) external pressure for accountability, many public universities have overhauled their traditional budget models in favor of RCM or other IBB systems (Priest et al., 2002).

In his foreword to Whalen's 1991 book on RCM, former Indiana University President Thomas Ehlich summarizes the principles underlying RCM:

“1) All costs and income attributable to each school and other academic unit should be assigned to that unit;

“2) Appropriate incentives should exist for each academic unit to increase income and reduce costs to further a clear set of academic priorities; and

“3) All costs of other units, such as the library or student counseling, should be allocated to the academic units.” (Whalen, 1991, p. ix)

Ehlich summarizes RCM with these points, but the systems that grow from these principles can be exceptionally complex. Under RCM, the priorities of the institution are embodied in an array of formulas that convert traditional collegiate finances into a new format, but Whalen (2002) stresses that it would be a mistake to equate RCM systems with formulas. In writing about the closely related RCB (Responsibility Center Budgeting) system, Whalen says that, while necessary, formulas “do not capture the essence of RCB. RCB is embodied in the state of mind, an attitude, of both central administration and center heads that they are empowered to make decisions” (Whalen, 2002, p. 11). With acknowledgement of Whalen's caution, the foundation of any RCM system is indeed the formulas that drive revenue and cost attribution, out of which flow the incentives that drive decisions. The inner workings of RCM systems can be

demonstrated most clearly with three basic examples: 1) tuition attribution, 2) distribution of indirect cost recovery, and 3) cost pools.

Tuition Attribution under RCM

Tuition revenue flows to the college that is responsible for its generation based on a formula. Typically, the formula has two components. A portion of the tuition from each student in each course is attributed to the college of instruction and a portion is attributed to the college in which the student is enrolled. For example, 75 percent of the tuition for a given course may flow to the college of instruction while 25 percent flows to each student's college of enrollment (the college housing the student's academic program). The financial value in teaching service courses to students enrolled in other colleges versus enrolling more students in one's own college is established by this formula. If, rather than a 75 percent, 25 percent split, an institution adopted a tuition-attribution rule that distributed tuition by 90 percent instructional and 10 percent enrollment, then teaching additional service courses would be favored over enrolling more students in one's college. The larger the share of tuition that flows to the college of instruction, the more desirable it is to teach students enrolled in other colleges rather than dedicate resources to enrolling more students in one's own college.

Distribution of Indirect Cost Recovery under RCM

Indirect cost recovery generated by sponsored research typically flows to the college housing the sponsored project, and indirect cost recovery is shared on interdisciplinary grants. In some cases, the Office of the Vice President for Research

may directly receive a portion of the institutional indirect cost recovery, and often colleges further share indirect cost recovery with their responsible departments and principal investigators on a percentage basis. The formula that establishes the proportion of total indirect cost recovery that is attributed to each party creates the incentives facing the colleges and faculty who drive the institution's research enterprise.

Cost Pools under RCM

RCM systems divide the university into revenue-generating units and non-revenue generating units, and the costs associated with non-revenue generating units are allocated to the revenue-generating units via an array of cost attribution formulas. For example, because the Office of the Vice President for Research does not naturally generate revenue to cover its costs, the cost of administering the Office of the Vice President for Research is charged to revenue-generating units throughout the university that benefit from efforts of the Office of the Vice President for Research. The formula for spreading the costs is driven by some metric, such as sponsored research expenditures. In such a model, a college responsible for 10 percent of the university's sponsored research expenditures would be charged 10 percent of the cost of administering the Office of the Vice President for Research.

Most RCM systems refer to non-revenue generating units as "cost pools," "administrative cost centers," or "service centers," and there can be dozens of them within one university, such as student services, information technology, and human

resources. Lang (1999) tells us that proper overhead and indirect cost¹ determinations are “essential and very demanding” and take most universities 18-24 months to devise (p. 10). Allocating indirect costs is vital because the illusion of free goods and services must be eliminated if optimal decisions are to be expected (Whalen, 1991). If there is no charge for space or utilities, then subunits will view these resources as free, and they will rationally over-consume them. By assigning all university costs to the units that generate university revenues, an approximation of the full institutional cost of a decision is revealed to collegiate decision makers. For example, an additional graduate student not only delivers tuition and fees, but also bears the central costs associated with his or her enrollment in the institution. Lang (1999) stresses the importance of transparent and straightforward allocation of indirect costs (i.e. cost pools), because the cost side of the RCM equation can only be managed by local leaders if there is a clear and predictable cost-allocation mechanism in place.

Due to the full allocation of revenues and costs to university subunits under RCM, collegiate finances become “business-like,” making revenues, expenses, and the bottom line the responsibility of collegiate leadership. Central university leaders retain some discretionary funds for strategic, university-wide priorities, and often a component of annual collegiate revenues is subject to central discretion. Such central discretion is critical to RCM, because it reveals institutional priorities and values through

¹ Indirect costs have two related but different meanings. Used generally, indirect costs refers to the institutional costs necessary for the University to carry out its business which are not direct costs. For example, an instructional salary is a direct cost of instruction, while the heat, human resources office, and paper are indirect costs. A second usage of “indirect costs” specifically refers to sponsored projects. Most sponsored projects pay an indirect cost rate, a percentage added on top direct expenditures. In this usage, indirect cost recovery represents a *revenue stream* to the institution to cover a portion of its indirect costs.

disproportional allocation of discretionary resources, often termed “subventions.” The source of the subvention pool varies, but commonly is state appropriations, return on investments, gifts, or a tax on something, for example, a tax on revenues. Strauss and Curry (2002) explain that the subvention allows transparency in cross-college subsidies and can reward good performance, and it is a source of start-up funds for new academic ventures. Without transparent subventions, inter-collegiate subsidies are vague and contentious.

Responsibility Center Management: Transition

RCM systems are expensive to implement in terms of time and money. Years can be spent debating whether to implement RCM and establishing the foundation of the system. RCM is not an off-the-shelf, one-size-fits-all system to be implemented expediently. University data systems must be modified to provide detailed and reliable data to drive the formulas that comprise the RCM system. Faculty and staff must be retrained and some staff may need to be replaced, so the workforce has the necessary understanding and skills to operate productively within the new system. Whalen (1991) notes that a high level of professional, financial expertise is necessary in colleges, not just in central administration. Lang (1999) suggests that RCM systems effectively make deans into CEOs with responsibilities for which they may be neither interested nor competent. Lang (1999) even suggests that, “successful implementation of RCB/RCM may require considerable patience, enough patience to wait for a new generation of academic leadership” (p. 21), because deans and collegiate financial administrators may not have the requisite skills to succeed in an RCM system.

Beyond high transition costs, RCM models require higher ongoing costs in certain areas. Salaries may escalate to attract capable financial administrators and to compensate deans and other subunit heads for their increased responsibilities (Lang, 1999). An RCM model also requires new university regulations and regulatory bodies that Lang compares to governmental mechanisms “of curbing the potential excesses of capitalism” (Lang, 1999, p. 25). For example, a university body may need to limit departments’ freedom to teach outside their disciplinary focus in order to avoid sharing tuition with departments offering service courses to outside majors, and committees may need to monitor the amount charged for central services because identifying costs does not ensure that those costs will be fair (Lang, 1999). RCM models are not solutions for short-term financial problems, but, rather, they are long-term strategies that may take many years to reach fruition (Lange, 1999). With such a large investment of time and money, a university president must have confidence in an institutional payoff in order to embark on such a long, expensive, and perilous path.

Responsibility Center Management: Impacts on the Institution

Some key expected benefits of implementing RCM, enhanced institutional revenues and cost containment by decentralized decision making, are subject to several risks. An overarching risk is that the fears of academic capitalism critics prove accurate, and RCM catalyzes academic capitalism to an unhealthy degree. Left unchecked, RCM incentivizes collegiate entrepreneurialism, which can lead to academic capitalist behavior. In addition to this concern, authors, many of them supportive of RCM, have identified several risks associated with RCM.

Whalen (1991) observes that decentralization of decision making can be shocking to some, recalling that after RCM implementation a dean was concerned about the amount of discretion he had been granted. The Hanover Research Council (2008) suggests that deans and other local leaders may not even desire the authority they are granted under RCM. The system can pit various university parties against each other (Whalen, 1991). For example, deans and faculty can be at odds, as faculty wish to limit the number of students both to keep quality up and to constrain the instructional workload, while deans want to expand the student base because they see the direct connection between more students and an expanding budget. Service centers and academic units often end up at odds, as academic units never view service units as efficient enough, and service units feel constantly squeezed (Whalen, 1991). Central administration, with its decisions open and subject to scrutiny, may find itself in conflict with deans (Whalen, 1991).

Whalen (1991) also identifies potential unintended consequences of RCM, and he assigns them to three categories: 1) organization, 2) income attribution, and 3) cost allocation. If subunits are too small, they are subject to random events that can determine their fortunes, and the cost of maintaining the system may exceed the benefits; however, if the subunits are too large, then the decisions are not local enough for the benefits to be realized (Whalen, 1991). Service courses can present an income attribution problem (Whalen, 1991), because depending on the tuition-attribution model, service courses may be profitable or not. In either case, colleges may go to battle over them. Also, the entrepreneurial approach can be taken too far unless academic leaders police the responsibility centers (Whalen, 1991). For example, to cut costs, deans may make

excessive use of adjunct professors while increasing the student base, and service centers may lobby for their own student fees to obtain a dedicated revenue stream. Without central scrutiny, the incentives to raise additional revenue may work a bit too well (Whalen, 1991).

Curry (1991) warns that the openness of RCM systems can create conflict about which units subsidize other units, which can be destabilizing to the institution. He also points out that RCM allows those who are naturally entrepreneurial to be entrepreneurial, but it does not suddenly create entrepreneurs. Traditional academic leaders and existing financial staff may not be well-suited to operating skillfully within an RCM system (Curry, 1991). Strauss and Curry (2002) put it as follows:

“In centralized budget systems, managing a direct expenditure budget is relatively easy. But managing a responsibility center budget requires comprehensive understanding of the center’s business model: to predict and budget the center’s tuition revenues, one must understand the external student recruitment market and the internal course enrollment patterns; to predict and budget indirect cost recovery on center contracts and grants, one must know the indirect cost rate and predict the center’s (modified) total direct expenditures to plan and manage the annual budget; to manage total expenditures, one must master the indirect cost allocation rules and the responsibility center/central service interface. Typically, smart amateurs who have grown from administrative assistants into local budget managers won’t be good enough. And while professionals cost more, they find resources for their deans.” (Strauss & Curry, 2002, p. 42)

The above passage makes stark the contrast between operating in a centralized budgeting system and an RCM system. It stands to reason that university leaders implementing RCM expect it to be successful, which requires a different kind of academic leadership. At a minimum, RCM requires a different mindset, if not different collegiate leaders, which is a concern of academic capitalism critics. When the academic core is not insulated from market and political forces, there is a risk that decisions will be based primarily upon finances at the expense of academic principles and open, free inquiry.

Responsibility Center Management: Controversy

From a solely financial perspective, RCM systems hold much theoretical appeal, but, as has been shown, there is controversy regarding its business-like approach being applied to a public university. According to Lang (1999), “RCB/RCM is, in practical effect, the institutional version of marketization” (p. 9). As Wilson (2002) puts it, “By harnessing the forces of competition, RCM is supposed to induce units to function more efficiently” (p. 48). Lang (1999) also tells us that, “RCB/RCM can produce...institutional behaviours that lead to improving the fit between social need and economic demand on one hand, and educational diversity and supply on the other hand” (Lang, 1999, p. 9). The quotations immediately above are welcomed by some and alarming to others. One’s philosophical orientation toward higher education informs, in part, one’s position on the issue.

Responsibility Center Management: Pros

RCM is expected to strengthen an institution's financial position by decentralizing financial consequences to encourage decisions that properly weigh financial ramifications. In addition, Strauss, Curry, and Whalen (1996), suggest that RCM models create open systems with strong colleges and academic departments, which is consistent with the culture of public research universities. They also note that decisions are made at the local level, which is where the best information is likely to be found. Whalen (1991) explains that by placing a cost on central services, those charges can not only be passed on to academic units, but the academic units can further pass costs on to those ultimately responsible for incurring the costs. Also, by eliminating free central services, subunits are no longer generous with things for which someone else is paying, such as space and utilities. According to Lang (1999), RCM systems translate between budgets and plans, and they make it impossible to hide anything. The costs of administrative and operational services are revealed and assigned, so they no longer produce free goods. Lang (1999) also cites expansion of entrepreneurial behavior and relocation of decision making to the proper organizational level as important benefits of RCM systems.

Responsibility Center Management: Criticisms

Leslie, Oaxaca, and Rhoades (2002) examine the perceptions of those operating within RCM systems by interviewing academic leaders serving under RCM systems. There is a diversity of opinions, but some themes emerged. For example, the study found that "there was almost universal department head agreement...that the imposed incentives were burdensome in their requirements" (Leslie, Oaxaca, & Rhoades, 2002, p.

86). The study also found that entrepreneurship was driven by opportunity, which varied by discipline, rather than being driven by resource deprivation (Leslie, Oaxaca, & Rhoades, 2002). It was not a loss of revenue or a search for more revenue that drove entrepreneurial activities, but rather the availability of opportunities, such as grants and contracts, which existed regardless of the RCM system. This suggests that the experience under an RCM model will differ based on the external climate facing each academic discipline. Leslie, Oaxaca, and Rhoades (2002), while maintaining that there is promise in RCM models, offered a number of observations and conclusions that are best quoted liberally:

“Our results suggest, however, that unintegrated incentive strategies may not have much positive effect; in fact, the burdens of such approaches may outweigh the benefits, in particular if the frustrations of department heads and faculty are considered. Further, such simple problems as administrative turnover or poor internal public relations can doom the efforts.

“Although we found some evidence of the power of RCM approaches to affect the internal workings of academic departments, the evidence was sporadic and many of the effects were viewed as less than positive. If there are major gains to be realized from RCM, the ‘costs’ are indeed unclear. If we are to accept the perceptions of the department heads of our 11 universities as the final word, the verdict is clearly negative.

“We began our research expecting to find that incentive structures were systematically and effectively moving public universities toward the

generation of more and more of their own revenues through a conscious, strategic, entrepreneurial effort. What we found instead was a set of incentive structures that often were of little apparent effect other than to generate a good deal of internal hostility.” (Leslie, Oaxaca, & Rhoades, 2002, p. 88)

These results indicate that the promise of RCM systems comes with the risk of destabilizing the institution. The market-based, business-like approach of RCM systems does not necessarily match university systems or culture, and it will be resisted by some and appeal to others. Though generally supportive of RCM systems, Whalen (2002) observes that while RCM systems have existed for over three decades and their usage has grown, they have not become ubiquitous, which, he acknowledges, calls their effectiveness into question. Whalen (2002) suggests that RCM systems may not be as effective as theorized or the results that they deliver may not be desired by higher education institutions. Even RCM advocates acknowledge RCM challenges, but they see the promise of the systems as too great to ignore.

Importance of Responsibility Center Management Research

RCM is worthy of scholarly research due to its potential impact on the future of the academy. Many have examined its benefits, costs and risks, and detailed blueprints for its implementation have been penned, yet, despite over 20 years of real-world application, little scholarly effort has been devoted to analyzing its actual impacts on institutions. Developing an understanding of the full impact of RCM is critical, because RCM adoption is being driven by institutional isomorphism.

DiMaggio and Powell (1983) identify three mechanisms that drive organizational homogeneity: coercive, mimetic, and normative mechanisms. All three isomorphic processes are influencing RCM adoption. External organizations do not formally mandate RCM adoption, but public universities feel informal pressure from outside organizations and the public to become less dependent on governmental funding, to be more efficient, and to demonstrate their tangible and practical value. Some see RCM as the means to these ends. Mimetic processes arise when organizations model each others' behavior, which is powerful particularly in organizations with uncertainty and ambiguous goals (DiMaggio & Powell, 1983). A university facing declining appropriations and seeking alternative revenues may not know how to expand revenues, so it models the behavior of prestigious institutions. As major universities gradually have adopted RCM, RCM increasingly has become the model to be copied. Lastly, normative processes arise as a field is professionalized. Professions create formal educational standards, communications networks, guidelines, and best practices that permeate the profession (DiMaggio & Powell, 1983). The field of higher education finance is professionalized, with graduate education programs, continuing education opportunities, professional organizations, annual conferences, and a robust body of guidelines, standards, and best practices. The largest professional organization, the National Association of College and University Business Officers (NACUBO), holds an annual meeting attracting thousands of participants from around the world. At a recent NACUBO annual meeting held July 28-31, 2012 in Washington, DC, the agenda included sessions entitled: *Growing Revenues in the Face of Federal Funding Cuts; University Research Parks Increase the Value of Institutions, the Changing Financial Model of Public Universities; A*

Progression of Cost Saving Initiatives; Budget Models and Processes: Challenges Facing Institutions Today; and Integrated Planning in a Decentralized Organization. The final session listed above was presented by financial administrators from Iowa State University and carried the following short description:

“Hear how one university implemented a responsibility centered management budget model four years ago. The incentive-based model has supported the university's growth in student enrollment and research activity. Learn how the decentralized management of this model has changed the roles of central administration and colleges in the university's planning and resource management processes.” (NACUBO, 2012)

RCM adoption in public universities has been slow over the past 20 years, but with coercive, mimetic, and normative isomorphic mechanisms all driving its adoption, RCM soon may become more prevalent. For this reason, scholarly inquiry into several aspects of RCM is critical.

Conclusion

University finances have evolved considerably over the past fifty years. As the higher education enterprise grew to serve more students and universities' non-educational activities expanded, the complexity of university finances grew dramatically. Tuition and appropriations were joined by a multitude of other revenue streams, public funding was reduced and universities became increasingly ambitious in expanding alternative revenue streams. An increasing reliance on non-governmental support brought new funders to the

table, such as industry and benefactors, and these parties, along with tuition-paying students, now exert greater influence on the universities that rely on their funding.

The means by which an organization secures external funding influence both its relationships with external parties and its internal character. Though both are large and diverse organizations, a major appropriation-funded federal agency and a multi-national corporation contain vastly different incentive and decision-making structures in part due to the differing manner in which each organization secures the revenues necessary for its survival. As public universities move from the federal agency to the corporate end of the spectrum, some of their fundamental historical traits are being challenged. Responsibility Center Management is a critical front in the struggle between those who welcome the paradigm shift of academic capitalism and see it as an avenue to greatness and those who consider academic capitalism to be a destructive force that undermines the tenets that made American higher education great. Both the financial future and the character of the academy will be defined in part by the outcome of this struggle. Gumpert (2000) highlights the tension in writing:

“The central balancing act in contemporary academic restructuring is that of adequately responding to seemingly irreconcilable expectations, when to make gains in one dimension may mean loss in another. For example, achieving strategic positioning in new knowledge markets may yield immediate gains for a campus in generating resources but a loss of moral legitimacy, core purposes, and values...Alternatively, a campus could have all the legitimacy it can muster and no revenue, and thereby go out of business.” (p. 85)

Kerr (1987) writes of the accumulated heritage of higher education, noting that of 85 western institutions established by 1520, 70 are universities. The depth of heritage and tradition in higher education is nearly unmatched, yet no institution can remain frozen in time. For the foreseeable future, the great challenge for higher education will be responding to contemporary demands while respecting the form in which universities have been handed down through the centuries. Responsibility Center Management will be a powerful influence as higher education leaders navigate the coming decades.

CHAPTER 3

Methodology

This study uses both qualitative and quantitative methods to further understanding of the impact of Responsibility Center Management (RCM) on public research universities. Commonly held beliefs about RCM's impact will be considered by exploring the extent to which common beliefs are supported by empirical data. While each university makes numerous implementation decisions resulting in a system unique to that institution, all RCM budget models have commonalities. This study focuses on the University of Minnesota's experience with RCM, and this chapter describes the conceptual framework and procedures that were used to obtain and analyze data.

Conceptual Framework

Limited empirical research on RCM (Hearn et al., 2006) provides only a rudimentary understanding of RCM's impact on an institution. According to Hearn et al. (2006), "the ratio of rhetoric to actual findings on the performance of [incentive-based budgeting systems] is too high" (p. 294). Even with perfect knowledge of RCM's impact, university leaders and scholars would debate RCM's desirability and appropriateness at a public university. If all parties agreed on the facts regarding the impact of RCM, personal interests and differing philosophical worldviews still would lead some to accept and others to reject RCM. This study seeks to contribute to the RCM debate and advance the debate from arguments about the ways RCM alters an institution's finances, culture and character to a more meaningful stage: a discourse

about the desirability of the alterations that are observed to accompany RCM implementation.

For many reasons, RCM generates controversy, and debates often are vigorous (Hearn et al., 2006). Interviews with administrative leaders and faculty operating within RCM systems reveal concern about the rich getting richer, academic quality suffering due to financial considerations, and a shift of focus from academics to finances, though these concerns are balanced by positive comments (Hensley, Bava & Brennan, 2001). Hearn et al. (2006) find “a cultural clash between the use of management concepts and terms (customers, products, outputs) and academic concepts and terms (students, courses, completion rates)” (p. 293). Proponents suggest that RCM derives substantial benefits by locating decisions closer to those with the most relevant knowledge, but Hearn et al. (2006) report that critics are concerned that “the ‘every tub on its own bottom’ approach can be ruinous to the academic fabric of an institution” as incentive-based thinking can become excessive and damaging (pp. 290-291). There are entrenched camps regarding expected outcomes as well as the desirability of those outcomes.

Important aspects of the RCM debate concern anticipated impacts on an institution. By studying institutions operating under RCM, one can add clarity to the expectations associated with RCM implementation. Other debates around RCM, however, cannot be settled with additional research. Many of the disagreements over RCM arise from differing philosophies about higher education, and better knowledge about RCM’s impact on universities will not resolve these debates. For example, if research reveals that RCM leads to additional revenue to the institution, but that revenue is spread disproportionately across academic disciplines, reasonable people will disagree

on whether disproportionately more revenue is a good or bad outcome for higher education. Similarly, if RCM is found to result reliably in the expansion of non-traditional revenue streams, some will view this as a desirable, perhaps even necessary, direction for higher education. Others will refuse to accept this as an acceptable course for public higher education, instead holding that the only way to maintain higher education's values is to insist on renewing historical levels of governmental support for public education.

Figure 2 presents the conceptual framework for this study. The left side presents six propositions that reflect specific points of controversy, and on the right are fictitious but credible quotations that represent divergent beliefs. The quotations are intended to illustrate representative positions on the points of divergence. This study is intended to add clarity to the left side of the diagram and inform legitimate debates portrayed on the right. Research can remove uncertainty from the left side of Figure 2, but philosophical differences result in intractable disagreements on the right side of the figure. The propositions follow, each with a question highlighting the opposing views.

Proposition 1: Responsibility Center Management leads to more total revenue that is spread disproportionately across disciplines.

Is increased institutional revenue desirable if external forces spread the new revenue disproportionately across academic disciplines?

Proposition 2: Responsibility Center Management leads to expansion of non-traditional revenue streams.

Does increasing reliance on non-traditional funders of public higher education place too much power over higher education outside of higher education?

Proposition 3: Responsibility Center Management leads to internal competition among colleges for students and credit hours.

Does internal competition for tuition lead to unproductive inter-college competition?

Proposition 4: Responsibility Center Management reveals subsidies.

Do transparent subsidies result in desirable decisions?

Proposition 5: Responsibility Center Management creates an adversarial relationship between academic and administrative units.

Does taking money from academic units to cover the expenses of central administrative offices damage the relationship between academic units and central administrative offices?

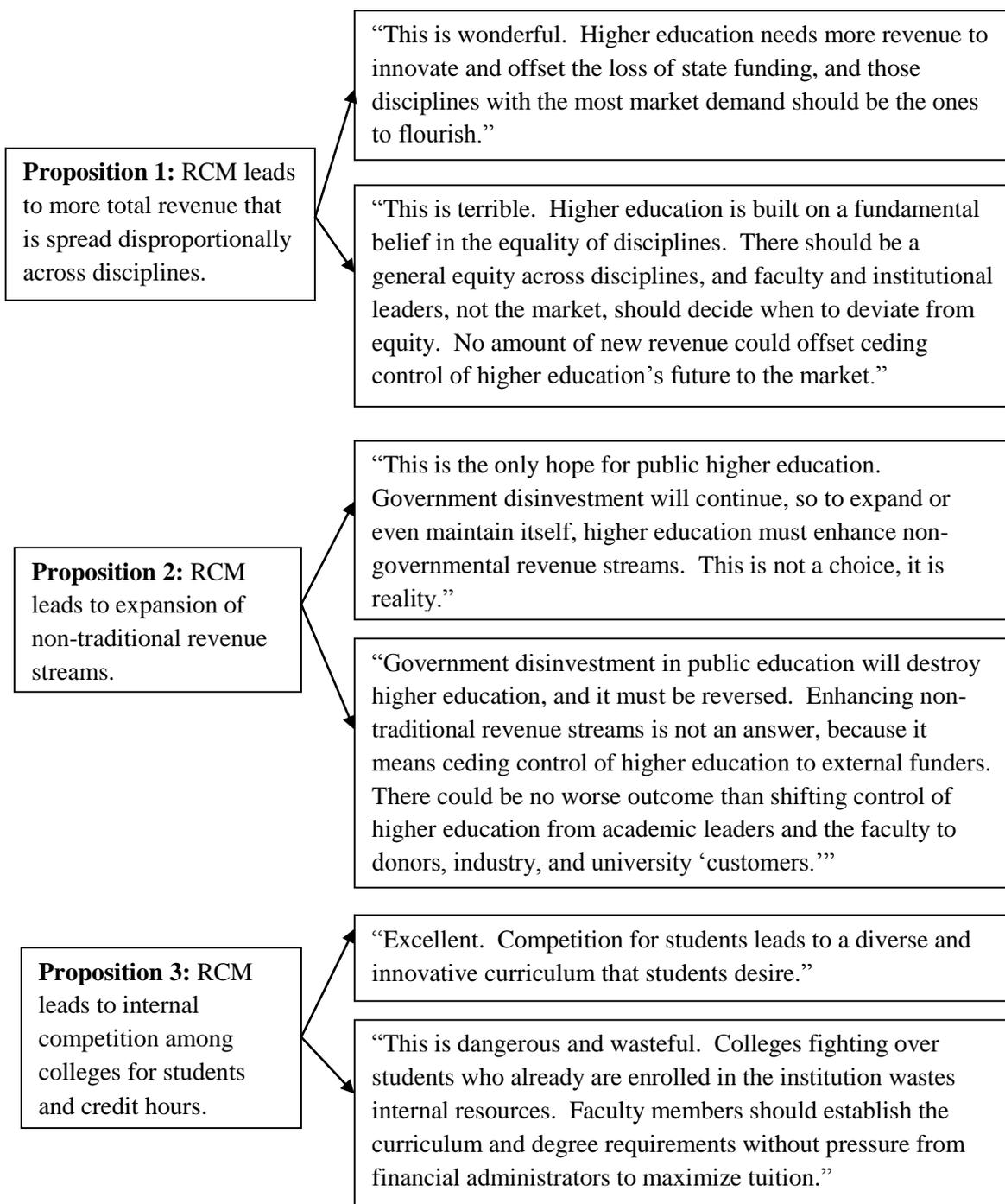
Proposition 6: Interdisciplinary cooperation declines under Responsibility Center Management.

Do RCM's financial incentives damage collegiality?

FIGURE 2: Responsibility Center Management (RCM) Propositions and Opposing Positions

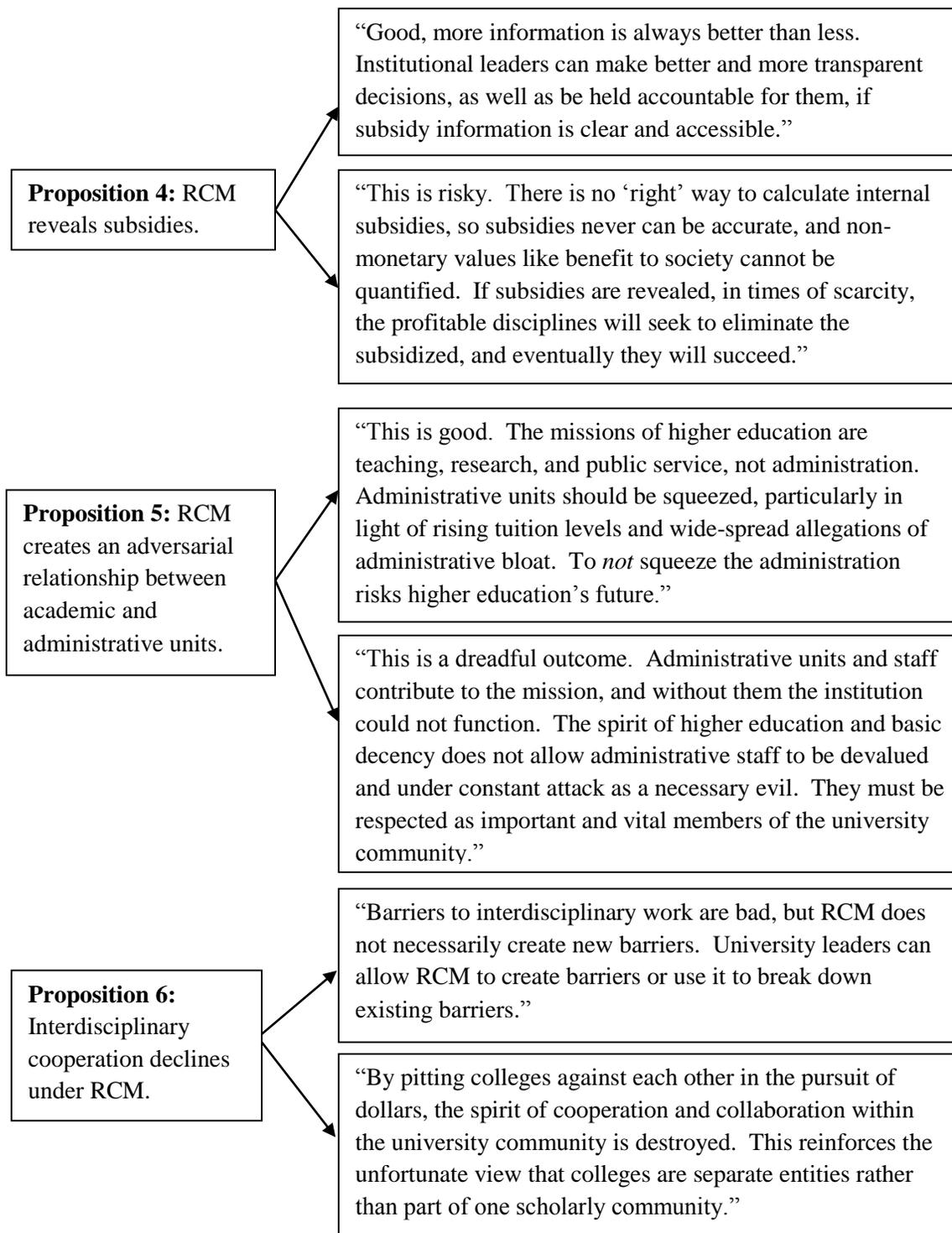
Propositions about Potential RCM Outcomes

Opposing Positions



Propositions about
Potential RCM Outcomes

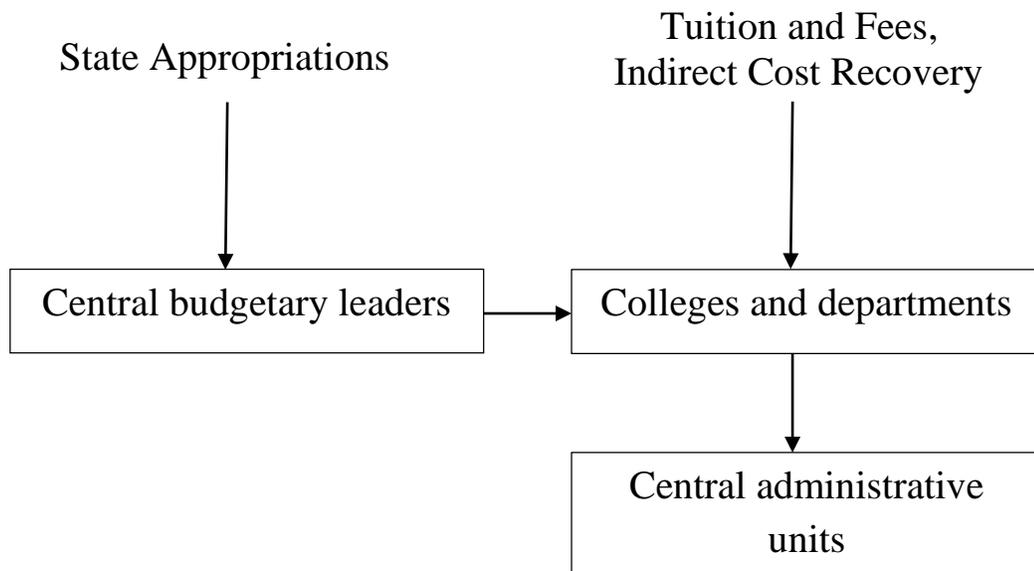
Opposing Positions



Many of the debates portrayed in Figure 2 occur within the context of RCM, because RCM has many variants, and each institution implements it differently (Hearn et al., 2006). Figure 3, which is a reproduction of a portion of Figure 1, reflects a simple and generic RCM budget model. At several decision points, people who design an RCM system have opportunities to influence how their RCM system engages the debates portrayed in Figure 2. By thoughtfully constructing the formulas that drive an RCM model and choosing a method of allocating state support (or other central discretionary funds), an institution can, within RCM, impact the extent to which the debates portrayed in Figure 2 are or are not active.

Figure 3 also shows that tuition and fees flow to colleges, so colleges are incentivized to increase educational revenue. RCM designers at each institution have an opportunity to construct the formula that drives tuition attribution in a manner that incentivizes enrolling students or instructing students, which can differ for lower division, upper division, and graduate and professional students and courses. Beyond the formula, central oversight and reporting can be employed to minimize counterproductive methods of intercollegiate competition for students and student credit hours. The decisions on the above points position a particular RCM system within the intercollegiate competition debate that is depicted in Figure 2.

Figure 3: A Responsibility Center Management Budget Model at a Public University



As shown in Figure 3, indirect cost recoveries on sponsored research flow to colleges, so colleges are incentivized to increase sponsored research. Indirect cost recoveries are a relatively unrestricted source of funding to institutions that conduct sponsored research. A sponsoring organization typically is required to include funding for a sponsored project, on a percentage basis, in addition to the direct costs of the research. For example, if the direct costs associated with a sponsored project are \$100,000, a funding agency may be required to provide an additional 50 percent (\$50,000) to the institution in the form of indirect cost recovery, which is used by the institution to support general overhead costs. For research universities, indirect cost recovery is a vital resource for covering overhead costs such as utilities, maintaining suitable space, employing administrative personnel, and other infrastructure necessary to conduct research. The formula used to distribute indirect cost recoveries and central oversight establish incentives to units conducting sponsored research. The extent to which interdisciplinary research is promoted or hindered, a debate portrayed in Figure 2, can be influenced by institutional decisions on the distribution of indirect cost recoveries and accompanying policies and practices.

In a public research university, multiple revenue streams are available to many academic disciplines, for example: external sales, royalties, ticketing receipts, and endowment income. In Figure 3, these activities are included within the “colleges and departments” box, which is where the revenue generation and expenditures associated with these activities occur. Within an RCM system, the revenues created by a college stay within the college, and colleges carry unspent balances forward, so they are incentivized to expand other revenue sources and minimize costs. University leaders

have the opportunity, however, to create policies and conduct oversight to regulate these activities.

As depicted in Figure 3, collegiate revenues fund central administrative units, which occurs via cost pools. In an RCM system, the costs of central administrative offices are covered by charging revenue-generating units based on cost allocation formulas. For example, the cost of the office of the vice president for research could be spread across colleges by charging proportionally based on their share of the institution's total research expenditures. Revealing the costs of administrative offices and charging the recipients of their services can create pressure on central administrative units to operate efficiently to minimize cost pool charges. As portrayed in Figure 2, an adversarial relationship can be created or reinforced by the division of a university into revenue generating units (i.e. the colleges) and central administrative cost pool units. Such a division is an inherent aspect of a fully-implemented RCM system, so there is little the designers of an RCM system can do to influence this debate beyond effective communication and demonstrating the effective and efficient use of resources by cost pool units. Under RCM, a university is divided, and the desirability of such a division is a point on which reasonable people may differ.

The financial incentives described above can be altered by central leadership's distribution of the annual state appropriation, as shown in Figure 3. By allocating funds to units disproportionately and reserving a portion of the appropriation or other discretionary funds for institutional priorities, university leaders can inject value considerations into the model. Under RCM, the annual budget process presents an opportunity for university leaders to steer the university by altering the RCM system (e.g.

adjusting formulas), allocating discretionary central resources, creating special funding pools to address institutional priorities, or implementing policies and central oversight to regulate the behavior of subunits.

While RCM provides ample opportunities for tailoring to meet financial and non-financial priorities, it is worth considering whether university leaders can and will craft a stable and sustainable model that appropriately balances financial pressures with university values. Hensley, Bava and Brennan (2001) report that administrative leaders and faculty operating within RCM note that RCM's "effectiveness as a planning tool depended upon the skills of the people using it" (p. 18). RCM models include mechanisms that allow university leadership to override financial interests in favor of other priorities (Lang, 1999), for example, the concept of cross-subsidization to support programs that are not otherwise financially viable is an explicit aspect of RCM models. To further the values and priorities of the institution, university leadership may allocate to programs disproportionately from a pool of discretionary funds resulting from either a tax on revenue-generating units or withholding a portion of revenues "off-the top" (Lang, 1999). Strauss and Curry (2002) explain that when cross-subsidies are revealed, university leaders can make better-informed decisions. Hearn et al. (2006) suggest that "differential funding produced by inter-unit competition can preserve and nurture institutional strengths" (p. 290). It can be argued, however, that, while RCM theoretically includes mechanisms to mediate between raw market pressures and the incentives facing decision makers throughout the institution, university leaders, in practice, may not properly tune the incentives. On one end of the spectrum is a market-driven institution that is responsive to its funders and less reliant on taxpayer subsidies,

and on the other end of the spectrum is a traditional institution led by the faculty with high ideals regarding disciplinary equality, academic freedom, and independence from external pressure.

Incentive-based Budgeting at the University of Minnesota

This study builds on two previous analyses of the University of Minnesota's experience with incentive-based resource allocation. In 2001, Kallsen et al. evaluated the University of Minnesota's experience with "Incentives for Managed Growth" (IMG), the precursor to the University's implementation of RCM in 2006-2007. In 2006, Hearn et al. (2006) produced a case study of the University of Minnesota's experience with IMG. These two studies created fertile ground for further study. The studies and the University's decision to move to pure RCM in 2006-2007 suggest a need for a comprehensive review of the University's experience with RCM.

The University of Minnesota is a large research, land-grant institution with a total enrollment of over 65,000 students and a \$3.3 billion budget (University of Minnesota, *Facts and Figures 2013*). According to Hearn et al. (2006), the University's "relative autonomy derived through the state's constitution, its administrative culture, and its organizational structure, create a climate conducive for implementing a version of [an incentive-based budget system]," and "the university has a long history of rather decentralized planning and decision-making," (p. 295). Hearn et al. (2006) report that Incentives for Managed Growth (IMG) was intended to "support and stimulate institutional growth by aligning performance with resources, allowing academic units to ensure their own financial health, holding units more accountable for their activities,

linking planning with budgeting," and generating incentives for revenue growth and cost containment (p. 295).

IMG had three parts, 1) performance indicators for each college, 2) remission to colleges of all tuition, indirect cost recoveries, and some other revenues via formula, and 3) annual budgetary and planning contracts (termed "compacts") between University leaders and each college (Hearn et al., 2006). At implementation, state support, which was controlled by central administration, was set for each college at a level to achieve a revenue-neutral transition in 1997-1998 (Hearn et al., 2006). An internal committee in 1999 reviewed IMG, and made the following recommendations:

"(a) the compact-planning process should be used to address historical patterns of funding inequities; (b) the compact-planning process should occur during alternate years; (c) the institution should establish an effective mechanism to soften the effects of tuition and [indirect cost recovery] revenue variations; (d) central administration should provide collegiate units with the resources to perform better tracking, budgeting, and planning procedures; and (e) central administration should be more forthcoming and public about how centralized revenues are spent under IMG." (Hearn et al., 2006, pp. 297-298)

Kallsen et al. (2001) conducted a study of IMG and found that bivariate correlations between full-year equivalent students and operations and maintenance allocations increased after IMG's implementation. In a study co-authored by Kallsen and building upon Kallsen et al.'s 2001 work, Hearn et al. (2006) note that this finding suggests that "units' enrollment and research performance more directly affected their

financial status than they did in earlier years" (p. 299). Of note, Kallsen et al. (2001) refer to their study as a review of RCM, though, at that time, the University of Minnesota had yet to implement a full-scale RCM system, which would not occur until 2006-2007. While the system reviewed by Kallsen et al. included some RCM principles, making it an incentive-based system, it was not a pure RCM system, which is why the University of Minnesota refers to this budgeting era as IMG. Kallsen et al. (2001) made a number of conclusions about IMG, including:

- “New revenues are now disproportionately flowing toward academic units and away from administrative units.” (p. 11)
- “...Indirect cost recovery revenue, while proportionally a small amount of the total budget, is much more closely aligned with actual sponsored expenditures...” (p. 11)
- “...There is little evidence that colleges are attempting to manipulate students, either through advising or through design of the curriculum and curricular requirements...” (p.11)
- “...RCM cannot necessarily create parity among all institutional units – there are still winners and losers.” (p. 11)

Kallsen et al. (2001) tell us that at the University of Minnesota, “there was little appetite for complex formulas attributing support costs and administrative costs to academic units, only to be charged back under some changing system” (pp. 12-13). The institution, however, adopted such a system five years later.

Hearn et al. (2006) supplemented the work of Kallsen et al. (2001) with interview data from three deans. According to Hearn et al. (2006), deans did not view IMG as a

way out of "politics and power struggles" (p. 302), and they noted a number of benefits and concerns associated with IMG. The perspectives of the deans and the implications articulated by Hearn et al. (2006) are integrated and built upon by the present study, as the University of Minnesota's IMG history is inextricable from its RCM experience. Hearn et al. (2006) include an epilogue describing work at the University of Minnesota in 2005 and 2006 toward a "purer" incentive-based budgeting system, which ultimately became the University of Minnesota's RCM budget model. The present study picks up at this point and builds upon the work of Hearn, Kallsen, and others.

Implementation of the Full RCM System

Beginning in 2006-2007, the University of Minnesota implemented its full RCM budget model, which was the culmination of an evolution lasting more than a decade. While that evolution formally began with the implementation of IMG in 1997-1998, its earliest conceptions date to at least the early-1990s, if not earlier. Discussions with senior University leaders trace consideration of RCM back to 1992, and serious external criticisms of the University's financial practices date to the late 1980s (University of Minnesota, *Report of the University Financial Review Committee*, 1988). With the University's financial processes and secrecy the subject of internal and external criticism, by the early 1990s, senior leaders viewed RCM as a beneficial reform, but the inadequacy of data and financial systems and other "pandemonium" foreclosed serious consideration of RCM until the mid-1990s. Inadequate data and information systems continued to impede RCM's implementation upon IMG adoption in 1997-1998, as cost data were not up to standards to allow full RCM-style cost allocation concurrently with IMG

implementation. A small step toward cost allocation was implemented at IMG's onset – a \$5 charge per assignable square foot (University of Minnesota, *Report of the Budget Management Task Force*, 2000) – but even this humble step was abandoned shortly after IMG's implementation.

The retreat from a per-square-foot charge left IMG's application solely and only partially to revenues, partial in that indirect cost recovery still was shared roughly 50/50 between central administration and the responsible college (University of Minnesota, *Report of the Budget Management Task Force*, 2000). Lacking a cost allocation mechanism to recover revenue from colleges to fund central administrative units, central administration almost immediately found itself with inadequate resources to fully fund central administrative units (University of Minnesota, *Report of the Budget Management Task Force*, 2000). Two approaches were taken to generate additional central resources. The "University Fee," a tuition-like charge to students, was created and captured centrally (University of Minnesota, *Internal Budget Model- Status Report and Discussion*, 2006), and a one percent revenue tax termed the "IRS" (Institutional Revenue Sharing) was charged to units beginning in 2000-2001 (University of Minnesota, *Report of the Budget Management Task Force*, 2000). In subsequent years, the IRS rose to 8 percent, and as this tax to fund central administration increased, so did outcry from collegiate taxpayers, which culminated in the adoption of full-scale RCM, including complete cost allocation and revenue attribution in 2006-2007.

The RCM model implemented in 2006-2007 has remained stable since its implementation, the only changes being small adjustments to fine-tune attribution formulas, which are considered annually. When adopted, changes are implemented on a

“budget neutral” basis, which means, at the point of a transition, offsetting adjustments are made to neutralize the impacts. For example, if a formula change moves \$1 million of tuition from one college to another, the central allocation to those two units would be adjusted to offset the tuition movement, thereby neutralizing the impact of the formula change at the transition point. Budget-neutral changes prevent shocks to the system and reduce the incentive for units to lobby for changes that would generate a windfall at the expense of other units. Budget neutrality is sought only at the point of implementing a change; after that point, the altered formulas generate revised incentives.

As of this writing, the University of Minnesota’s system attributes to colleges 100 percent of tuition (including the “University Fee” described above, which subsequently was rolled into base tuition rates), with 25 percent of tuition attributed to the college of enrollment of the student and 75 percent attributed to the college of instruction (University of Minnesota, *Internal Budget Model- Status Report and Discussion*, 2006). For example, when college A teaches a course to its own student, college A receives 100 percent of that student’s tuition for that course. If that student takes a course in college B, then college A, as the college of enrollment, still receives 25 percent of that student’s tuition for that course, and college B, as the college of instruction, receives 75 percent of that student’s tuition for that course. Indirect cost recovery is passed on 100 percent to the responsible colleges (University of Minnesota, *Internal Budget Model- Status Report and Discussion*, 2006). State appropriations are allocated annually by University budget leaders to colleges, not directly to central administrative units, with the exception of an annually-determined “off-the-top” allocation for centrally defined strategic investments (University of Minnesota, *Internal Budget Model- Status Report and Discussion*, 2006).

In 2006-2007, a major change was implemented related to the allocation of costs: cost pools were created to fund central administrative unit costs by collecting funds from revenue-generating units such as colleges. Since their establishment, the cost pools have changed only subtly, and currently twelve cost pools allocate costs to colleges by a set of formulas. The cost pools are: 1) support service units, 2) technology, 3) facilities, 4) student systems, 5) student services, 6) research, 7) library, 8) classrooms, 9) warehouses, 10) utilities, 11) leases, and 12) debt. Some of the cost pools are broken down further, for example by graduate student versus undergraduate student and by Twin Cities campus only versus the entire system. These further divisions result in a total of seventeen cost pools.

Each cost pool covers one or multiple administrative support units, and its cost allocation formula is driven by a proxy metric such as headcount or expenditures, with the exception of Utilities, which is billed monthly to units based on actual usage (University of Minnesota, *FY16 Budget Instructions -- Support Units*, 2015). Multiplying the total cost of a cost pool times a college's proportional share of the metric (e.g. headcount) results in that college's cost pool charge for the upcoming fiscal year. With the exception of Utilities, the charges are established during the annual budget process based on metrics that lag one year. The common-good services to be provided by the support units in exchange for the cost pool charges they receive from colleges are described at a high level, but not described in detail (University of Minnesota, *Internal Budget Model- Status Report and Discussion*, 2006).

To summarize, since the 2006-2007 full RCM implementation, tuition and indirect cost recovery have been 100 percent attributed to colleges based on actual

revenue generated, and the state appropriation is allocated annually to colleges at University leaders' discretion, not by formula (University of Minnesota, *Ad Hoc Budget Committee Report*, 2007). Annually, colleges also receive a formulaically-determined share of central cost pool charges for the upcoming year. The cost allocation formulas are stable year-to-year, but the total expenses in each cost pool are established annually by central administration. As a fiscal year passes, colleges are responsible for managing deviations from tuition, indirect cost recovery, and utility-expense plans either to the benefit or detriment of the college. The revenue attribution and cost pool charges are not hypothetical; rather, they are formally budgeted for, and system transactions move real dollars around the institution (University of Minnesota, *FY15 Budget Prep Instructions for Detailed Budget Entry – Preparing Budgets in the Enterprise Financial System*, 2014). Overspending the utility target or falling short of the tuition or indirect cost recovery target creates a real budgetary shortfall for a college.

Understanding RCM's usage at the University of Minnesota requires an appreciation of its context within the University's overall budgeting system. RCM is the University's budget model, but it is not the entire system for managing the University's resources. It is not intended to be, as some would say, an "every-tub-on-its-bottom" system. There are three pieces to the University's budget system, and RCM is one of them. In addition to RCM, there is an annual budget framework, which describes the University's overall approach for the upcoming year and includes tuition rates, reallocations to units, updated fringe rates, and pay plans. RCM defines how that annual framework translates to University subunits in terms of revenue and expense flows, and RCM's translation of the budget framework to the unit level is the foundational

information on top of which University leaders' discretion is then imposed. This discretion, primarily establishing annual operating allocations of state appropriations for each unit, is the third piece of the University's complete system. The raw incentives of RCM, to maximize attributed revenues and minimize cost pool allocations, can be exposed or overridden annually by central administration's discretionary allocation of the state appropriation. RCM does not make decisions; it establishes a unit-level financial framework, which is intended to enable information-rich and transparent decision making by central and local leaders.

Areas of Analytical Focus

Scholars theorize various impacts, financial and non-financial, associated with implementing incentive-based budgeting approaches; several of these are shown in Figure 2. In addition to considering the University of Minnesota's experience objectively, this study seeks to understand the motivations for implementing RCM and the recognized risks to assess the degree to which RCM met its intended goals, and avoided potential pitfalls. These research goals are considered under four broad categories: 1) RCM's background and context at the University of Minnesota, 2) RCM's financial impacts, 3) RCM's non-financial impacts, and 4) RCM's outcomes. Interviews and document review were conducted to explore university leadership's and the broader community's intentions and concerns when RCM was implemented.

Data Collection and Analysis

Both quantitative and qualitative data were gathered and analyzed to assess the extent to which commonly held beliefs about RCM are supported by empirical data. Available quantitative information and descriptive documents relating to the University of Minnesota's RCM model were reviewed, which provided a rich contextual description of the University's financial experience over the past 20 years. Quantitative data also added to specific analyses, but cause-effect relationships are impossible to determine due to the existence of numerous potentially confounding variables over the past two decades.

As an employee of the University of Minnesota, the researcher has access to the University of Minnesota's relevant financial, student and human resources data, and additional information was requested of and provided by the University's Office of Institutional Research and the Budget Office. Trends were analyzed for key variables, but due to the single-institution focus, causal relationships and generalizable results were neither anticipated nor found; rather, potential relationships worthy of subsequent study were explored.

Interviews with key personnel throughout the institution are the critical data source. Semi-structured interviews were conducted with 21 University employees ranging from deans and executives, such as a former President, to senior financial staff in the colleges. Interview subjects represent two categories: 1) central University leaders, particularly those at the time RCM was implemented, and 2) deans, department heads, and financial leaders throughout the institution. In this context, "central" personnel refers to the President, Chief Financial Officer, and others who are not appointed to colleges; they work in central university offices. "Non-central" personnel refers to collegiate deans

and collegiate staff. Given the long timespan under consideration, some subjects have held multiple positions during the relevant time period. In such cases, the most fitting label was chosen in consultation with the subject. One individual, a vice president of an academic unit, declined to be interviewed. The following twenty-one individuals were interviewed:

- One former University President who oversaw much of the RCM implementation, from IMG through the 2006-2007 RCM implementation, as President or Provost.
- One University CFO and one Associate Vice President for Budget and Finance, both of whom were in similar positions pre-dating IMG's implementation.
- Three senior University leaders who were instrumental in the development and implementation of IMG and RCM.
- Four college deans who were deans or associate deans at the point of IMG implementation.
- Two faculty leaders who have been heavily engaged in faculty governance pre-dating IMG's implementation.
- Eight staff members with a diversity of experiences in senior collegiate and central finance positions, all of whom had University experience pre-dating IMG implementation.
- One collegiate Chief of Staff who arrived at the University after the 2006-2007 RCM implementation.

The Institutional Review Board was consulted and determined that this research project does not meet the regulatory definition of human subject research. Appendix 2 contains documentation of that finding. Nevertheless, each interview subject signed a consent form before the interview began. A standard set of interview questions (23 for central personnel, 25 for non-central personnel: see Appendix 1 for complete list) was prepared. Questions were asked of the subjects with some adjustments as dictated by time and interview flow. Interviews were semi-structured, so some follow-up questions were asked, and many interviews concluded with an open discussion, which also was on-the-record.

The interviews were scheduled for one hour each, with some extending slightly over the scheduled time. One interview lasted two hours, as the subject had considerable knowledge of RCM at the University of Minnesota and has conducted research on RCM. Some subjects did not answer every question due to time constraints. Some subjects required a strict conclusion at one hour. The structure of the question set (see Appendix 1) was such that the final questions returned to subject matter that had been discussed earlier, so all interview subjects had an opportunity to respond to all topics. The interviewer allowed subjects to talk at length in the areas about which they were most informed, often including follow-up questions when a subject had substantial depth of understanding and experience. While the standard set of questions was followed, the interviewer sought a relaxed, conversational dynamic. Interviews were conducted at a place of each subject's choosing, most often in his or her University of Minnesota office. By their own preference, four subjects opted to conduct the interview in the researcher's office or conference room.

Interviews were recorded by voice recorder (with subjects' permission) and transcribed by the researcher. The transcripts were loaded into Microsoft Excel, and all statements were coded by speaker, question, concept, and position (when relevant). The conceptual and positional coding facilitated analysis of the interview content. Upon the conclusion of all interviews, statements from all subjects were extracted and compiled by conceptual area, so the positions of the interview subjects could be compared and characterized. Analysis included considerations such as: On what details was a consensus evident, and where did divergence arise? Did those sharing a certain perspective have common traits? Were divergences attributable to inconsistent information and communications or underlying philosophical differences? University data informed the analysis, but quantitative data were never able to definitively settle an issue where interview subjects had divergent perspectives.

The study concluded with a follow-up interview with the University's Associate Vice President for Budget and Finance. The concluding interview provided additional context to the results of the study. For example, state politics, local economics, changing demographics, campus unions, federal audits or any number of other factors of no relevance to this study may have influenced the institution in important ways that risk misinterpretation. Care was taken to prevent the results of the study from being inappropriately shaped by the final interview, but it was important to provide an opportunity for those most knowledgeable about the University of Minnesota's experience to comment on the results to verify the accuracy of inferences and interpretation.

The data collection strategies by topical area are described below, with the four previously-stated broad areas as headings, followed by overarching questions, data collection strategies, and specific interview questions. A complete list of interview questions is included in Appendix 1.

Topic 1: Background and Context

Question 1: What were the institutional goals when RCM was adopted?

- Data sources: Interviews and document review
- Interview questions: *What were the institutional goals when RCM was adopted? To what extent, if any, have these goals have been met? To what extent, if any, have there been unanticipated benefits? (Survey question #6)*

Question 2: What risks were of concern, and did these risks or other risks come to fruition?

- Data sources: Interviews and document review
- Interview questions: *What risks, if any, concerned you about using RCM at the University? To what extent, if any, did these risks come to fruition? To what extent, if any, have unanticipated risks or problems arisen? (Survey question #7)*

Topic 2: Financial Impacts

Question 1: What impact did RCM have on revenue changes?

- Data sources: Interviews and University data

- Interview questions: *What impact, if any, did RCM have on revenue changes? Are you aware of analyses that link revenue changes with RCM? (Survey question #8)*

Question 2: To what extent did RCM have a disproportionate impact across academic disciplines?

- Data sources: Interviews and University data
- Interview questions: *To what extent, if any, did RCM have a disproportionate impact across academic disciplines? Are you aware of analyses of varied impacts of RCM on different academic disciplines? Can you provide examples of RCM's varied impact on different academic disciplines? (Survey question #10)*

Question 3: What impact did RCM have on revenue diversity?

- Data sources: Interviews and University data
- Interview questions: *What impact, if any, did RCM have on revenue diversity (for example changes in non-traditional revenue streams)? Are you aware of analyses that link changes in revenue diversity with RCM? (Survey question #9)*

Question 4: Has RCM enhanced understanding of cross-unit subsidies?

- Data source: Interviews
- Interview questions: *To what extent, if any, has RCM enhanced understanding of cross-unit subsidies? To what extent, if any, has decision-making been altered due to an increased visibility of cross-unit subsidization? (Survey question #11)*

Topic 3: Non-financial Impacts

Question 1: To what extent have institutional characteristics changed in ways that may be linked to RCM implementation.

- Data source: Interviews
- Interview question: *To what extent, if any, have institutional characteristics (for example decision making processes and culture) changed in ways that may be linked to RCM implementation? (Survey question #12)*

Question 2: To what extent did RCM create unproductive competition across colleges?

- Data source: Interviews
- Interview questions: *To what extent, if any, did RCM create unproductive competition across colleges? For example, have you observed colleges engaged in inter-college competition to take advantage of RCM's financial incentives? (Survey question #13)*

Question 3: To what extent did RCM create or reinforce a division between colleges and cost-pool units?

- Data source: Interviews
- Interview question to University leaders: *To what extent, if any, did RCM create or reinforce a division between colleges and cost-pool units? (University leaders question #14)*
- Interview question to college leaders: *To what extent, if any, did RCM's cost pool structure lead you or other leaders to view*

administrative cost-pool units differently? (Collegiate leaders question #16)

Question 4: To what extent does RCM create or reinforce barriers to inter-disciplinary cooperation?

- Data source: Interviews
- Interview question: *To what extent, if any, does RCM create or reinforce barriers to inter-disciplinary cooperation? (University leaders question #15, Collegiate leaders question #17)*

Topic 4: RCM Outcomes

Question 1: Has RCM been accepted by University and collegiate leaders?

- Data source: Interviews
- Interview questions: *To what extent, if any, has RCM been accepted or rejected by the University community? (Survey question #5); What is your overall impression of RCM at the University of Minnesota? Can you tell a story that reflects your experience with RCM? (Survey question #3); What was your view of RCM prior to implementation? How have your views changed since then? (Survey question #4)*

The next chapter examines the research findings of the study. First, the relevant internal, external, and financial contexts of the University of Minnesota will be described, because the broader circumstances associated with RCM adoption and implementation are important precursors to full understanding of RCM's impact on the institution. After

establishing the relevant context, interview results will be described in a manner consistent with the conceptual framework of the study.

CHAPTER 4

Research Findings

This study considered the research question: “To what extent are common beliefs about Responsibility Center Management (RCM) systems supported by actual outcomes?” The research question was explored by development of potential RCM outcomes, which generated the following six propositions:

Proposition 1: Responsibility Center Management leads to more total revenue that is spread disproportionately across disciplines.

Proposition 2: Responsibility Center Management leads to expansion of non-traditional revenue streams.

Proposition 3: Responsibility Center Management leads to internal competition among colleges for students and credit hours.

Proposition 4: Responsibility Center Management reveals subsidies.

Proposition 5: Responsibility Center Management creates an adversarial relationship between academic and administrative units.

Proposition 6: Interdisciplinary cooperation declines under Responsibility Center Management.

These six propositions informed the creation of interview questions for a group of 21 leaders (vice presidents, deans, and senior finance managers) from across the University. The responses from these institutional leaders form the foundational data for analysis of the above propositions, which responds to the broader research question. The University of Minnesota’s experience with incentive-based budgeting can be best understood with the benefit of its full context, which includes the internal and external

environment before, during, and after the adoption of RCM. Before presenting results related to the interview responses and the conceptual framework, this chapter describes important aspects of the University's context, in part by introducing material from the interviews that elucidated the institutional context.

Financial Context

The 20-year period from the mid-1990s, before IMG's implementation, through the present time was financially chaotic at the University of Minnesota in ways entirely unrelated to RCM. Major financial shifts over these two decades make it impossible to draw causal relationships between RCM incentives and observable changes in University finances. For example, making cross-college quantitative comparisons would be of great interest, but multiple and major changes in collegiate composition over the past 20 years obscure college-level trend data. Though causal relationships are impossible, understanding the University's RCM experience demands discussion of the financial experience of the University as context.

From an instructional perspective, the University of Minnesota expanded its efforts dramatically from the late 1990s through the next fifteen years. The University switched from a quarter to a semester system in the 1990s, so comparable student credit hour data extends only back to 1999. Based on data provided by the University's Office of Institutional Research, from 1999 through 2014, student credit hours increased University-wide by more than 25 percent, from 1.440 million to 1.806 million. Undergraduate credits (i.e. the 1000-4000 course levels) rose even more during the period, from 1.044 million to 1.385 million (33 percent). As instructional effort

increased, tuition rates rose. For example, Twin Cities undergraduate tuition for residents in 1999 was \$4,158, and by 2015 the rate had risen to \$12,240, a near tripling over fifteen years (*University of Minnesota Annual Tuition Rates: 1960-61 to 2015-16: Twin Cities Campus, Office of Institutional Research*, 2016). Resident graduate rates rose at a similar rate. Combining the increases in tuition rates and student credit hours resulted in an enormous increase in tuition revenue. Based on information provided by the University Budget Office, from 1998 to 2012, the most recent year for which data was provided, tuition and fees more than tripled, from \$252 million to \$805 million.

During the same era, state appropriations fluctuated wildly. Based on information provided by the University Budget Office (*University of Minnesota – Revenue History*, 2015), from 1997 to 2002, state appropriations increased by 30 percent; from 2002 to 2005 they fell by 11 percent; from 2005 to 2008 they rose again by 30 percent, but then fell by 25 percent from 2008 to 2012. In 2012, in absolute terms the University's state appropriation of \$556 million was slightly above its 1998 level of \$548 million, but the University was on a roller coaster during the intervening years. In addition to expanding tuition, sponsored expenditures and indirect cost recovery increased substantially from the late 1990s to the present. For example, from 1999 to 2012, indirect cost recovery rose by 162 percent, from \$58 million to \$151 million.

Not surprisingly, as state support lagged, the institution became notably more dependent on other revenue streams, primarily tuition. Based on Budget Office data, in 1999, the state appropriation represented 33 percent of the University's total revenues. By 2012, the state appropriation had fallen to only 17 percent of total revenues. Tuition, on the other hand, rose from 16 percent of total revenues in 1999 to 25 percent in 2012.

During this time period, sponsored expenditures and indirect cost recovery did not change meaningfully as a proportion of total revenues.

Major financial variables such as appropriations, tuition, and sponsored expenditures have been in a state of flux, and so it would be impossible to draw meaningful conclusions regarding RCM's impact by quantitatively analyzing changes in the University's finances. There is simply no way to connect RCM implantation to specific financial events and trends, because other powerful forces influenced the University's finances in a manner that likely overshadowed any cause and effect connection between RCM and financial performance. Factors such as the "dot com bubble" of the late 1990s, the real estate collapse in the late 2000s, the so-called great recession, state budget deficits, federal policies, and state politics all had great and immediate impacts on the same variable set that RCM would be hypothesized to influence. These factors provide important context for this study, but for the reasons described above, no attempt will be made to connect trends in these factors to RCM implementation.

Pre-Incentive-based Budgeting Environment

Senior leaders at the University were considering a shift from a traditional budget model to an incentive-based model by the early 1990s. According to several interview subjects, the "old model" (i.e. pre-Incentives for Managed Growth) was referred to by variations of the phrase: "father-knows-best." The old model was unanimously condemned by interview subjects who had exposure to it. According to a senior University official,

“I tell stories about the old days, before we attributed tuition, when...deans would come into the budget hearing, and they would say, ‘If I increase my rate a percent more than the guidelines, can I keep the money?’ Or, ‘Can I increase my enrollment?’ ‘Can I add another hundred...students and keep the money?’ And [a former Provost] would, it was bizarre, he would cut little different deals with different deans. They would get together and they would find out who [the former President and Provost] did like and didn’t like. And so...from the get go, people were clamoring for more transparency.”

And another senior leader stated,

“I lived for two and a half decades with the old [budget system], and I thought it was lousy. It was more about the art of the deal.”

A leader in a central administrative unit described differences between the old and new systems:

“And the model of funding was, you go in and plead your case to the Provost, and he makes a decision, yes or no, about how much revenue you might get from some proposal...That really doesn’t happen any longer. You’ll have a proposal...that will come forward, that will say, ‘We’re going to change the curriculum. We’re going to add additional courses. We’re going to pay for that with additional tuition revenue that will be generated by these students that we believe we can attract.’

“And, it isn’t really at the Provost’s discretion...Obviously the Provost can say, ‘No, we don’t want to do that for academic reasons,’ but in terms

of funding, it's not a begging process any longer. It's a business plan.

Here's what we're going to do. Here's how we are going to pay for it.

Here's why we should do it, and let's go. Under the [former Provost's] plan, it was all sort of open to speculation and question. And, whether it was [he] or any other Provost, it was always a central decision...

“I think, in the past, the deans didn't even know how it was paid for...It could have been very true that the revenue that was generated by their new proposal was double what the costs were. Maybe they asked for \$100,000, and maybe the revenues that were generated were \$200,000...And nobody at the University ever knew. It just sort of happened...All of the money flowed into the central coffers, and at the end of the day nobody ever reconciled those things, so there was no way to really predict. So, it's pretty clear that the RCM process has aligned all of those decisions much closer with the revenue streams, and you can tell on the front end, you can measure on the back end, and you can see whether you've made it or not.”

As a college dean put it,

“The old model – and I just caught the tail end of it – was, well, the faculty would just look to me and say, ‘Go to the Provost and tell him we need more money.’ And, this is kind of a larger issue in higher ed...There's a kind of a relationship that allows some faculty to act, how, what's the right word? I wouldn't say childish, but like infants. In other words, the old structure was a little bit like going up to ask daddy for more

money. Almost like we're kids and daddy has the money, and we're going to ask for an allowance.”

To summarize in the words of a senior University leader:

“I think there was just enough unhappiness with the old system that – let's try something new.”

The inadequacies of the old budget model and external criticism of the University's finances created an atmosphere ripe for major change. By 1997-1998, the University was prepared to make its foray into incentive-based budgeting with the partial-RCM implementation termed Incentives for Managed Growth (IMG), which essentially implemented RCM for revenues, specifically tuition and indirect cost recovery. Exposing tuition and indirect cost recovery to RCM-based attribution almost immediately led to a dearth of resources to fund central administration, as tuition and indirect cost recovery flowed to colleges and state appropriations failed to grow consistently. In order to capture revenue to fund central administration, taxes were implemented on the colleges, such as the previously described Internal Revenue Sharing, also known as the IRS. Central administration's adoption of unpopular tools to transfer funds from colleges to central administration provided fertile ground for a full-scale RCM implementation in 2006-2007.

Goals of RCM

In contrast to the so-called “father-knows-best” system of the past, transparency was considered a goal as the University moved toward incentive-based budgeting.

Transparency of information and, more importantly, transparency of decision making,

were considered to have been achieved by interview subjects both at the central and college level. According to a senior University leader,

“I think everything is more transparent, because everybody knows where the money flows now...I think that RCM requires that you be able to defend your decisions in a much more open way. And, it’s much more public.”

Another senior central leader noted a clear contrast in transparency between the old budget model and RCM:

“Well, definitely, if I look back into the early ‘90s and I look today, it’s much more transparent. It’s much more understanding on the part of leadership that they have to publicly justify and provide a rationale for the decisions that they make.”

The minority of respondents who raised concerns about transparency cited the complexity of the system as potentially limiting transparency:

“I will say that this institution provides more transparency about the financial data than most places. That said, have we made it understandable enough and consumable enough that when we talk double step down [a particularly complex aspect of the University of Minnesota’s RCM calculations] and peoples’ eyes glaze over, and so on and so forth? I’m not sure that we’ve really accomplished that yet.”

Beyond the goal of transparency, the goal cited most often by interview subjects was to increase University revenues. The success or failure of this goal will be considered later. A central budget official noted,

“Well, way back at the beginning, it was a way to incent revenue growth. That’s really what the ‘90s part of it was, to incent revenue growth and to help people understand what drives revenue in terms of tuition and [indirect cost recovery] in particular.”

A finance director in a central administrative office had a similar sentiment:

“I think, pretty clearly, it was to generate additional revenues. The University was, as we always are, faced with uncertain state revenues. The federal climate at that time was perhaps more certain than it is today, but it was clearly uncharted waters. And, I think this was a way to allow the deans primarily to become entrepreneurial and to do things that would allow them to manage their resources, to manage their faculty workloads, to project revenues, to live in an environment where hopefully they could grow those revenues.”

A leader in faculty governance drew a distinction between goals associated with IMG in the late 1990s and those related to full RCM in 2006-2007:

“Well...you have to differentiate between IMG and RCM. I think the institutional goals when...IMG was initiated [were] to encourage units to find new sources of revenues...with the promise that they could keep all or most of that revenue. And, that it wasn’t a side deal, it was part of the main budgeting process...I think RCM was more to encourage units to use University resources as economically as possible.”

The faculty governance leader’s distinction between IMG and full RCM is insightful. The implementation of IMG on the revenue side of the ledger was likely

focused on the search for revenue growth, a point also made by a well-placed University budget official, while the application of RCM principles to expenses in 2006-2007 sought transparency and effective resource utilization, particularly in the area of central administrative expenditures.

Risks of RCM

Interview subjects had difficulty recalling the risks prior to adoption of RCM, and the risks that were mentioned may have reflected problems that emerged rather than risks that pre-dated RCM adoption. Based on interview responses, the greatest risk pre-dating adoption of RCM was inter-college competition, particularly in the area of student credit hours. From IMG adoption to the present day, tuition has followed students, and there was concern that colleges would compete for existing student credit hours to increase their tuition revenue at the expense of other colleges and at the expense of educational quality. Internal competition for the tuition dollars that follow students, which led to “poaching” of students to maximize student-driven revenue, proved to be the most controversial aspect of RCM. The risk of poaching certainly was recognized by many prior to IMG adoption, while others came to recognize it later as a serious concern. The topic of poaching will be given thorough consideration later.

An internal white paper prepared by senior leadership specifically addressed the question of goals and risks associated with RCM. Though undated, the document refers to the mid-1990s as the future, so it likely dates to the early-1990s. It was prepared by and circulated among senior University leaders. A section of the paper follows:

“What is the Goal of Responsibility Center Management? Responsibility Center Management is a method of sensitizing unit managers as well as individuals throughout the university community to the need for identifying paying service constituencies and serving them efficiently, thus stimulating activities closely related to our mission that yield more revenue than they cost. Its essence is creating management, budgetary, and reward structures that tie resources to performance closely enough so that individuals will perceive that their own actions have an influence on the security and fiscal well-being of their units and themselves...

Other Desired Results:

- Flattening our management structure should be less difficult.
- The authority and responsibility of deans will be substantially enhanced.
- Locus of responsibility for results will be clearer.
- Better considered expenditure decisions will be made closer to the point of service delivery.
- The current maze of cross-subsidies and entitlements will be clarified.
- All members of the community should sense more relationship between performance and rewards.
- It should become plain that the success of one unit contributes to the fiscal health of the entire university.

- Service units will be subject to constant scrutiny for efficiency, effectiveness, and proper incentives.

Possible Adverse Effects:

- Mission differentiation may be blurred.
- Unit goals may supplant or contradict institutional goals.
- Sub optimization; negative externalities. What is best for a single RC may not improve the University's overall fiscal equilibrium.
- Excessive decentralization limiting the ability to provide selective investment, innovation, and central direction.

Considerations in Planning for Responsibility Center Management:

- All decisions should promote the central goal as outlined above.
- Investment in new instructional and research programs should be stimulated throughout the institution.
- Simplicity is desirable but not at the cost of distorting objective reality.
- Timely and accurate reporting is central to successful implementation.
- An initial year changeover should be revenue and cost neutral.
- In assessing change, estimated marginal (not average) revenues and costs must be used.
- In designing changeover, existing cross-subsidies must not be reified. Efficient achievement of planning goals can only occur through changing them.

- Quality rather than quantity should continue to be the primary driver of change.” (University of Minnesota, *Responsibility Center Management, Designing the Minnesota Version*, n.d.)

Interestingly, the word “transparency” never appears in this in-depth, thoughtful internal planning document, and transparency is alluded to only in the desired outcome of clarifying cross subsidies. Increasing revenue also does not explicitly appear as a goal, although it would be a reasonable outcome associated with several of the stated goals, e.g. decentralizing authority and responsibility, as well as linking performance to rewards. Regarding risks, course poaching generally is alluded to as a potential adverse effect, i.e. “what is best for a single [Responsibility Center] may not improve the University's overall fiscal equilibrium” (University of Minnesota, *Responsibility Center Management, Designing the Minnesota Version*, n.d.). An even more explicit reference to the risk of poaching was presented in another undated internal document of the same name as that above (i.e. *Responsibility Center Management, Designing the Minnesota Version*), which will be referred to as “version 2.” This document also likely dates to the early-1990s:

“We will need an arbiter(s) -- probably an all University academic committee that regulates duplication of courses, start-up of majors, name changes, etc. We must anticipate and have ways to effectively check sub optimal behavior. Oversight must occur on both academic initiatives and services (especially recharge rates). The group should establish basic principles to guide curriculum development across the campus and then monitor behavior to ensure that those principles are being met.”

(University of Minnesota, *Responsibility Center Management, Designing the Minnesota Version*, version 2, n.d.)

A committee with a charge as described above either was not created or did not survive long enough to have a meaningful influence. The lack of “policing,” as it was referred to by some interview subjects, in the area of poaching and administrative cost pool oversight became critical as the University’s RCM experience unfolded.

While the entirety of the relevant institutional context cannot possibly be described, the key aspects related to RCM implementation have been captured above, as explained by institutional leaders and as described in documents dating to the period in question. The above background establishes important context in which to understand the interview results presented below.

Impacts of a Responsibility Center Management Resource Allocation System on a Public Research University

Interview subjects provided diverse perspectives on RCM, perspectives that were informed by a wide variety of experiences. Interview content was analyzed by topical area, linking back to the conceptual framework above. Results are presented in congruence with the framework. Other points from a document review will be referenced as interview results are presented.

Proposition 1: Responsibility Center Management leads to more total revenue that is spread disproportionately across disciplines.

The two elements of the question will be considered separately: first total revenues, then the issue of disproportionality. Many subjects found it impossible to assert a causal relationship between RCM and revenue changes, but they asserted that RCM was one of several factors driving revenue growth. Some subjects provided tangible examples of revenue-generating efforts driven by RCM. The overall responses, and particularly the examples, establish a strong likelihood that exposing revenues to RCM principles did contribute to an increase in revenues. A senior University leader stated,

“I think that after RCM, I mean, the money just started flowing in here. You can’t just attribute it to that. The University was raising tuition. It was really producing a much better educational experience that allowed you to raise tuition. There was a lot more demand for our product. I think RCM was a factor. It did create incentives to create revenues.”

A majority of interview subjects observed that total revenues increased as a result of exposing revenues to RCM-based incentives, which occurred when IMG was implemented in the late 1990s. Several subjects provided tangible examples of revenue growth driven by RCM. According to a dean:

“RCM has led us to develop certainly new courses, liberal [education] courses, new degrees, new minors. There’s much more of an incentive to look for new revenue streams, so we’ve been doing much more online to attract tuition from around the world. So, there’s a whole range of things

we've done, because, frankly, once you're looking at where you can be bring in money, you start getting creative.”

A central finance leader stated,

“The model itself incented people to increase student credit hours within existing cost structures, and so they were able to gain additional revenue that way...It was like, now we are going to operate under this, so what can I do to change what I'm doing to gain revenue. I think that perspective still exists, so people think about that when they are making decisions, but the real change in revenue happened immediately and has not continued at that level of change.”

The concept of entrepreneurship frequently was mentioned in relation to revenue generation. Entrepreneurship in non-instructional areas will be addressed later, but even the instructional mission of the University was impacted by an increase in entrepreneurial thinking. According to a dean,

“I think both through what [a former President] said and through the IMG, he really encouraged schools to do new programs, and, for me personally, it was sort of a conversion to becoming an entrepreneur a little bit. Maybe more than a little bit...I never saw myself as an entrepreneur, but he encouraged us to think of new ways, as you're doing new programs, of thinking of how it supports itself, or what investment you might need and how that investment might pay off. Because, if you have predictability, you can put money into something and expect it to become self-supporting and maybe even to pay back that investment.”

A leader in faculty governance explained the situation in his unit:

“Well, I think RCM has encouraged units to look for new things that will produce revenue. You know, just to take an example in [my professional school], we are beginning to offer [a new master’s degree] for people who...need knowledge...in just that one little narrow area to be able to do work in that area.”

A minority position was that RCM had minimal impact on revenue generation. Instead, the economic climate, specifically declining state support, drove the University to generate more revenue. A senior leader in an administrative unit commented,

“You know, what’s really hard in answering that question is that we’ve just come through an incredibly historic period...I think you would say, if you were to talk to faculty and to some of the academic leaders, the contract between the public and universities has been broken a bit...So, it’s hard to say, has tuition been impacted more by a budget model or broader economic forces? I would say more about broader economic forces than the budget model. I think the budget model provided tools for people to play around the margins. I think the budget model provided ways for people to analyze what was going on.”

The positions presented above tell a consistent story of RCM’s impact on the University’s major revenue streams. RCM does foster a more entrepreneurial mindset in units with entrepreneurial opportunities. When considered in the context of the entire University’s budget, those opportunities may be marginal. The marginal nature of the changes at the University level, however, does not minimize their importance, as changes

at the margin are critical to success or failure, and, in specific units, the changes can be considerably more than marginal. Also, as suggested by the minority opinion above, the substantial shift at the University of Minnesota and other public universities away from state support and toward tuition-dependence is a macro-trend, not a result of RCM implementation at the University of Minnesota. Rather than RCM, it was central decisions to replace lost state support with tuition that drove the trend to increase tuition rates. In summary, interview subjects suggest that two changes happened simultaneously that cannot be disentangled. First, macro trends pushed the University to raise tuition rates to replace declining state support. At the same time, RCM led collegiate decision makers to become more entrepreneurial to generate more revenue for their units.

Indirect cost recovery also was mentioned as being impacted by RCM. Specifically, many subjects suggested that indirect cost recovery waivers (charging a sponsor lower than the standard indirect cost recovery rate) should have decreased as a result of indirect cost recovery flowing directly to colleges. A financial administrator said,

“The...college pushes out the [indirect cost recovery] to the individual unit and pushes out the associated costs. So, that led us to manage much more carefully the cost side of sponsored projects, particularly with regard to [indirect cost recovery] waivers. Now that we are bearing the costs whether we get the revenue or not, when we give away the revenue, we don't give away the costs, so we pay attention to it.”

As with tuition, it is impossible to quantify the change in indirect cost recovery waivers and draw a causal relationship to RCM. Negotiated indirect cost recovery rates

have changed during the years in question, as has the mix of sponsors, and there have been fluctuations in the fiscal climate of the federal government, the largest sponsor of University research. With so many factors potentially impacting the realized indirect cost recovery rate, isolation of the impact of RCM is impossible. The perspective given immediately above, however, must have been prevalent in dean's offices when indirect cost recovery began flowing 100 percent to colleges, so there is a strong likelihood that RCM led to a decline in indirect cost recovery waivers, which would have led to an increase in revenues, *ceteris paribus*.

With regard to the second element of this question, the issue of disproportional changes across disciplines, several subjects said they were not in a position to offer an opinion. Those who expressed a perspective saw disproportionate opportunities across units to capitalize on RCM's incentives. Based on subjects' responses, it is clear that RCM impacts units differently depending on a college's funding environment, which also changes over time. A financial administrator with experience in two different colleges painted different pictures of RCM's impact on the two colleges:

“Yeah, I think if you're in a smaller college and especially if it's all grads, you have a lot less of a diverse set...revenue, students who contribute revenue...There's more pressure on a place like [a small graduate college], as well. Their grants, they had a lot of grants for the size of the unit, but almost none of them had any [indirect cost recovery] on them, and so our question a lot of times was, 'Should we continue to do this?'... So at [a small graduate college] we had fewer students that we could figure out how to serve, so we couldn't just offer a whole bunch of

undergraduate courses and get a lot of revenue that way. And, it was hard, really hard with graduate students to attract students from other disciplines to take your classes. Whereas [a freshman-admitting college], with the undergraduate population being bigger, it's a lot easier to offer a few more sections and get more revenue in, so we were much more able to influence our revenue here in [a freshman-admitting college].”

Another financial administrator with experience in two colleges also described different experiences:

“I think just the faculty's willingness to accept it or not accept it was different. In [one college], it brought...the cross subsidies out into the light, because there are some very cheap departments to run and some very, very expensive ones. But, that was no reason to operate any differently or to do anything differently. In [a different college], there's a lot more similarity of units, and the faculty are lots more quantitative just by nature, and so there's much more willingness to say, 'If that's how we make money, okay, let's figure out how to work with this.'”

Yet another administrator focused on the disconnection between indirect cost recovery revenue and the cost of research in different disciplines:

“The biggest disparity that I see is with regard to [indirect cost recovery]...[a college], which does very little lab research, almost none, gets the 52 percent rate...We've got this big laboratory research infrastructure...That's much more costly, it's much more costly for us to do that kind of research than it is for [the other college] to do their

population-based research, where they just have people on the telephone or on the computer. So, they benefit a lot [because] the University averages all these costs and returns all the revenue to every unit just across the board rather than following the way the costs build up.”

A dean raised the same issue in reference to indirect cost recovery. Regarding tuition, another dean mentioned the ability to teach larger classes as a factor:

“We know that those teaching big lecture classes just inherently are generating more tuition than those who are teaching small seminars.”

A central financial leader acknowledged potential differences in opportunities, but pointed to University-level leadership as a tool to override inequities in opportunity:

“When [the budget model] translates the budget framework into a unit view of the budget, depending on all the other environmental circumstances going on, some units are going to have more tuition than other units. Some units are going to be allowed to grow their tuition more than other units, so you could see that as a differential impact across areas. So, right now we are all into STEM [science, technology, engineering, and math], right? So all the STEM areas have been able to increase enrollment, increase a lot of things, but generate more revenue. They are growing, versus areas that aren’t. Now, the model itself, I think, exposes that in a way that is different than if we didn’t have this model...We try to make them all successful, but if you are in a unit that is experiencing a downturn, for example, your experience in the budget is going to be

different than one who is growing. And, I think RCM makes that more obvious.”

Clearly there are unequal impacts on units for a multitude of reasons. The mix of students, student demand, opportunities for research and external sales, and the culture and leadership at the unit level all impact the capacity of a unit to respond to RCM incentives. RCM cost and revenue flows are not, however, the full financial system at the University of Minnesota. Leadership reviews the annual financial flows of RCM, and, using unequal adjustments to allocations of the state appropriation, may choose to override the outcome of the RCM model. University leaders’ decisions to adjust allocations of the state subsidy unequally are controversial, with distinct perspectives from central administration and the colleges, and this point is deserving of fuller treatment.

When RCM was implemented, it was done on a budget-neutral basis, meaning that historical levels of subsidization were continued. RCM-based attributions of tuition and indirect cost recovery were considered at the point of transition, and allocations of state appropriations intentionally were established at levels to neutralize the impact of RCM at the point of implementation. Other approaches to allocating state appropriations could have been used then or in the years after implementation. There are many ways to determine allocations, and it is unlikely that any specific method would be considered equitable by all interested parties. One might choose student headcount or undergraduate headcount or faculty headcount or total headcount – any number of measures could be argued as equitable. There is, therefore, no such thing as one truly “equitable” distribution of the state subsidy. Once allocation levels are established, however, an

equitable annual adjustment could be agreed by many to be one of an equal percentage applied to each unit, i.e. all unit allocations are increased or decreased on an annual basis by the same percentage. The University's annual framework commonly begins with such a stated percentage in guidance to units (University of Minnesota, *FY14 Budget Instructions: Academic Units Budget Planning Guidelines*, 2013), but final adjustments are not made in an across-the-board manner. Central administration considers this practice to be exerting leadership, as alluded to by the central financial leader's quote above, that they "try to make them all successful." Those units receiving unequal adjustments view it differently, however. According to a dean:

"And so, as you bring in more tuition or more entrepreneurial dollars, they take it away. There's a spigot at the bottom that is the state dollars, so I went from a high of \$8 million down to about \$4 million, somewhere in there. Every year we're level or down a little. If we're succeeding, then we're down in state dollars, and so while you keep those [new] dollars, you don't keep them in the same way, because you're not keeping your state base. As [a central leader] calls it, we put you where we want you at the end, which I find is the antithesis of an RCM model. So, while we have on paper an RCM model, we don't."

Another dean had a similar sentiment:

"I'm sure one of the complaints you've heard from deans is that they pour money in the bucket, and they've got a little spigot out the bottom, and they open it up and it pours right back out again. And [a central leader] has told deans, frankly, many times, 'Well, we'll put you where we want

you. And, if you're doing well with student credit hours, we may need to take some of that money and reallocate it.' Now, the argument there is, you're dis-incentivizing us."

A college leader referred to the same concept, but described it a bit differently:

"And, some of the words or phrases you get around here are that it's largely a bailout budget process at the University. So, what benefit is it to fix [a collegiate financial problem] versus wait until it gets bad enough until the institution has no choice but to deal with it? Because that's the messaging that we get, 'We know it's bad, but it's worse elsewhere. So, we have to go where it's worse.' Well, if the budget process is a bailout budget process, and that's how you get increased state support: you have bad problems. I don't see how that lends itself to any sort of strategic decision making that would occur in units."

Yet another dean raised a similar complaint:

"...it seems as if the strategy is largely devoid of academic priorities. It's like, 'Yikes, these units are underwater.' And the smoke-filled room is a different kind of smoke-filled room, and that smoke-filled room is, 'How can we keep as many noses above water as possible?' And, 'Oh geez, next year we'll be a lot better at this. We'll have a better strategy, and it's not going to be this last-minute keeping as many noses above water.' But, then the next year comes before they know it, and we're right back keeping noses above water."

Interviews revealed that the decisions that some central administrators consider to be exertions of leadership are considered by some collegiate leaders to be unfair, inequitable, and contrary to RCM. The same unit-by-unit variations in annual budget decisions that central administrators consider strategic choices to make every unit successful are thought by many deans to be ways to bail out units that are failing under RCM. In an era of declining state support, it is easy to see how these two perspectives came to be. When a college experiences financial difficulty, it either needs to restructure to reduce costs or be granted additional subsidy. When state support is in decline and tuition rates cannot be raised adequately, the only source of additional subsidy are the colleges that are capitalizing on revenue growth opportunities. Taking from the colleges that are succeeding under RCM, however, is a dis-incentivizing action. Taken to its extreme, it turns RCM into nothing more than an elaborate incremental budget process.

In summary, it often is said that, under RCM, more leadership is needed, not less. The question of unequal annual adjustments highlights this point. RCM sheds light on those adjustments, and only strong University leadership can apply disproportionality to keep an entire University functioning during times of resource constraint. In good times, central leaders certainly attempt to “make them all successful” by disproportionately allocating more resources, but, in constrained periods, there is a shift to merely “keeping noses above the water” by disproportionately reducing subsidies. The shift from seeking broad-based success to mere survival likely occurs regardless of an institution’s chosen budget model.

Proposition 2: Responsibility Center Management leads to expansion of non-traditional revenue streams.

Neither IMG nor full-scale RCM altered the flow of non-traditional revenue streams. Revenues such as endowment income and external sales flowed to the responsible unit prior to RCM implementation. Several subjects, nevertheless, spoke about changes in their approach to the pursuit of non-traditional revenues after RCM was implemented. Several interview subjects flatly said RCM had no impact on non-traditional revenues, while others described changes to fundraising and external sales. On balance, most subjects were skeptical of the proposition that non-traditional revenue streams expanded as a direct result of RCM, but some subjects offered credible contrary examples.

Regarding fundraising, several subjects shared a dean's perspective in response to a question on whether fundraising was impacted by RCM or not:

“No, no. Fundraising for us has always been a question of putting us in a competitive position in terms of recruiting faculty and students and retaining them... We never looked at fundraising as a source to replace normal day-to-day expenditures.”

A few subjects described contrary experiences. An individual who had worked in both a college and central administration spoke of his time in a large college:

“We became keenly interested in our ability to do fundraising. That became a priority for the college, so we really made an effort to increase that... We could really take a look and see the price of having somebody fundraise is X, and as long as they get a return greater than X, it's a

worthwhile investment to have people engaged in fundraising...It's a different environment when you are really managing the revenue flows as well as the expenses. So, it really raised the priority for the college on fundraising as a way to try and supplement the one stable flow of money we had, which was state support...We were looking for another stable source of money essentially."

A leader in faculty governance expressed a similar perspective:

"It didn't change the flows, but it made [fundraising and external sales] seem more like part of the regular budget."

A dean elaborated on RCM's impact on his college's development operation:

"...Once you're in an entrepreneurial mindset, for example in development, you think, 'Well, I could pitch an idea to a donor, and that donor could fund a new program, and if I get a new program with new students and new tuition, it's going to help my entire operation.' So, I think development has become much more supercharged since RCM. I mean, there were other causes for that, too. Declining state support has made us more dependent on development...I also think the donor community responds more to the entrepreneurial sensibility here. I think we were viewed by our alums and donors like a state bureaucracy in the past, and we acted somewhat bureaucratically. The Provost was like the agency commissioner that everyone had to go up to to get money to do anything...RCM makes us more like a company, where every college is more like its own little educational business. And, it makes it easier when

I'm talking to donors. They understand, 'Oh, if we do this, [the college will] get the money.'”

Entrepreneurship, creativity and innovation were brought up by several subjects. These topics were described most meaningfully by a collegiate leader who could draw comparisons between his experiences at the University of Minnesota and at another public institution:

“I would tie this to RCM, that at the other institution there was much more of a focus on traditional academic programming, almost exclusively. You know, that to have any kind of innovative programming, they had to create a unit that was called ‘innovation.’ And very few faculty thought that was a worthwhile investment. And, I think here, the opportunities that I’ve been able to be a part of, I never would have imagined could have existed at the other institution. So, I would say that this budget model, to me, drives more innovative and creative thoughts about how we can engage with our audiences...So you have a mix of faculty members here that are interested in that work, that believe it is valuable work, that it’s more creative, it’s more innovative, it’s outside...what I would view as the traditional academic programming, and they have the ability to move on it. Versus there, that ability to actually move it forward and have a value was non-existent.”

Revenue diversity also was cited by some as increasing as units expanded into additional “traditional” revenue streams, such as tuition and fees, which that particular unit had not traditionally sought. For example, some professional schools have taken an

interest in undergraduate education, while undergraduate-admitting colleges have started professional master's degree programs. A senior central finance leader described the phenomenon as follows:

“...Revenue diversity is an interesting one to me. Like I say, I don't think RCM in and of itself pushed colleges to start more external sales activities or go after more endowment money. I think that was already sort of happening. I think where some of the increased diversity probably comes in is in the variety of tuition streams. So, you're seeing traditionally graduate level colleges and programs and departments wanting to get into the undergraduate game. And, so that, to me, is a diversity of revenue issue. I think another place you're seeing it is, I'm going to postulate this, but I think the increase in the number and type of fees for students is encouraged in an RCM environment...Lots of places have fees, but we do have a wide variety...People are entrepreneurial about 'How can I get another revenue stream that's not connected to tuition attribution, so I don't have to worry about it?'...And, maybe, in general, it does make academic units more entrepreneurial, in general. They are now managing several big complex revenue streams, which makes them more confident about adding one more...I would postulate this: an RCM institution has, and has to have, greater financial expertise in academic units than a centralized budget model. Has to, couldn't survive without it...we need a different kind of dean to run places, so my guess is that you end up...more capable of entrepreneurial activity in academic units under RCM.”

That statement summarizes RCM's impact on non-traditional revenue streams, according to interview responses. RCM may not lead directly to enhanced efforts to raise private funds or to pursue external sales more aggressively. Some subjects have sensed, however, a gradual change in culture and mindset as academic units have become more comfortable operating in non-traditional areas for public institutions. Colleges operating outside their traditional comfort zones have expanded into new areas, including new instructional areas. Whether the shift sensed by several respondents is related to RCM or to a general culture shift in public higher education is impossible to determine. The above assertions of the collegiate leader who worked for another institution are strong indications that RCM is related to expanded entrepreneurial opportunities, but that perspective is not definitive, as the subject's employment at the other institution obviously was not concurrent with his University of Minnesota employment and represents only one perspective.

Proposition 3: Responsibility Center Management leads to internal competition among colleges for students and credit hours.

Based on interview responses, the most controversial aspect of RCM is the struggle among colleges for tuition. At the University of Minnesota, the college of enrollment (the college housing a student's degree program) receives 25 percent of the tuition for every course a student takes, and the college of instruction receives 75 percent of the tuition for each course a student takes. Attributing 75 percent of the tuition to the college of instruction makes teaching students lucrative, particularly in large lecture-based courses with low instructional costs. The struggle for tuition manifests itself in two

obvious ways. First, colleges can “poach” courses, which means they teach courses that overlap with other colleges’ subject areas to attract students from other colleges.

Poaching also manifests itself in newly created courses that are clearly within a colleges’ subject matter, but that are primarily motivated by attracting other colleges’ students and tuition. The second strategy colleges can employ to capture tuition is to revise their own degree requirements to “keep their students at home,” which means the required curriculum for a major is made more restrictive to ensure only a minimal number of courses are taken outside of a student’s home college. As a long-time finance staff member described it,

“One of the most obvious downsides to this kind of system is the notion of either direct course poaching or sort of tweaking the rules of majors in ways that are more restrictive than they should be and driven more by revenue than student success or even knowledge that students gain.

We’ve certainly seen instances where there’s at least some parties to the discussion that really think they are encroaching on their territory... That’s always a little in the eye of the beholder, but we’ve definitely seen colleges that have offered courses that other colleges really feel are their domain. And, conflicts have arisen out of that. We’ve seen interest from professional schools in teaching undergraduates. I think there’s a perspective on that that here’s a way to reach out to students to... get them interested and so forth, but it’s also very much a tuition-seeking strategy.”

A considerable majority of interview subjects described experiences with poaching, several citing it as either a downside or even the biggest downside to RCM. A leader in faculty governance assigned blame to University leadership:

“I think it has had a terrible effect there. There really are two pieces of it. One of them is the piece about courses and designing courses to keep the credits in your unit, and...I think that reflects a failure of leadership on the part of the Provost’s Office. Just saying, ‘This has got to stop, and we will make it stop.’ The other is what people see as a barrier to faculty collaboration, if the faculty members are in different units.”

Many respondents blamed University leaders for failing to provide adequate oversight of inter-college competition for tuition. A dean described the failure:

“...This is the downside again of the system. It really encourages every college to sort of think about their own fate, and I think this has been happening from college to college. One way to address deficits is to generate more student credit hours that you keep, and of course we are also trying to steal student credit hours from other colleges by creating [liberal education] courses that get students from across the University to take our courses. So, there is the potential...problem of poaching. And, I think the system only works well if there is a strong police role that the Provost plays to say, ‘College of [X], you can’t offer English courses.’...and, I think that has not always happened well in the past. It has been too laissez faire...If it doesn’t have that police role at the Provost

level, you really do get a lot of turf warfare or poaching or actually creating courses that a college has no business creating.”

Another dean also pointed to a neglect on the part of University leadership:

“The problem is, in my judgment...no matter how you are operating, it does not remove decision making from the senior most officials. That is, you can’t just assume it is an automaton, and you turn it on and most things will just work out fine. And, you know, we’re seeing that in spades now. Unbridled incentives have drifted, [have] caused the institution to drift in ways that most people, senior leadership of the institution say, it’s not in the institution’s best interest. But, there’s been a series of opportunities. I’ve used a sports metaphor. It’s as if we are playing a game and there are referees, the Provost and senior officers, and they have whistles to blow, but they’re not pulling the whistle out and blowing it. So, with the academic priorities in mind it’s become kind of a game independent of academic priorities that I think badly needs that academic jurisdiction asserted.”

Two University leaders acknowledged that the problem was recognized prior to RCM implementation, and it has not been adequately managed. According to one University leader,

“...This is one of the things that we knew going in: you have to consciously manage it. You just do, and we haven’t done a very good job, in my opinion. We said right at the very beginning, especially as it relates to course creep and tuition...We said right at the very beginning in the

'90s that we need to have a process in the Provost's Office in the academic side of the house to manage that, because it is an incentive that is in there. And, you need to make those decisions from an academic viewpoint, not a budget viewpoint. The deans and everybody need to be reminded of this. The deans are tasked with the success of their colleges, not just financially, but in total. And they know that, and they aren't going to make a decision solely based on finances. But, where they can do something that will increase the finances without hurting them programmatically and qualitatively, they will do that. And, if the institution wants to put the brakes on some of that and put boundaries up and rules...they should do that. We have a process where if somebody is seeing something happen and they bring it forward and it can be dealt with, there is a process in the Provost's Office to do that. It's just not a very well-communicated or strong process, in my opinion."

Another senior leader who spent time in a college and central administration stated,

"...One that I will talk about that has come to fruition is the tuition grabs around the curriculum. At the time that IMG was being discussed, there was a lot of discussion about how would we make certain that there wasn't curricular mischief – like that the business school wasn't going to start teaching Spanish, and then people would offer up ridiculous examples. And, people around the table would say, 'Well that won't ever happen.' Well, it's happening, not the business school teaching Spanish, but [a

professional school] wants to serve undergraduates, and I don't know that it's completely out of the goodness of their heart and that they want to share their vast wisdom. It's because there's money there, especially as undergrad tuition went up, so we have everybody fighting over the same pieces of tuition, and it's not helping the overall institution. So, a year and a half ago we got a central campus curriculum committee. It was talked about 20 years ago when we were talking about IMG, that we needed one, and now we have one, but there are so many big sleeping dogs around the curriculum that have already been allowed to exist. Now we're poking at them, and it's hard to clean up that stuff after the fact."

Tuition attribution to the colleges was introduced in the late 1990s with IMG, so for 15 years there was no curriculum committee or other formal body dealing with the potential for "curricular mischief." Several subjects provided examples of what has emerged. According to a leader in faculty governance with experience in this area,

"...When I talk to [a dean] who I've known for a long time, she says, 'I got these...people; they're great teachers; they're doing a fine job, some might even argue it's covering other problems in the college because they teach a lot of students and get a lot of undergrad tuition to them.' If you talk to then [a large college], [the dean] said, 'These guys are teaching the same courses we're teaching, and we want those courses with 250 people in them.'"

He went on to say,

“...It’s deeper than this, even though everyone says they don’t poach and raid students. I had this conversation with [a professor]. He was dean then; he was dean until very recently. And [he] says... ‘We only capture 35 percent of our students’ tuition... That’s going to change.’ And, obviously they have the power to do it by making their courses required to graduate as opposed to being more flexible by saying you can take it over in Agriculture or on the Minneapolis campus... So, you know, there’ve been some rather perverse incentives set up.”

A dean asserted that they are not concerned that money is shared across colleges, and money does not drive decisions, but the dean’s terminology raises concerns of parochialism:

“...The model affects decision making, but the fact that [another college] gets some of my money, I mean, my money, the money we bring in, do I hate [the other college]? No. Does it affect my decision making? No.”

Another dean suggested that narrowing curriculum to keep students in courses in their home colleges is an appropriate reaction to RCM:

“I’ll give an example. I think it’s in neuroscience where they’ve been able to introduce this large lecture that... gets the students’ attention. It’s probably very interesting as a course, and because it has been approved by this council on liberal education, it’s... approved... for liberal arts students, for example... It’s really the case where they are moving students, a big herd of them from one place in [the College of Liberal Arts], and they are

taking this course because it's exciting and interesting, more than some of the ones going on in the College of Liberal Arts. And...[the other college] doesn't have anything to do with the cost of advising those students and dealing with all of the day-to-day things that students do, so it's essentially a grab for money...and my approach or my comment to the liberal arts people is to say, 'You need to be more structured in what courses you allow your students to take.' Head them off that way. Well, they are unwilling to do that because of academic freedom issues and things like this, so self-inflicted wound."

The dean's comment above brings another critical aspect into the discussion: the student experience. The primary flash-point in the poaching debate is professional schools starting new courses, including online courses, targeted at existing undergraduate students. One side of the debate views this initiative as a "money grab," while the other views it as expanding the student experience. A collegiate finance leader described a decision in a professional school to offer courses to undergraduates:

"When I was at [a professional school], we immediately started offering an undergraduate course. You know, it was a graduate-only school, but we brought in somebody to teach a big class in public service or something like that, and it brought in like \$300,000 a year in more tuition – that was the 75 percent. And, they were pretty much all [College of Liberal Arts] students that would have been signing up for this, but they kind of gathered from a large area. There were a lot of those, probably

[business school] students, and it was just something that we probably wouldn't have done had it not been lucrative.”

On the other side of the argument, several subjects discussed the student experience. A dean said,

“Because people need medical terminology, and it's still a very popular course. And so, we took topics that we wanted the general public educated in...the general public, [College of Liberal Arts] majors, that's one audience. They need to know to be literate about drugs and society if you want to put it broadly, or drugs and themselves, to be good citizens. So, we think we're doing a service...the other audience are people, we're mostly a post-baccalaureate program now, so we're after your...graduates. We want them to consider [our professional program] as a degree, and we think they are more likely to do so if they have been exposed to some of our topics beforehand. And, there's a whole bunch of pre-declared, pre-med, pre-pharmacy, pre-nursing, etc. who want to take them because they want a liberal arts major, but they want something that interests them related to what they are going to do in their future. So, I guess it's the three audiences...and they are rigorous, these are good rigorous courses.”

Further addressing the student experience, the same dean stated,

“I fall on the student experience side. I think if they didn't feel there was value to our courses, they wouldn't take them...And then we wouldn't do them below a certain point. Do we need to make money on them? Yeah, we do,...because...having an online technology group also feeds into my

regular curriculum. So, there's a lot of synergy there,...but don't we all have responsibility for undergraduates? I would think they'd want us to be thinking about the undergraduates.”

A former senior central leader and designer of the Incentives for Managed Growth (IMG) system described other reasons why the student experience has improved:

“I think what really improved the undergraduate experience here was when we did the undergraduate reforms under Hasselmo in the '90s. The faculty sat down and radically rethought the undergraduate curriculum. And, in that curriculum, they said one of the unique things about the University of Minnesota, unlike St. Olaf, is that we have the professional schools, so why shouldn't we create a curriculum that exposes our undergraduates to some of our professional courses – that will help them transition if they want to go on to graduate school in that. So, I would say it's not RCM; it's a faculty who pay attention to the curriculum and try to create a kind of good experience for the students using the resources that you have in a place like this.”

At a minimum, based on the responses overall, the movement in the 1990s described above was reinforced by an internal tuition attribution model that linked tuition revenue to students. As described by a central finance leader,

“Our current model, the best thing you could do is teach a bunch of service courses, be a really small college with really great service courses. And if...your goal is just to make money, we all know how to do that. And, some of that is probably unproductive competition to the University

overall. Sometimes...I think it looks like competition, and maybe it is, but if overall the student body is getting served better by an enhanced curriculum, then maybe that's not unproductive. It might feel like it from a college perspective, but if...the student body has more choices of curriculum that is of high quality that they want to take, taught by great teachers, heaven forbid. I mean, you are trying to incent that in this system."

The College of Liberal Arts was cited as the aggrieved party in many discussions of inter-college competition. Several subjects had ideas for the College of Liberal Arts.

A dean explained,

"The professional schools... would argue back to [the College of Liberal Arts], well, be more entrepreneurial. In other words, it's a marketplace of ideas really, so it's dollar signs, but it's also ideas. Create new things that will be so compelling to students that they will want to stay in [the College of Liberal Arts] or go to [the College of Liberal Arts]...I spent a lot of time in [the College of Liberal Arts] this past year, and I certainly heard a lot of these hard feelings on the part of [the College of Liberal Arts] toward what is going on in the University...I understand it, and the liberal arts generally are under attack in our culture right now, so I recognize that they feel this way. And, of course, I totally agree with them that a college like mine should not be teaching an English course...But we have historians here, so we teach some history classes. [The College of Liberal Arts] doesn't own history."

Another dean said,

“In fact, I said... why don't you just let [the College of Liberal Arts] shrink to what they need to be? The issue is their courses aren't filled. They aren't competing with our courses. Something is wrong here besides the fact of kicking out those courses and denying the students the full breadth of what they should be embracing. And, I think we are going to hit, rubber hit the road with the grand challenges curriculum that's coming out of the strategic plan, which really broadens the education interdisciplinaryity of their students. So, what's going to happen? They are going to get less of those tuition dollars. Okay, so...this is the crunch. Do you as a University say, '[the College of Liberal Arts]...you need to right-size?'...Do you deny the students the full scope of the grand challenges?...The strength of being on a great big campus is this wonderful breadth of disciplines that you can be exposed to. So, do you deny the students that or do you tell [the College of Liberal Arts] to right-size?”

As these deans suggest, the issue is tied to, but much bigger than, tuition attribution in the budget model. Though some quotes above assert that colleges are in a raw money-grab, interview responses suggest that there is more to it. When pressed, nearly every subject said that there are no pure money-grabs of which they are aware. Rather, some colleges, particularly the professional schools, might be operating on the margins of their traditional missions, but with students in mind. As a senior college leader put it,

“So, we try to put in front that we’re making decisions in the best interest of students, and we want that to be in the fore of what we do. I’ve adopted the language, of: We don’t have financial discussions; we have academic discussions with financial implications. And, I try to put that out in front of them all the time, but in the end, I think it’s natural for people to say, ‘We need to capture as much of that tuition revenue in this college as possible.’”

The challenge in exercising oversight of the inter-college battles arises because colleges rarely, if ever, engage in pure money grabs. College leaders do consider academic missions in conjunction with financial ramifications. Every example of poaching that was raised by a subject had two apparently valid sides. The absence of stark borders around academic disciplines, particularly as higher education moves toward increased inter-disciplinarity, creates an extraordinary challenge for those charged with overseeing the University’s curriculum. Nonetheless, most subjects saw a University-level curriculum committee as the only potential solution to the problem. A central staff member described the need:

“A sort of theoretically perfectly engineered incentive system would be self-regulating. I don’t think we can ever produce such a thing here. I’ve never seen one in policy anywhere. So, I think there needs to be central authorities to reign in behavior, and it does become sort of a policing function, and I don’t believe there is a way around that. At least curriculum control at a central level is a necessary counterweight to the incentives we’re creating for colleges to seek out new markets, because in

many respects we want them to seek out new markets. We want them to find: Where are students going? How can we get our classes to be where students want to go? But, we also have to make sure that we are managing that competition, because if everybody goes to the same place then we spread too many costs in those areas. The revenue gets spread across all these different courses, and we just find new ways to lose money as opposed to really finding new revenue sources and new ways to be productive. One of the difficulties is that we have tried to stay relatively steady in terms of total enrollment as a University. We're about the right size, which makes these games a little zero sum. We're fighting over the same 50,000 students. So, if one place gains, somewhere else is losing...I think ultimately in terms of meeting student needs and meeting our financial needs, it's useful for us to have that internal competition. If someone else can do it better, that's good for the institution, but it needs to be managed at some level so it is not watering down or just burdening kind of silly courses. They are actually serving a purpose to move students through...I never felt the colleges get purely wrapped up in the money. There's always more to it than just the money. The colleges have pretty fair integrity. They do what they feel is appropriate and reasonable, but if the incentives are going to push them a little more out of their comfort zone than they would otherwise, we need something to help them kind of back up their own conscience on that basically."

One dean offered a dissenting view:

“I don’t have much faith in curriculum committees. They take lot of time. They take a lot of political debate, and I’m not sure they guarantee quality.”

While in the minority, the dean quoted above makes a strong point. A curriculum committee seems to be an easy or perhaps the only solution to the problem of inter-college tuition conflicts; however, in practice such a committee may not be an effective arbiter. If the problem were colleges duplicating courses of other colleges, it would be easy to solve. The problem, however, is deeper, and it challenges the core philosophy of higher education. Both the liberal arts and professional schools can argue that their programs offer valuable diversity of experience and knowledge to undergraduate students in a similar way. A major public research university obviously needs a strong liberal arts college, and it should also capitalize on the breadth of its academic programs, including professional schools. In a time of resource constraint, these two areas are colliding, and RCM’s tuition attribution model monetizes the struggle. A respondent with experience at another institution did not experience the same inter-college tension at his previous university:

“You know, certainly if I rely back on my previous experience that was more of the traditional budget model, those conversations didn’t really exist there like they exist here. I think that they maybe did exist, but they were driven solely by academic reasons, and there wasn’t an underlying spoken or unspoken financial aspect to it.”

RCM forces hard discussions that many would say are appropriate and necessary conversations within higher education, but those discussions do not automatically lead to

better outcomes. Based on interview responses, at the University of Minnesota these discussions and decisions have not been managed toward broadly-accepted outcomes.

Proposition 4: Responsibility Center Management reveals subsidies.

A purported benefit of RCM is its revelation of cross-subsidies. Before considering interview subjects' perspectives on cross-subsidies, we first must consider the question: What is a cross-subsidy? A senior finance leader questioned the terminology of cross-subsidizing:

“So when we say ‘cross-subsidizing,’...the notion of cross-subsidizing with state money doesn’t really make sense to me. It’s a subsidy for everybody, and there’s a decision on where it goes...A cross-subsidy, to me, in its pure form would mean, let’s say we don’t get any state money at all, and I said, ‘Okay, [college], I can increase your tuition eight percent, and I’m going to take some of that from you and give it to someone over here who can’t increase their tuition at all.’ That doesn’t happen. Now, we move the state money around, or allocate it differently because of where costs and revenues flow, but I don’t call that a cross-subsidy.”

In a public institution with a state subsidy benefiting all units, “relative degree of subsidization” is a more apt characterization than the widely used term “cross-subsidy.” To some, the distinction is an important one, while others view the two concepts as nearly the same. There is a tendency for collegiate personnel to see the concepts as synonymous, because to the extent that their prior-year levels of state subsidy are viewed as entitlements in future years, the concepts of cross-subsidy and degree of subsidization

merge into one. Put another way, if a dean views his or her level of state subsidy as an entitlement, then a decision to take some of it away and give it to another college will be viewed as a cross-subsidy from his or her college to another. Central budgetary leaders, however, view differential allocation of state subsidy as falling within their discretion, so central leaders view taking away state subsidy from one college and awarding it to another college as exerting leadership by exercising discretion over the allocation of state subsidy. In the view of University leaders, they have changed the relative levels of subsidy, but they have not taken something that belonged to one college and given it to another. This point is more than a linguistic nuance. Central budgetary decisions to move state subsidy between colleges look different depending on perspective, which harkens back to the previously considered concepts of the “bailout budget process,” “keeping noses above water,” and the “spigot” central opens to siphon off additional revenues that colleges generate.

Using the concept of relative degree of subsidization, the same central leader who took issue with the term “cross-subsidy” asserted that RCM has improved understanding of degrees of subsidy:

“Every unit has a better understanding, given stable enrollment, of what revenue they are generating against the costs they have to pay. And they understand that if their revenue (their tuition revenue or their [indirect cost recovery] revenue)...if those things drop, they are in line to get more subsidy. I think everybody sort of understands that.”

Most subjects felt that relative degrees of subsidization became considerably more visible after RCM implementation. Only one respondent flatly denied that there was

enhanced visibility. A leader in faculty governance was the contrarian on the topic:

“There are cross-unit subsidies, but...it is pretty opaque how that happens, in my opinion.”

Subjects talked about cross-subsidies across colleges, within colleges, and across different lines of business. For example, a central staff member explained,

“Certainly in the management group I was in, we were very aware of what it meant for cross-subsidies. You know...one of the things that I had done at one point was to try to revive a version of the instructional cost studies that had been done long in the past in institutional research. I estimated that in [the College of Liberal Arts], and my basic sense was [also] the University, sort of made money, in as much as it can make money, on 1000-level classes [primarily for freshmen], and everything above that was a loser. So, if you compare our instructional costs to our revenue, we sort of made money on freshman instruction and lost on everything else, which meant that we had to think about what our course offerings looked like. And, if we had courses that were bringing in lots of revenue...we had to be sure we were protecting those and keeping those going, even if they weren't necessarily always what we thought was the core academic focus that we needed. But, it paid for other things that we were doing. So particularly [in] more research heavy departments, we had to find ways to support them, and sometimes that would be tuition revenue from another unit within the college. So, we became very aware of how these things focused, and I actually calculated a version of profit and loss for

departments, not because we expected each department to turn a profit, but because we needed to know where we needed to fill in and where we were able to get money to make sure we were not in the hole.”

A central finance leader also referred to the increased focus on undergraduate instruction:

“One was that academic disciplines had to start to understand that small graduate seminars didn’t just happen. A criticism almost immediately was you’re trying to kill my graduate seminar after all. But, we need to figure out a way to pay for your three-person graduate seminar, and if that means teaching more, making sure this undergraduate-centered program is healthy, we have to do that. So, there was ...more appreciation for the undergraduate enterprise than there had been previously. And...from an academic discipline standpoint, you couldn’t just talk about your nice graduate program and hope that the undergraduate thing keeps going and they keep showing up. I happen to think that was a good thing to come out of this, that, in general, there was more focus on the undergraduate game.”

A financial manager in an administrative unit said the information all exists, specifically referring to the support the administrative units receive from the revenue-generating units:

“I think that’s a very definite, ‘Yes.’ With these...cost pool charges, you’d have to be sort of blind to not know what was happening to an individual college in terms of who is paying for what. It’s really clear.

How much does it cost to run the [Office of the] Vice President for Research? How much does it cost to run the Facilities operation? How much does it cost to run the Libraries? Those figures are pretty simple. Anybody with a computer can go to the web and find all that. And, I would have said 20 years ago that would have been a bit of a challenge. You wouldn't have known. And, as the dean of a college, you would have probably been paying or subsidizing things that you had no knowledge of. So, I think...probably one of the biggest success stories of the RCM model is that it is pretty transparent. It's still not perfect...I still hear faculty indicating that they have a hard time getting at this data, but, quite frankly, it's much easier to find than it would have been 20 years ago."

With a consensus that RCM's complete revenue and expense accounting did provide new information regarding cross-subsidies, the discussion turned to whether or not different decisions are made as a result of the enhanced information. Some subjects provided examples of cross-subsidy information leading to different decisions. A central finance leader said,

"My example right now is [a particular department], which has been a premier program forever and ever and ever. The college...is saying that's going to keep being a premier program, but can we keep doing it at this subsidy level forever and ever and ever? Well, in a non-RCM world, that conversation never comes up."

A finance director in a college referred to knowledge of a professional college arguing for increased subsidy due to its service mission being paired with a limited capacity to increase revenues:

“We had fewer students...so we couldn't just offer a whole bunch of undergraduate courses and get a lot of revenue that way. And, it was hard, really hard, with graduate students to attract students from other disciplines to take your classes...at the [professional college], because they had a very different mission in many ways and had that huge public service mission. We were able to use that as the reason to get more resources for [the professional college]. You know, that we're doing the outreach work for more than just the [the professional college]; it's for the whole University. And that was our argument, and there isn't a big return on those dollars, so please fund us.”

Subjects also commented on the degree to which decisions have been impacted by the perceived increase in cross-subsidy visibility. Most subjects saw decisions at the college level more heavily impacted than University-level decisions. Conversations about internal collegiate decision making revealed major differences across colleges regarding their levels of internal transparency and their choices about exposing departments to the impact of RCM on the college. RCM is not pushed below the college level by central administration. In fact, there was a consensus that most or all of RCM's formulaic incentives should stop at the level of the college. As a former central leader put it,

“You need to give departments incentives for revenues and the use of resources, but I think if you go in some kind of reflexive way...down to the department level, you turn everybody into accountants instead of creative thinkers, and I was always wary of doing that...I didn’t like driving this down to the lowest programmatic levels of the University. I thought it should be at the college level...This is a highly decentralized place that really works well around colleges, and I think that’s where most of it ought to be.”

Only one area of the University deviates from this philosophy and pushes most of RCM down to its units. Within the Academic Health Center, cost pool charges are pushed below the college level, but an in-depth analysis of that experience is beyond the scope of this study. Each college approaches sharing RCM information with departments differently. Some are highly transparent. A dean explained,

“We make all that visible. We have it at the faculty assembly. We’ve taken the view that the key to RCM is transparency, so we spend a lot of time putting numbers up on screens at faculty assemblies and explaining what’s going on. And, in a simple enough way, I mean we make the spreadsheets available if anyone really wants to dig into them, but we simplify it to say, ‘This is it; this is the budget. Here’s the components of it. Here’s where we’re moving money, and here is why.’ It sometimes has been embarrassing to some units. They realize...they are being subsidized, and the dean just sort of told everybody. But, it’s the reality.”

In another college, a senior staff member described their process:

“We provided all that information last year, so units that are very heavily productive in research were shown that they are subsidized more than any other unit in the college, and not only were they shown that, but everybody else was shown that. And then the units that were most profitable were shown that, and then everybody else was shown that. And, so we’re not hiding behind anything. We’re giving everybody the information that we think they need to have in order for us to then have this collective conversation that’s not in the dark, but tied to exactly what people are doing as a college, and in what units, to lead them to what are the next phases of building the college.”

The staff member also described how that information caused tension:

“I would say that it certainly has created a competitive environment within the college, as well...It’s hard to give people what they want in terms of transparency with the budget, and then not have that create some sort of competitive environment. In creating the kind of transparency that people desire, there is then the natural questions of, ‘So why would we subsidize one unit with state support more than another unit or other revenue streams?’ And so, it’s been, I would say, been very challenging presenting information in a way that does not create that competitive environment, but still provides the transparency that people desire. And, I think that certainly we have that tension between units.”

The level of transparency described above within colleges appeared to be the exception, not the rule, as leaders in other colleges made no mention of sharing information so widely within their colleges. Many subjects, however, referred to decisions made in deans' offices being influenced by considerations of subsidy flows to units within their colleges. Most interview subjects, both central and non-central, expressed skepticism that central decisions were altered due to visibility of cross-subsidies. Only one example was raised: that of the closure of the Graduate School. Those with an understanding of the machinations behind the Graduate School closure agreed that while the decision to close the Graduate School was multifaceted, the subsidies revealed by RCM were influential in the decision. A dean described RCM's influence on the decision, which was a complex issue necessary of extended explanation:

“A good example of this was with the Graduate School dissolution. In fact, this is probably one of the evils of the RCM model...Let's see if I can characterize it properly. The cost pool structure and the changes that took place with the implementation model really brought to light the costs of some of the operations...Graduate education is expensive, make no mistake. If you look at things like [some professional schools], they damn well know it, because their tuition is really high. And they are trying to cover most of the costs from the tuition.

“What happened with graduate education, and I'm talking now not about the professional school graduate education, but the kind that really contributes to the ranking of an institution: the Ph.D. programs in engineering and sciences, for example, and probably also in the

humanities. Those are the ones that get rated and ranked when you look at various national ranking services. The cost of those operations was always borne across the whole University. But, at the stage when this budget model came in, the cost pool model especially, units were given money to essentially pay for that part of the operation, whether they were active contributors to it or not before, without knowing about it. Now, all of a sudden, they got that money, and they could see, 'Here's where that money is going to go,' and then they would make the next step and say, 'This money is used by the Graduate School to pay fellowships primarily for Ph.D. students.' And, they would have an argument with that, saying, 'We are paying this money, but we aren't getting our fair share because we don't have a Ph.D. program.' These deans would say they weren't getting their share of the pie. And, I'd say, 'Wait a minute now, you were given that money to start with. You can't now walk away from the table with that money to the detriment of all the Ph.D. programs.' I don't know how many times I made that argument. In fact, I used to, the last few times I did it, I had to say, 'I know I'm sounding like a broken record, but I'm going to say it again.'

"And, of course, what happened was the decision...that this money was going to be given back. That's what happened. So, one of the reasons why we are short on graduate fellowship money as an institution is because...the model was perverted because of these complaints that came in."

The Graduate School experience provides evidence that decisions are being influenced by RCM. That such important decisions are influenced by RCM calculations demands consideration of the “rightness” of the decision-making framework presented by RCM. If key decisions will be made based on RCM, then one must consider whether those decisions are informed properly by RCM, which some subjects commented on. Some of the formulas underlying RCM are somewhat arbitrary, as admitted by a senior central leader and designer of the system. The 75 percent, 25 percent tuition attribution split is no more “right” than 90 percent, 10 percent or 60 percent, 40 percent, and the formulas that drive the cost pools also are proxies for reality. As one interview subject described it,

“Anytime you create an incentive system, it’s going to be a really rough model of the incentives that we really need people to react to. The world is much more complicated than what we can build, and certainly if we built anything as complicated as what we want people to make these decisions on, no one would understand it well enough to drive the decisions.”

Despite some degree of arbitrariness, RCM’s formulas provide a framework in which to understand decisions. The framework may not be perfect, but at least it is a framework to bring some order to an otherwise incomprehensibly complex array of financial flows. This framework for decision making was described by a central finance leader:

“I think that...one of the grand benefits is that...you really get a much better understanding of what each individual academic unit is about, what

it needs to run. And, you know, at first, everybody throws up their hands and says, ‘Why do they get ten times as much subsidy as we do?’ But, it does help you think through what, understand what the resource needs are and where they’re coming from. And, I...always said it also helps us understand who to look out for earlier when one of those revenue streams is feeling shaky...And the other benefit, of course, not only does somebody in Morrill Hall understand it, but somebody in [a dean’s office] gets this, says, ‘Yeah, I understand this.’ Now we’ve gotten past all the, ‘Is the data right?’ We understand the picture, now what are we going to do about it? So, that’s a great advantage to these models as well. Be interesting to work for a purely centralized place again, see if it feels backwards, as I think it would...Maybe I’m totally wrong, but...I go talk to my Big-10 colleagues...sort of probe the ones that are central, and they just don’t worry about the same issues that RCM institutions do.”

Finally, a leader in faculty governance described how difficult discussions are facilitated by the RCM framework:

“It’s very hard if you are an academic vice president or you are a finance vice president, and look at a unit, and say, ‘I don’t think you need all of your faculty members.’ As opposed to being able to say, ‘Well, you don’t have the revenue to support all of your faculty members.’ It’s a way of pushing, and if you don’t have somebody who has the audacity, nerve, backbone, whatever, to do the first thing, which you very rarely do in a

consensus built organization, you have to have something that says, ‘We can mitigate that a little bit, but it’s going to happen to you.’”

The interview subjects unanimously described a system that provides considerably more information than was available pre-RCM, and that information clearly led to some different decisions than otherwise would have been made. Questions remain with regard to the quality of the decisions. It is possible that the additional information was misunderstood, misused, or incomplete in ways that led to poor decisions.

Proposition 5: Responsibility Center Management creates an adversarial relationship between academic and administrative units.

RCM’s cost pool structure results in academic units paying annual charges to cover the costs of running central administrative units. Interview subjects were asked to what extent the relationship between academic units was impacted by such a financial arrangement. Most interview subjects saw the “us versus them” aspect of the relationship between central administration and colleges as inherent and not negatively impacted by RCM’s cost pool mechanisms. Several subjects saw the relationship change, however. Parallels were drawn between cost pools and paying taxes. A dean explained,

“You can always find things that you object to paying for. I mean, look at the federal government. I mean, my god, the kinds of things that they do. If I had my choice to say, ‘I don’t want my tax to go to this; I don’t want my taxes to go to that.’ But, at the end of the year, you write out a check. Why? Because it’s the price of citizenship. We have the same thing at a University. We have an opportunity, if we want to take it, to complain

about things that we think are getting out of whack. And, if you don't feel that you have the courage to make that complaint or if you think that it won't be well-received by somebody, by your superior, then I guess you just need to keep your mouth shut. Grit your teeth and move on. But there are opportunities, sometimes you get asked for opinions, and that can have an effect on the costs of central administration."

A senior finance manager commented,

"Now, I consider myself a taxpayer, and I talk about it like that occasionally. And, I want value for the taxes I pay. So, we are supporting the central units, and when they are not functioning all that well, I pull out the old taxpayer card. I don't think I'm getting value or enough value for the amount we pay...so we have more clout than we otherwise would. I think it does give us a little more leverage than we had before."

There was agreement generally that central administrative units are more highly scrutinized because of RCM's cost pool structure. According to a collegiate finance director,

"It's made us think...I know our past dean...– I think at the dean's meeting and different places – had many discussions about what we are paying for. What are we getting for our money? And if we are the ones paying for it, how much control or influence do we have on their operations?"

Another senior finance manager stated,

“I don’t think anyone was paying much attention to [administrative units] before, and now there is a real heightened awareness of what they are doing. I see that coming out of all quarters. I mean, the deans comment about it, the RRC managers comment about it. Almost any meeting that you go to people are talking, ‘Why are they getting salary increases when we are not, when we have to pay their costs?’ You know, we have to fund it ourselves, and you are adding it to our pool. So I think there’s that heightened awareness of what all those units are doing.”

The suggestion of preferential treatment for administrative units also was brought up by respondents who referred to the order of the budget process. Central budgetary leaders consider budget requests for administrative cost pool units for the subsequent fiscal year in the fall, while academic units wait until spring to make their requests. A dean described his perspective on this timing, including why it is this way:

“The other thing that I think deans were disappointed in was that, initially, the deans were going to have their compact meetings in the fall and then the operational units in the spring, and it got flipped. And, I think there’s a feeling that the operational units oddly have an advantage over the colleges. A lot of the decisions get made in the fall related to operations, and the colleges get what’s left. And, people have said, ‘Wait a minute, what’s our mission here?’ We’re about teaching and research; we’re not about running dorms and food service operations. So, there’s a bit of that weirdness to it, too. Now...there are many reasons why that is, including

the fact that you have to have some time to talk to the faculty in the fall before you come up with compact requests in the spring. The operational units are here year round, and they can get ready for the fall by having conversations in the summer, but we have so many [9-month] faculty in the institution. So, there are practical reasons why it came out that way, but it's just an odd thing where it looks like the operational piece gets priority.”

A leader in faculty governance viewed it as an issue of perception:

“There has been this long battle...over whether the administrative units should be done first or last or in the middle. And, it has seemed to me, that is a fruitless argument. The argument has always been that they should be done first, subject to a correction at the end if we then discover we are overextended...that correction has been made on occasion, but it has never been well-publicized. So, there is a sense that administrative units get favorable treatment because they are...done when...the budget executive is thinking that everything is going to be rosy. And, when it is not rosy at the end of April and they are finishing up the collegiate units, they have to squeeze it out of the collegiate units. I think that it's a rhetoric thing that the administrative units need to be told, ‘Well, we don't have a budget yet until the end of April, and we may have to curtail the cost pools to provide less expense to the units, and that means you're not going to get to paint the bridge every three years, you're going to paint it every four years.’ So, I think that's a question of perception and maybe

the timing, and the way the thing moves along is part of the bad perception.”

A leader of a central administrative unit described the challenges faced by administrative units seeking budgetary increases:

“The politics around cost pools is tough, having been someone now who has had to manage an administrative budget and tried to get money to do the work of the unit, it is really hard. At some level, that’s appropriate. It should be hard to get money to do administrative work, and it should have to pass a high bar before we spend, and having that pressure on administrative units is a very positive thing. I feel less positive about it, of course, when I lose. And, I have lost a few of those where I felt there were things we really needed institutionally, that I thought were all for the good, that I was turned down for because we were holding the line on cost pools.”

Phrases such as “healthy tension” were used by many. A senior central finance leader stated,

“I mean, I don’t see a division. I think it is healthy that academic units know what the support functions cost. I think it’s healthy that they are able to question what is provided in terms of support and whether it is worth it or not. Now, can they make the decisions to have it or not? No, but they can raise issues and make it enough of a political problem that someone has to deal with it one way or the other. So, I think that is all healthy, even the support units being a little nervous about their services

and having to explain them and justify them and be accountable maybe makes them feel a divide, but I personally think it's healthy.”

Another senior central leader saw cost pool units being unfairly criticized, although the outcome is positive:

“Well, I can tell you it created a lot of tension, because those cost pool units are at some disadvantage. They get a lot of criticism for the increased costs, many of which are driven by things beyond their control. Fuel goes up 20 percent. Construction costs go up. So, I think it's... created some divisions. But, it's also created some very healthy conversations, because now those costs, you call them cost or administrative cost pool units, they are accountable to the academic enterprise now. So, I have, as a dean, I can say, ‘You know, the admissions office just isn't working very well. And, I'm paying a lot of money, my tax this year’...It forces this kind of conversation. And, I actually think that's been one of the benefits of RCM, because it was a mess in the old days. And, I think right now those units are much more attentive to being service-oriented, being productive, trying to be efficient. It's not perfect, but at least you can have a conversation about it. It isn't just a big black hole where everybody gets their money and there's no accountability, because you're paying for it every year.”

The “conversations” described above sound positive, yet others in the institution questioned whether those conversations are happening in a productive way. A dean explained,

“Certainly, the cost pools were an attempt to get accountability from the central units. And, I applaud that, because when [a former President] did it, he didn’t do it on the central units, he did it on the schools. I think accountability for central units is a good thing. There was supposed to be all this feedback to the deans. That doesn’t happen...I mean let’s not fool ourselves, it’s in the model but it doesn’t happen.”

Some interview subjects referred to advisory panels that were supposed to be established for each cost pool. Such panels were to be populated by personnel from academic units, but interview subjects only knew of one panel that came to fruition. A leader in the central administrative unit that established that panel spoke favorably about the experience:

“And, year-to-year we do go in and talk to what we call a budget advisory committee. We talk to faculty; we talk to deans; we talk to finance people from across the different colleges we serve. And, we talk to them about our budget, and we tell them those things that we believe that we need new investments in. We talk to them about things we’re probably going to be stopping because of financial pressures. I think that’s good. I think that we have a much better means of communicating what we do here to a broader community, and I think from that perspective that’s been helpful. We really never had a budget advisory committee that told us to stop doing what we’re doing and scale back and cut things because the pressure on individual colleges was too much. And, as I say, that includes having a dean or two in these meetings or an associate dean, which somewhat

surprised me, because at some point in time, the cost pool charges to the colleges are a significant challenge. And, when we go in and ask for major increases, sometimes we'll ask for double digit increases, I think what we've gotten is kind of a University-wide perspective on things. So, we go in and potentially make a pretty bold request, human nature says that you might get a lot of push back... That's never happened. There's always been a fairly reasonable, thoughtful discussion, and at the end of the day, there's always been support for increased investments in things that we thought were necessary, and I think that's where you get some of that University-wide discussion and University-wide perspective, and I think that's all good."

The same subject also referred to the direction at implementation for all cost pool units to establish such committees:

"[The cost pool units] were all told to [establish an advisory committee]. Because the reason that we do it is when this was implemented, we were told to do that, and we took that seriously. And, we invented that process, and we've been doing it ever since RCM formally started. Every 'recipient' of cost pool dollars was told to do that... and I think other than our office, to the best of my knowledge, every unit chose to ignore that. I think it's a great idea. I think every cost pool unit should be doing that. I don't think it's a terribly burdensome process. I mean, we keep it simple. I provide the group with a one-page spreadsheet that shows the group at a high level where we put all of our money on the [operations and

maintenance] side. We're talking about [operations and maintenance] money primarily, cost pool dollars. We don't talk about the revenue streams that come from royalty income or other things that happen, you know, the research programs of our research centers. That's not our focus. It's the state money; it's the cost pool money. We show them where we put it. We show them where we want more money. We show them where we are making cuts. Very simple. Very straightforward. They always give us good advice. It's almost always the case they tell us some things we want that we probably shouldn't do, but there have also been cases where we have not come to the table with something, and they've suggested that we put it on the agenda. So, it's been a really good open dialogue. Some of the people have served on this committee since its inception, and so they are very free and willing to offer input. It's a one-hour meeting, and...it's not burdensome to anybody. And I say it's a good use of the process.”

A collegiate finance director also spoke favorably of the advisory panel described above, and she reiterated that the rest of the cost pool units ignored the instruction to form such a committee:

“I was on this, [an associate dean] was on it, too, the steering committee for [a particular cost pool unit], and one thing that [the finance director] says to all of us at the beginning of every meeting that I've been to, is, ‘You know, when they rolled this out, everybody was supposed to have like a steering committee that reviewed their costs,’ and, to his knowledge

it's only [this particular cost pool unit] that has one. To my knowledge, too. I certainly haven't been asked."

Since administrative cost pool units, with one exception, did not create budget advisory committees, there is no formal, routine feedback structure or most cost pool units. The absence of formal feedback structures may risk unhealthy conversations, which were described by an interview subject:

"When you argue about cost pool charges, you don't necessarily have an argument about what makes a great university. What can we do to shift the University as a corporate entity that will provide the next 50 years of excellence? Those discussions are hard to have, because people are arguing about nickels and dimes and pennies all along the way. And so, I think it's focused a lot of energy on things that, while they are very important, ... probably don't steer the ship long-term necessarily in the right direction. And, it's tough to have that kind of discussion."

In summary, interview subjects did not view RCM as damaging the relationships between central administrative units and colleges. RCM also, however, does not appear to have improved the relationship, which it may have the potential to do. RCM provides an environment ripe for healthy, strategic discussions, but they are not automatic. Productive conversations still must be facilitated by a formal structure and leadership, which interview subjects viewed as being insufficient.

Proposition 6: Interdisciplinary cooperation declines under Responsibility Center Management.

A common criticism of RCM relates to cooperation across units. Often, it is alleged that interdisciplinary research specifically is stifled by RCM, but interview subjects spoke to interdisciplinary cooperation generally, including interdisciplinary teaching. In fact, several subjects cited interdisciplinary instruction as being more problematic than interdisciplinary research. Divergent opinions were expressed in regards to interdisciplinary cooperation, but an area of broad agreement was that, throughout higher education, interdisciplinary work is challenging. A senior finance leader explained,

“Interdisciplinary research is hard, because you’re naturally coming at things from two different perspectives. It’s some of the most interesting stuff going, but it is hard regardless of your budget model.”

Another stated,

“I think interdisciplinary research or instruction of any kind was a problem before we had RCM.”

A leader in faculty governance agreed:

“Yeah, well, it’s always been a problem. It was a problem before RCM, and it’s a problem now.”

A few respondents saw barriers to interdisciplinary cooperation as fundamental to higher education and RCM as having little or no impact. A senior central academic leader explained,

“I think that’s one of the big red herrings. You’ll hear it, but I think it’s the biggest red herring around. Because when we were allocating monies centrally, we were putting more money into interdisciplinary education than almost any other area...And, there was nothing from our perspective to stop a couple of deans from sitting down and writing a contract of some sort to share resources for X, Y, or Z. So, again, I would argue this is not RCM. This is a question of whether the deans could act smartly and figure out how to divvy the resource.”

In his decades of academic leadership, one dean has never confronted an example of RCM being a barrier to interdisciplinary cooperation:

“There’s this frequently stated comment about how it inhibits interdisciplinary interactions. I always say, ‘Show me an example. Give me an example, because it’s too abstract for me.’ I don’t know of any.”

Many subjects, however, did perceive RCM as a barrier to interdisciplinary cooperation, although most also saw ways to work around it. A senior staff member with central administrative and collegiate experience spoke to this issue:

“I think there is a sort of psychology in how RCM is experienced that is a barrier to interdisciplinary work...When I’ve seen interdisciplinary projects that people have been upset about having trouble getting to come together and getting agreement between the units to do, for the most part they have been ones that in pure financial terms lose money...So, in the past, two colleges could agree to do something that lost a boatload of money, and there wasn’t necessarily that immediate sort of signal to them

that that was a money-losing operation...I don't feel there's any particular force in RCM that stops people from doing this, but it forces people to think through what the costs and revenue are and talk through that process in ways that in the past they could get away with sort of ignoring. And, from an institutional standpoint, that's really very good. We want people to be conscious of those costs and these decisions, and if it loses a bunch of money but accomplishes something really good, as long as colleges can figure out how they are going to make that work financially, then we want them to go ahead with that."

Two people, both administrators themselves, specifically cited financial administrators as the barriers to cooperation. The first, a collegiate finance administrator explained,

"He's the lead behind these big grants that we get that are interdisciplinary. All these faculty from all these different places take them, and yet...he's always stymied by some administrator that doesn't want to cooperate. I feel bad about it, because I do feel like it's us administrators that are saying, 'That's not going to work, we need to have our...' but it's a financial reality."

Another senior collegiate administrator had a similar sentiment:

"I recognize my own stake in this. I guess...if it can't just be an academic decision, if it's going to have some financial ramification, then you're going to need to have other people involved in the discussion to make sure that the finances work. And, to the extent that the people in those

positions are competitive, it becomes very difficult. And so, I think a big key is making sure that whatever power that people in finance positions have in the units is very limited when it comes time for these academic decisions to be made.”

A faculty governance leader suggested the barriers could be minimized by central leadership developing a standard framework within which colleges could negotiate:

“One might talk to, say, the vice president for research, and say something like, ‘There ought to be a paradigm...that says...this doesn’t require reinventing the wheel every time you do it.’ The only question we have to face is: ‘What are the numbers that go in the boxes?’ And the deal is a standard format, it’s the numbers in the boxes are different and they all have to add up to 100.”

A senior central administrator, however, referred to numerous efforts to do just that:

“I think if you have informed deans and informed department heads, you can figure it out, because you have the costs and you have the revenues. You just need to figure out what you’re going to transfer and how much. But, somehow, that seems so complex to the units...I can’t tell you how many times I’ve been asked, ‘Can you be on a committee? We’re going to figure out the definitive agreement.’ Because the cultures of the colleges are so different, you can’t come up with one size fits all...The one faculty committee kind of fizzled. The latest iteration is something that [a faculty member] was working on when he was in the Provost’s Office. And, I

don't mean to make light of it, but it always starts with faculty saying, 'Oh, nobody's really looked at this, and I'm sure we can figure it out,' and then they get together and they say there isn't anything that works for everybody, and we'll just let it go and get on with our business...Departments can negotiate it, because they are so different. If you try to negotiate with the law school versus the business school versus the [medical] school, the [medical] school has a whole different way of paying people...They count people's time differently. There are differences in faculty workload. Usually what works is to get the two [collegiate finance directors] together, and usually in half an hour they've figured something out they both think is fair."

That such negotiations are necessary under RCM and not under some other budget models suggests that barriers are created by RCM. A senior collegiate administrator, however, asserted that there are barriers under any model:

"I would say that, to me, there's not one budget model that I can think of that would say, 'If you do that budget model, it's going to completely hinder your ability to do this work.' It's really, 'If you do that budget model, it's going to create barriers to this work, so what are you putting in place to overcome those barriers?'...There's not going to be complete happiness with any model that exists. It's just impossible, so I would say that the model is going to be what the model is, and people, so long as they understand it, then they can figure out how to work within it. And I'd say, the benefit to me of this model is you can understand it. And, so it

does create some barriers. It does create some competition. It does create some tensions, but with the right people in place having the right conversations, I think you can ease some of that.”

Senior University budgetary leaders acknowledged challenges to interdisciplinary cooperation, but one pointed out that RCM provides leaders with tools to address the potential problems:

“I think it is a problem, and I have been consulting around the country on this...It is very routinely a problem before an RCM system. Now, once you do an RCM system, it creates – because of the way the revenues automatically flow formulaically, and the costs – it does create,...problem points, that people have to work through that they probably didn’t before...They have to come to an agreement about how those revenues and costs flow, when before they really didn’t have to care about it. So, if you consider that to be an additional barrier, I would say that’s true. But, again, I get back to: you have to manage it from the beginning. And this is also one where I don’t think we did a good job...One of the deans, when we talked about this a couple years ago said, ‘You know, part of it is a dean’s responsibility to just make this stuff happen. It’s an expectation. You have to do it.’...Another piece is, you can create incentive pools in any kind of budget model. We could incent that activity by having money available or something...to kind of grease the problem areas. There’s different ways that you have to deal with it, but I don’t think it created the

problem. I think it exposes different barriers to it, but I think you can manage them, and we just haven't done a very good job of it."

Another senior University budgetary leader highlighted the distinction between RCM and decisions:

"I will say that I don't think the attribution of revenue or expenses did anything to incentivize or dis-incentivize interdisciplinary activity, but I will say that perception is that it has. So, I suspect that it has because of the perception, not the reality. [Another senior leader] and I were talking about this a couple months ago, and she said [she talked to a senior leader from an institution] who has the traditional budget model, and she said their single biggest issue is interdisciplinary research, interdisciplinary activities. You're going to get it in both models. So, my intuition tells me it's not what we're doing...Now, remember, I keep the model separate from decisions. They should be complaining that the President and the academic leaders have not provided enough money to grease and support interdisciplinary research. They shouldn't be saying...the incentives of the budget model are ruining interdisciplinary activity."

A former senior University leader described how the model can be used as a barrier or an incentive for interdisciplinary cooperation:

"I think you will find splendid examples where people have used RCM creatively to incent and support interdisciplinary work, and you'll find some areas where people have erected barriers, and I ran into both."

And, finally, a senior administrator also put a point on the issue, saying it's not about the model, but about leadership:

“It does go back to – in addition to the budget model – it does go back to leadership. Having somebody who is concerned about those things and who is driving that agenda...But, there's...certainly no large pool of central dollars to be able to provide things to interdisciplinary efforts. There's a small pool of money...And, so we've struggled at a University level to do that. I don't think RCM has helped us, but it's probably not the only reason that we've got challenges there.”

Subjects discussed interdisciplinary teaching less robustly than interdisciplinary research or cooperation generally, but some who spoke specifically to interdisciplinary teaching found the most challenging barriers in the area of interdisciplinary instruction. For example, a senior collegiate finance director stated,

“I think...there's been more barriers to the interdisciplinary teaching. On the research side...it's some extra haggling around [indirect cost recovery], but...faculty...collaborate with their research, that's what they do. So, I haven't see that that's been an issue. On the teaching side, they like to keep throwing it up as this big barrier, but I still believe if it's the right thing to do, there's a way to figure it out.”

A barrier in the instructional area results from different financial models in each college standing in the way of common ground on which even to begin a negotiation.

Overall, the majority opinion is that interdisciplinary cooperation does face barriers under RCM, because conversations about finances are forced upfront.

Challenges that could be ignored under a traditional model are brought to the front under RCM. Some subjects view these as desirable “barriers” that are overcome by negotiation or that stop projects that are not in the institution’s interest. University leadership has opportunities to minimize the barriers by creating incentive programs for interdisciplinary research, so many subjects find leadership decisions, not the model, to be the fundamental obstacle.

CHAPTER 5

Discussion

This study provides a robust answer to the research question: To what extent are common beliefs about Responsibility Center Management (RCM) systems supported by actual outcomes? The goal of this research is to enhance understanding of the impact of an RCM resource allocation system on major public universities. An in-depth case study approach was taken on a public research university with extensive experience with RCM, the University of Minnesota. Previous studies of the University of Minnesota by Hearn et al. (2006), Kallsen et al. (2001), and others provide an ideal launching point for this research study. Conclusions about the University of Minnesota's experience and hypothesized broader implications are based on information from the existing literature, a review of the University of Minnesota's financial and other metrics during its RCM period, and 21 interviews with key figures in the University's RCM past and present.

Every institution of higher education is positioned in a unique context, yet many characteristics are in common, so some carefully considered generalizations are apt. Characteristics such as an institution's financial position, prospects for the future, level of prestige, relationship to its state government, and governance structure must be taken into account when considering the applicability of generalizations based on the University of Minnesota's experience. Despite these caveats, learning from each other's experiences presents universities the best potential for making informed judgments about their own future paths. This research seeks to improve the likelihood of wise judgments by public university leaders as they chart their financial futures.

The findings of this study address multiple gaps in the existing literature. Most broadly, the research builds on the academic capitalism (Rhoades & Slaughter, 2004; Deem, 2001; Hanley, 2005) and university commercialization (Bok, 2003) literature by adding considerable depth to the understanding of entrepreneurship and innovation at a major public research university using RCM. In-depth research into the University of Minnesota's experience with academic capitalism and commercialization particularly is of interest because of the University of Minnesota's extensive experience with incentive-based budgeting, i.e. RCM. The current study elucidates the potential relationship between RCM and academic capitalism, and indeed evidence of a relationship was identified in interviews.

The findings of this study also address RCM more broadly, beyond the connection to academic capitalism, and in so doing the study builds on the incentive-based budgeting literature (Curry, 1991; Hensley, Bava, & Brennan, 2001; Jarvie, 2002; Lang, 1999; Leslie, Oaxaca, & Rhoades, 2002; Strauss, Curry, & Whalen, 1996; Whalen, 1991 & 2002). The current study added a new level of understanding of the impact of RCM on a major public research university. The University of Minnesota's experience is of particular interest due to the existing literature (Hearn, et al., 2006; Kallsen, et al., 2001) addressing the University of Minnesota's experiences with incentive-based budgeting.

The current study takes a step beyond the theories associated with incentive-based budgeting and academic capitalism by examining the actual experiences of the University of Minnesota. This foray into experience can be a jumping-off-point for additional research to expand the body of literature around budgeting systems at public universities

and their many impacts, including but by no means limited to academic capitalism and commercialization pressures at institutions utilizing incentive-based budgeting systems such as RCM.

Discussion

This study's research question was addressed through six propositions. This section recaps and summarizes the study's conclusions with regard to these propositions.

Proposition 1: Responsibility Center Management leads to more total revenue that is spread disproportionately across disciplines.

Proposition 1 is upheld, with caveats. University of Minnesota revenues have expanded significantly during the RCM period, but it is impossible to attribute a specific portion of that increase to RCM as opposed to a multitude of other factors including but not limited to economic conditions, state politics, changing demographics, and federal funding. The proposition is upheld due to interview subjects' specific examples of entrepreneurship that were driven by the incentives associated with RCM.

Opportunities for revenue enhancement are not spread equally across the institution, so disproportionality of revenue increases is a near certainty. One can easily imagine different entrepreneurial possibilities facing a foreign language program and an engineering department, and interview responses detailed some of the discipline-dependent differences. Despite inequity of opportunity, central University leaders annually layer funding decisions on top of the formulaic outcomes of RCM, so, while particular revenue streams accrue disproportionately across the institution, executive

leaders have discretion to allow the disproportionality to persist or not by adjusting each unit's allocation of state funds by an across-the-board approach, which maintains the disproportionality, or by adjustments to state support that erase some or all of the disproportional changes to other revenue streams. For example, if college A increases its tuition by \$1 million while college B's tuition falls by \$500,000, central leadership can either let those changes hit the bottom lines of college A and B, or college A's state support can be reduced, which makes available state support that could be used to ameliorate college B's tuition loss. The University of Minnesota's RCM system does not allocate resources; it provides a financial framework to inform decisions on allocating resources, and the financial fortunes of individual colleges ultimately flow from the decisions of University leaders, not from a set of formulas.

Proposition 2: Responsibility Center Management leads to expansion of non-traditional revenue streams.

Proposition 2 is upheld, but only in a marginal sense. Interview subjects disagreed on the impact of RCM on fundraising, external sales, royalties, and other non-traditional revenue streams. The University of Minnesota's RCM system did not change the flow of these revenue streams. Some interview subjects, however, spoke eloquently of the complete change in mindset, expertise, and motivation that accompanied RCM. More financially-savvy deans with more expert financial staff may have been better able than their predecessors to capitalize on non-traditional revenue streams. The interview responses overall suggest that this did occur in many places at least to a marginal extent, and in some places to a significant degree. As different kinds of deans were hired and

collegiate financial leadership at the staff level was enhanced, either through development of existing personnel or turnover, colleges were able to pursue non-traditional revenue streams more confidently.

An unforeseen example of “non-traditional,” revenue expansion was mentioned by multiple respondents. Some subjects interpreted “non-traditional” revenue streams to be revenue streams not traditionally pursued *by a specific unit*. For example, a professional school seeking undergraduate tuition or a humanities department developing technological products, which, while related to its discipline, were more entrepreneurial than tradition would predict. The expansion of traditional revenue streams in new parts of the university may have been more dramatic than the expansion of truly non-traditional revenue streams.

Proposition 3: Responsibility Center Management leads to internal competition among colleges for students and credit hours.

Proposition 3 is upheld, and it was the most controversial topic covered in the interviews. With tuition a major source of revenue for all colleges within the University, every college seeks to expand, or at least not lose, tuition. Some strategies result in generation of new tuition, such as increasing the student body, but other strategies result in shifting existing tuition dollars around the institution. An often-cited example of tuition shifting occurs when professional schools offer undergraduate courses that meet liberal education requirements. When a professional school’s course meets liberal education requirements, students can receive credit toward graduation requirements by

taking classes in professional schools, which shifts tuition away from the college where the students would otherwise have met those liberal education requirements.

A second form of tuition competition occurs when colleges adjust their degree requirements to narrow the list of necessary coursework to focus more heavily on coursework within the college. For example, a college could require a specific statistics course taught by the home college rather than allowing a wide range of statistics courses to satisfy a degree requirement. In the parlance of some college personnel, “keeping their students at home” prevents tuition from “leaking” outside of the college.

The argument against both tuition-seeking strategies (i.e. creating new liberal education courses to attract undergraduate tuition and curriculum narrowing) is that it results in unproductive competition among colleges. The tuition pie does not grow; resources are spent fighting over the same pool of tuition. The counter-argument is that the competition may not increase the tuition pie, but it enhances the student experience because a market for student credit hours and the associated tuition leads to enhanced curriculum of interest to students. As long as academic standards remain rigorous, students are better served when colleges seek to attract them to their courses, but this alters long-standing understandings of collegiate boundaries. There is merit to each side of the argument and anecdotal evidence to support both sides.

Proposition 4: Responsibility Center Management reveals subsidies.

Proposition 4 is upheld. A substantial majority of subjects found that the financial flows around the University are clearer as a result of RCM. A dissenting voice claimed that there was too much complexity in the system to allow everyone to understand the

cross-subsidy flows around the University. While the flow of revenues and expenses across the University are clearer under RCM, there is risk of making decisions based too heavily on the financial flows of the RCM system. The flow of revenues and expenses across the University are what they are because the designers of the RCM system chose them. The financial picture for a college would be different if tuition were split in a way other than 75 percent to the college of instruction and 25 percent to the college of enrollment, as decided by the University of Minnesota's RCM designers. An apparently minimally-subsidized college under a 75 percent, 25 percent system would benefit differently under a 50 percent, 50 percent; 80 percent, 20 percent; or 100 percent, 0 system. A college may do better or worse depending on its mix of students and other factors. Local decision making is also influenced by the incentives created by the formulas chosen by the RCM designers. Clearly, there is additional information available as a result of RCM, but there is a risk that the additional information does not lead to better decisions as viewed from a University-wide level.

Proposition 5: Responsibility Center Management creates an adversarial relationship between academic and administrative units.

Proposition 5 is rejected. With near unanimity, interview subjects viewed divisions between academic units and central administrative units as inherent in higher education and not the result of RCM. Some see RCM-based conflicts between academic and central units as healthy and desirable. Some subjects expressed frustration that there are not more robust accountability and consultative mechanisms built into the cost-pool

budget decisions, and senior University leaders did not dispute that more should have been done in this area.

Proposition 6: Interdisciplinary cooperation declines under Responsibility Center Management.

Proposition 6 is upheld, in part. Interdisciplinary cooperation in research was viewed by most interview subjects to be inherently difficult, and while RCM did not improve that status, it also did not make it materially worse. RCM actually presents tools to improve interdisciplinary research cooperation, though they have not been fully utilized. For example, investment pools could be created or indirect cost recovery attribution formulas could reward and incentivize interdisciplinary research. Some subjects did see barriers to interdisciplinary research, but that view was balanced by the perspective of many that the “barriers” are actually appropriate conversations before initiating a project. At times, initial conversations about project funding will result in not initiating the project, but that may be the optimal decision. RCM may be a barrier to projects of questionable net benefit to the institution, which admittedly is frustrating to researchers favoring those projects. RCM was not viewed categorically to be a hindrance to interdisciplinary research, and, if it were ever viewed broadly to be a major barrier, the system could be adjusted to ameliorate the perceived problem.

Interdisciplinary instruction was considered to be harmed by RCM. Because 75 percent of tuition goes to the college of instruction, colleges have a financial interest in being recorded as the college of instruction. This leads to complexity when cross-college teaching is proposed. Which college receives the tuition and which pays for instructors

are questions that must be negotiated before cross-college instruction can happen, and different financial and other practices can make negotiation between dissimilar colleges a challenge. An interview subject referred to extensive committee work to create standard agreements to simplify cross-college collaborations, but differences among academic units stymied efforts to standardize agreements. Unlike the issues related to interdisciplinary research collaborations, which subjects felt usually could be worked through, the challenges arising from interdisciplinary teaching collaborations were viewed as true impediments to cross-college instruction.

Important Perspectives Outside of the Six Propositions

As anticipated, interview subjects brought up numerous topics beyond the six propositions on which information specifically was sought. These important perspectives are briefly detailed below.

RCM's intended role is misunderstood by some people. According to central officials, RCM is one of three pieces of the budget system at the University, and it cannot be considered in isolation. One must consider it in the context of the annual budget framework and annual budget decisions. Some mistake RCM for the entire budget system, failing to understand its context. RCM's purpose is to provide a financial framework through which to understand the institution and make decisions.

RCM is accepted. While RCM is not universally embraced, there is widespread agreement that RCM will remain in place, so it must be worked within. Going back is seen to be unreasonable and undesirable. Those with experience under the preceding University of Minnesota budget system find RCM to be an improvement.

RCM was a leadership decision. According to most subjects, RCM was not the end result of a robust consultative process. Most subjects agreed that it was chosen by University leaders, and subsequent consultation was on how to do it, not whether or not to do it.

Transparency was thought to be a primary goal, but may not have been.

Transparency was commonly cited as a primary reason for adopting RCM, but senior leaders who designed the system pointed to increasing revenues as a key goal. Review of foundational documents substantiated the idea that transparency was not a primary goal.

Decision making varies across colleges. Some colleges incorporate RCM into key decisions, while others do the opposite by trying to separate it from academic decisions. The financial state of a college may impact where a college falls on this spectrum, with financially constrained colleges, out of necessity, putting more emphasis on RCM's impact on every decision.

RCM may work in good times, not bad. On the one hand, several subjects found RCM to work well in a stable financial environment while failing in scarce times. On the other hand, no budget model will be perceived as working in scarce times, and RCM may provide a framework that allows for better decisions to be made in scarce times. Evidence for the model's durability exists in that Minnesota's RCM system came through a severe financial downturn with neither significant changes nor serious threat to its existence.

Finances take center stage. There was broad agreement that, under RCM, finance professionals throughout the organization become more important and deans must be more financially-oriented to succeed. Data systems and the data themselves must be

robust to support the more financially-minded decisions and decision makers. A side benefit to RCM was more robust and accurate institutional data.

Financial acumen must increase institution-wide. Central leaders must have a high level of technical skill to competently administer an RCM system, and deans and their financial staff need a high level of financial understanding to succeed at an RCM institution. The financial ramifications of decisions are more complex, so accurate forecasting and scenario-modeling are important at the college level under an RCM system, while such skills are less vital outside the central budget office when working within a traditional budget model.

RCM is complex, but as simple as possible. There was disagreement about the complexity of RCM. Most people found it very complex, while others saw the University's RCM implementation as the simplest that such a system could be.

Implications for Policy

The results of this research suggest four implications for policy. First, academic capitalism was energized by the incentives of RCM directly and through culture change. According to Rhoades (2003, p. 10):

“The challenge is more than merely a means of generating new revenues for institutions; **capitalism, academic style, is a cultural system...** Capitalism shapes peoples' consciousness, the way we think and talk about and define ourselves. This is true not only of more and more central administrators, of presidents who see themselves as CEOs, and would like to be paid accordingly. It is also true, increasingly, of more and more

faculty, who see themselves as independent small businessmen, with their faculty salaries as their secure sinecures.” (Emphasis in original)

From an academic capitalist perspective, productivity is equivalent to revenue generation and some disciplines subsidize others (Rhodes, 2003). Multiple interviews at the University of Minnesota revealed that there has been a shift toward more entrepreneurial, revenue-generating activities in academics, research and in external sales and fundraising. In the latter two areas, subjects spoke not of changes to the revenue flows, but rather of an increased comfort in operating in these spaces as financial expertise grew in the colleges. One study cannot prove whether this resulted from the adoption of RCM or was generally seen in public higher education, but many subjects linked RCM to this shift, and one subject with experience at an institution with a traditional budget model described stark differences in innovation and entrepreneurship between the institutions, which he attributed to the different budget models.

The interviews conducted in this study made it easy to see the “competing institutional logics” (Gumport, 2000, p. 69) and inherent tension when business ideas are applied to higher education (Bruininks, Keeney & Thorp, 2010). The previously discussed concept of course poaching, for example, creates an internal competitive environment in the academic area. The University of Minnesota continues to find its way forward, maintaining academic integrity in the face of fierce internal competition for tuition revenue during a time of severe constraints on resources. This study makes no judgment on the desirability of academic capitalism in public universities; it only finds evidence that decision-makers in the University of Minnesota’s RCM system see linkages between RCM and academic capitalist themes such as faculty entrepreneurship,

university commercialization, and other revenue-seeking behavior. How the University of Minnesota or other institutions react depends on institution-specific values regarding academic capitalism.

A second implication for policy is that RCM generates more information, which may or may not result in better decisions. All decisions are made based upon incomplete information, and, in general, it seems that more information leads to better decisions. RCM undoubtedly leads to more information to support decision making, but it is not clear if the additional information leads to better decisions. The formulas that drive RCM create a substantial set of information that informs decisions, but better information does not automatically translate into better decisions. For example, important conclusions regarding relative levels of subsidization across units would differ if the University chose to attribute tuition in a manner other than its chosen 75 percent, 25 percent split. The subsidization levels presented by the University of Minnesota's RCM system are merely one perspective of countless valid perspectives that would arise from RCM systems using different formulas. However, no interview subject pointed out that the subsidization levels as calculated under the University of Minnesota's RCM system present only one of many perspectives. The highly quantitative nature of RCM may promote undue confidence in its being "right."

While RCM's sometimes-arbitrary formulas increase the risk of poor decisions if one puts too much emphasis on the financial flows, they do provide a framework through which to view decisions. The framework may not be perfect, but at least it brings some order to an otherwise incomprehensibly complex array of multi-billion dollar financial flows across an institution with hundreds of diverse units. More data, however, could

create opportunities to cherry-pick from vast arrays of information and misapply data to justify any decision a leader wishes to make.

A third implication for policy is that incentive systems related to cost pools can lead to sub-optimal decisions. Lang (1999) claims that proper overhead and indirect cost determinations are “essential and very demanding” (p. 10). Whalen (1991) asserts that the illusion of free goods and services must be eliminated if optimal decisions are to be expected. To prevent over-consumption of resources like space and utilities, there must be charges. As the theory goes, by assigning traditionally centrally-covered costs to the units that generate university revenues, an approximation of the full institutional cost of a decision is revealed to collegiate decision makers. Lang (1999) stresses the importance of transparent and straightforward allocation of indirect costs (i.e. cost pools), because the cost side of the RCM equation can only be managed by local leaders if there is a clear and predictable cost-allocation mechanism in place. At the University of Minnesota, the manner in which cost pool charges are calculated and understood may not lead to optimized decision making, which should be noted by other universities considering a similar model.

The University of Minnesota charges the Utilities cost pool based on actual consumption on a monthly basis, which is an effective implementation of a cost pool. Chilled water, electricity, gas, and steam usage are tracked and charged to the appropriate units on a monthly basis. The charges are in each college’s budget, and savings or overruns directly impact college budgets in real time. The other cost pools, however, are charged to colleges annually based on metrics from the previous year. That is, headcounts and square footage assignments from the prior year set the cost pool charges

for the next year. Under this approach, which is used for the cost pools other than utilities, college leadership is unclear on the financial ramifications of decisions that impact cost pool metrics.

To be fair, the other 16 cost pools cannot function as the Utilities cost pool does unless every service performed by central administration is priced and charged out to colleges, which clearly is an undesirable outcome. To charge units for consumption of the president's time by the minute, as if his time is akin to metered chilled water, would be absurd. The issue is not the method the University of Minnesota uses to calculate the cost pools; rather, it is the lack of clarity regarding how the cost pools factor into budget allocation decisions. It is unclear to colleges whether they can expect to be held harmless for changes in cost pools or whether they should expect to confront the changes in their budgets. For colleges that expect a hold-harmless treatment, the cost pools are merely informational items, because their budget allocation will sweep away any savings in the cost pools and cover any increases in the cost pools. Units that expect not to be held harmless face a complex array of incentives based on the cost pool formulas. For example, expecting not to be held harmless would lead a college to factor the per-head cost of each student into a financial analysis of a proposal that includes changes to the student head count. If the college is ultimately held harmless, then it was incorrect to include that cost in the decision-making framework for that decision. The contrary also applies. If a college expects to be held harmless for cost pool changes and makes a decision to alter its student head count, but the college is not held harmless for the resulting cost pool changes, it may have made an unwise decision.

In a further complication, if cost pools are intended to generate better decisions by including central costs in colleges' decision-making framework, then the cost pools may not present the right information. The cost pools generate information on the average cost per student, staff, or faculty and per square foot, but decisions should be made based on marginal costs. If a college has an opportunity to bring in a few more tuition-paying students, the marginal cost of those students at the institution is near zero, but factoring cost pool charges into the decision-making framework would mean adding the average cost per student on the cost side of the ledger. This approach could result in missed opportunities that appear to be money-losers from this perspective, but only because the marginal cost-pool impact is overstated. Whether the array of cost-pool formulas assign a per student cost of \$4,000 or \$2,000 or \$10,000 or \$0 drives the apparent profitability of incremental decisions, an approach that can be dangerous because average costs per headcount charged to colleges do not reflect the marginal cost to the entire institution of adding an additional head.

Concern about using average rather than marginal costs was recognized in an internal University white paper from the early-1990s: "In assessing change, estimated marginal (not average) revenues and costs must be used" (University of Minnesota, *Responsibility Center Management, Designing the Minnesota Version*, p. 3). Yet, this point does not appear to have been addressed in the implementation of cost pools. A partial hold-harmless treatment for some cost pools would largely resolve this problem. Cost pools could be divided into two categories, those where the incentives are deemed by University leaders to be desirable and those that are not. The incentives would be exposed for the former and not for the latter by holding colleges harmless for changes in

the latter, but not in the former, in the annual budget allocation process. Space and utilities are areas in which incentives might best be allowed to play out, whereas it could be argued that many other categories should receive hold-harmless treatment in the allocation process.

A fourth implication for policy is that without strong curricular oversight, allegations of course poaching and curricular parochialism will arise, and without clear boundaries it will be impossible to recognize course poaching and undesirable degree-requirement parochialism. Rhoades and Slaughter (2004) speak directly to how universities' internal budget systems drive competition for students and credits, and they relate the issue to academic capitalism. Interview subjects spoke frequently and at length about this struggle occurring at the University of Minnesota. The allocation of tuition to colleges based on enrolled students and student credit hours drives the competition.

Subjects described two sides of the debate. Competition can lead to a more robust curriculum that interests students, but competition can also lead to unhealthy and unproductive activities when colleges let quality suffer or venture to the fringes of their natural subject matter, as noted above in references to course poaching. Nearly every subject who recognized the problem suggested a curriculum committee to advise the Provost and settle disagreements among colleges. A curriculum committee seems an easy or perhaps the only potential solution to the problem of inter-college tuition fights; however, in practice such a committee may not be an effective arbiter. If the problem were colleges' duplicating courses of other colleges, it would be easy to solve. The problem, however, is deeper, and it challenges the core philosophy of higher education.

The root problem is not simply one college duplicating a course taught by, and within the mission of, another college, which would be an easy problem for a governing committee to fix. The root problem is deeper and involves senior leadership's vision of the overall curriculum and collegiate responsibilities across the curriculum. A curriculum committee and Provost charged to police amorphous collegiate-mission boundaries on a course-by-course basis is not a resolution to the real struggle. Some would argue that bringing such otherwise-hidden conflicts to the surface is a strength of RCM, not a weakness. To be a strength, however, the tension must be deeply understood and properly managed.

Many of the "poaching" debates are between professional schools that historically have had few or no undergraduate course offerings and colleges in the liberal arts and sciences. Both the liberal arts and professional schools can argue that their programs offer valuable diversity of experience and knowledge to undergraduate students. A major public research university needs a strong liberal arts college and should capitalize on the breadth of its academic programs, including professional schools. In a time of limited resources, these two areas are colliding, and RCM monetizes the struggle. Leadership at the most senior level, rather than a curriculum committee, is a more appropriate arbiter of the financial and philosophical debates between colleges. A potential outcome is a more distributed liberal arts curriculum and a smaller, but more highly subsidized liberal arts college, but only central academic and financial leadership can facilitate this or other solutions to college border battles.

The generalizable lesson for RCM institutions is to recognize that instructional boundaries between colleges inherently are blurred, and curricular struggles between

colleges will assuredly arise. Curricular mischief begins on the margins and is initially difficult to recognize. Mechanisms must be in place to settle disputes, and settling disputes sometimes will require philosophical and strategic direction from senior University leaders. Invaluable to an RCM institution is a curriculum committee to vet disputes and to recognize deeper curricular issues that require elevation to senior leaders responsible for setting the University's strategic direction. A president and provost need a curriculum committee with such wisdom to prevent curricular disputes among academic units from festering. Finally, curricular decisions need not be so blunt as to either, 1) allow a course to go forward or 2) not allow a course to go forward. An RCM system allows for other outcomes, such as allowing a new and popular course that shifts tuition from one college to another to be accompanied by an allocation adjustment between the two colleges to partially or fully ameliorate the tuition movement.

Implications for Practice

The results of this research suggest three implications for practice. First, University leaders should communicate proactively the purpose of RCM and their expectations of the leaders who make decisions within the system. RCM is a foreign concept to many academic leaders, and its theory, practice, and the intentions behind it must be reiterated constantly to leaders throughout the institution. Due in part to normal turnover after RCM implementation, some collegiate academic and staff leaders lack a full understanding of what RCM is and is not supposed to do. As Whalen (2002) reminds us, incentive-based budgeting is more than formulas: "RCB is embodied in the state of mind, an attitude, of both central administration and center heads that they are

empowered to make decisions” (p. 11). A primer on University leaders’ philosophy on RCM would be useful. As new people come into leadership positions, they need an orientation to the purpose, history and intent of RCM.

RCM with full-cost allocation provides information, but some of the resulting incentives are not productive. Without reminders of how incentives are appropriately viewed, there is a tendency, particularly in times of resource constraint, for decision-making to be informed by raw financial incentives instead of being balanced by the teaching, research, and service missions of the institution. At the University of Minnesota, there is a disconnect between the RCM philosophy of central leaders and some colleges’ understanding of the intent behind RCM. As discussed above, the information generated by RCM does not necessarily lead to better decisions. University leaders should be more proactive in educating deans and other college leaders about the proper perspective from which to view RCM and the expectations, financial and non-financial, that University leaders have of college leaders.

A second implication for practice is that relations between colleges and administrative cost pool units could be strengthened by a deeper understanding of each other, which RCM could facilitate. Interview subjects did not feel that RCM damaged relationships between central units and colleges, but RCM presents an opportunity to bridge the inherent divide by having interested parties in colleges engage in consultative processes with administrative units. Collegiate payments into the cost pools that fund administrative units give colleges a stake in administrative unit operations, and RCM provides information that can be, and is, used as ammunition for colleges to allege favorable budgetary treatment of administrative cost pools units over colleges. Cost-pool

advisory committees populated by interested collegiate personnel could ameliorate the bitterness of cash-strapped colleges toward administrative units, which by some analyses are treated more favorably budgetarily than the academic units. Advisory committees also would build relationships between leaders in colleges and administrative units. Perhaps the tension to which interview subjects referred would be more productive if each administrative cost pool provided their “taxpayers” a formal venue in which to provide structured feedback.

A third implication for practice is that central university leaders could be more transparent regarding RCM’s interaction with the annual budget development and allocation decisions. According to RCM literature, RCM should incentivize revenue creation and bring full institutional costs into decision-making throughout the organization, but interview subjects made statements that seemingly conflict with such goals. For example, the annual budget process was referred to as a bail-out budget process and the annual allocation strategy was criticized to be keeping as many colleges above water as possible. Senior University leaders also were quoted by more than one subject as saying that the central administration uses the annual allocation process to put the colleges where they want them, which was interpreted to mean that, after the RCM incentives play out, the collegiate allocations of state appropriations are adjusted by central decision makers to offset the outcome of RCM to whatever extent central leaders desire. Taken to the extreme, when units with declining revenues are awarded more subsidy, RCM turns into an elaborate set of pseudo-incentives that are wiped away when the state subsidy is allocated disproportionately away from units generating more revenue to those generating less. RCM becomes an incremental budget model.

In times of constrained institutional resources, it is especially challenging for University leaders to balance allowing RCM incentives to materialize in budgets with taking from those who succeed under RCM to support those who do not. Nonetheless, interviews revealed a sense in colleges that annual allocation decisions are consistently used to maintain the status quo rather than allowing RCM to financially reward or penalize colleges. Central leaders acknowledged that, from the beginning, RCM at the University of Minnesota was not intended to be an “every-tub-on-its-bottom” system where colleges are left to fend for themselves and formulas dictate all the decisions. More predictability in the allocation process would be advantageous, however, for decision-makers across the institution. Colleges should have expectations that reliably predict whether college-generated revenue increases will be allowed to hit their budgets or if increases in earned revenues, such as tuition and indirect cost recovery, will be traded off against state appropriation levels. Similarly, colleges should understand whether increases or declines in their cost-pool charges will be exposed in their bottom lines or adjusted away using state appropriation changes. Finally, the end results of the annual allocation process should be shared with all colleges, so college leaders understand decisions about their own colleges in the context of other colleges. Such transparency should be built into the process, so questions can be raised and decisions explained.

Limitations

This study focuses on one institution, so the results are not generalizable to other institutions. Innumerable implementation decisions are made at every RCM institution,

so, even when considering an RCM system at a similar institution, conclusions based on the University of Minnesota's experience must be viewed with an understanding of the nuances of the RCM system at each institution. This study also focuses on a specific period of time with unique economic and political climates and leaders at the University of Minnesota. Differences in these factors would impact an institution's experience with RCM. The study is not applicable broadly to private institutions or to non-research institutions. It is intended as a first step toward understanding the multitude of complex issues that arise when RCM is implemented at a public research university. A broader study of more institutions and studies that delve more deeply into specific issues are necessary for a better understanding of how RCM changes the universities in which it is implemented. One of the research objectives was to identify areas for future research. This analysis of the University of Minnesota's RCM experience has presented a framework that allows others to apply similar techniques at other institutions to establish a body of RCM case studies, which may be used to generate testable hypotheses.

Directions for Future Research

To continue the work started by Kallsen et al. (2001) and Hearn et al. (2006), which was built on by this study, future research could further examine experiences with RCM at the University of Minnesota. The University of Minnesota's system will continue to evolve, and leadership changes and political and economic contexts will create an ever-changing experience. The work in this study and by Hearn and Kallsen provide a launching point for further research at the University of Minnesota.

The Academic Health Center at the University of Minnesota implemented RCM differently than the rest of the University by pushing RCM incentives down to a lower organizational level than other University subunits. The Academic Health Center's approach to RCM was considered out of scope for the present study, but research into the differing experiences of those within the Academic Health Center compared to those outside of it would enhance understanding regarding at what organizational level to apply RCM principles.

Finally, dozens of universities have experience using RCM or similar incentive-based budget systems. A statistical study could evaluate the impact of RCM on a range of financial variables at a wide range of institutions. Such research would require detailed understanding of each institution's RCM past, including implementation dates and choices in key implementation variables. Such a study would be highly ambitious, because substantial differences among RCM systems and sometimes long implementation periods would necessitate extensive research at multiple institutions.

Conclusion

Each university has many options regarding its resource allocation system. Universities may choose an incentive-based system or a traditional model, and under each of those major headings are numerous variations. Once a basic model is selected, countless implementation decisions must be made, each decision having some obvious and some nuanced ramifications. With a multitude of choices, there are as many budget systems as there are universities. A dizzying array of options may lead some to wonder: how much does it all matter? Perhaps the complexities associated with alternative

systems outweigh the potential benefits, and nothing is warranted beyond a simple, traditional budget model. Or, is the messiness accompanying any sophisticated budget model a necessary evil to unleash the full potential of a large, complex organization? There is no one answer to the questions, but there is one source of the answer: leaders.

The president and other senior leaders of a university must be fully and publicly committed to their budget model. No model will succeed without consistent and overt support of university leaders. Budget models will be criticized and scapegoated, and leaders must be resolute in defense of their chosen systems. If leaders lack demonstrable confidence in their budget system, then others across the organization will rightfully question it. Different budget models can serve admirably in a range of circumstances, but no budget model can succeed without broad-based support, and that support must start at the highest levels of the organization.

The academic literature and University of Minnesota personnel raise the importance of strong leadership accompanying RCM. The oft asserted importance of strong leadership approaches the point of becoming cliché. While difficult to dispute, what does it mean to say RCM requires strong leadership? In a traditional budget model, university leaders are expected to make allocation decisions – visions are evoked of the “smoke-filled rooms” of old where decisions of great consequence were made by a few. In a traditional model, strong central authority is the norm, and it is clear where to direct criticisms of those decisions. In an RCM system, authority is not so obvious. Decision making is distributed by design, and a system of incentives creates financial flows around the institution. Exerting central authority to move resources across colleges in a decentralized allocation model is a challenge, particularly when RCM principles create a

sense of ownership in colleges over the revenues attributed to them. Moving resources from one college to another, or making a decision with an indirect effect of moving resources from one college to another, becomes a difficult decision under RCM. Moving resources creates a winner and a loser, and RCM identifies those parties. To the extent “strong leadership” equates to making difficult decisions, RCM indeed demands strong leadership because RCM creates and exposes many difficult decisions.

With difficult decisions being one product of RCM, there is risk of decision makers becoming paralyzed. Not making a decision is a decision – the easiest and often most detrimental decision. Strong leadership is required to avoid leaving important decisions undecided. Failure to make important decisions can result in disorder and leaves the budget model itself the subject of criticism. Weak leaders may even shirk decisions by invoking the budget model. RCM creates a financial framework that brings decisions to the surface – important decisions about the priorities and values of the institution. No reasonable budget model itself determines the priorities and values of an institution. All budget models – traditional, incentive-based, zero-based, and more – present decisions, but, no matter the model, wise leaders are required to, first, recognize the decision points and then make the choices that set the course for the institutions they lead.

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Appendix 1: Interview Questions

RCM interview questions for central personnel

We are here to discuss the University of Minnesota's experience with Responsibility Center Management, or RCM, which was implemented fully in fiscal year 2007. I have a series of questions that will draw on your experiences and perspectives with RCM over past several years.

Participant roles

1. What is your current position at the University of Minnesota? Did you hold a different position when the University converted to RCM? If so, what was your position?
2. What role did you have in the University's conversion to RCM?

Background, context, and RCM outcomes

3. a) What is your overall impression of RCM at the University of Minnesota? b) Can you tell a story that reflects your experience with RCM?
4. Have your views on RCM changed since implementation? If so, how?
5. In your view, has RCM been accepted or rejected by the University community? Can you provide some examples?
6. What were the institutional goals when RCM was adopted? To what extent, if any, have these goals have been met? To what extent, if any, have there been unanticipated benefits?
7. What risks, if any, concerned you about using RCM at the University? To what extent, if any, did these risks come to fruition? To what extent, if any, have unanticipated risks or problems arisen?

Measurable financial outcomes

8. What impact, if any, did RCM have on revenue changes? Are you aware of analyses that link revenue changes with RCM? (A)

9. What impact, if any, did RCM have on revenue diversity (for example changes in non-traditional revenue streams)? Are you aware of analyses that link changes in revenue diversity with RCM? **(B)**
10. To what extent, if any, did RCM have a disproportionate impact across academic disciplines? Are you aware of analyses of varied impacts of RCM on different academic disciplines? Can you provide examples of RCM's varied impact on different academic disciplines? **(A)**
11. To what extent, if any, has RCM enhanced understanding of cross-unit subsidies? To what extent, if any, has decision-making been altered due to an increased visibility of cross-unit subsidization? **(C)**

Other impacts and perceptions

12. To what extent, if any, have institutional characteristics (for example decision making processes and culture) changed in ways that may be linked to RCM implementation? **(D)**
13. To what extent, if any, did RCM create unproductive competition across colleges? For example, have you observed colleges engaged in inter-college competition to take advantage of RCM's financial incentives? **(D)**
14. To what extent, if any, did RCM create or reinforce a division between colleges and cost-pool units? **(E)**
15. To what extent, if any, did RCM create or reinforce barriers to inter-disciplinary cooperation? **(F)**
16. On balance, has RCM had a positive or negative impact on total revenues? **(A)**
17. On balance, has RCM had a positive or negative impact on the spread of revenues across academic disciplines? **(A)**
18. On balance, has RCM had a positive or negative impact on non-traditional revenue streams? **(B)**
19. On balance, has RCM had a positive or negative impact on the visibility of cross-subsidies? **(C)**

20. On balance, has RCM had a positive or negative impact on internal competition among colleges for students and their tuition? **(D)**
21. On balance, has RCM had a positive or negative impact on the relationship between academic and administrative units? **(E)**
22. On balance, has RCM had a positive or negative impact on interdisciplinary cooperation? **(F)**

Conclusion

23. Is there anything else you would like to add?

RCM interview questions for non-central personnel

We are here to discuss the University of Minnesota's experience with Responsibility Center Management, or RCM, which was implemented fully in fiscal year 2007. I have a series of questions that will draw on your experiences and perspectives with RCM over past several years.

Participant roles

1. What is your current position at the University of Minnesota? Did you hold a different position when the University converted to RCM? If so, what was your position?
2. What role did you have in the University's conversion to RCM?

Background, context, and RCM outcomes

3. a) What is your overall impression of RCM at the University of Minnesota? b) Can you tell a story that reflects your experience with RCM?
4. Have your views on RCM changed since implementation? If so, how?
5. In your view, has RCM been accepted or rejected by the University community? Can you provide some examples?
6. What were the institutional goals when RCM was adopted? To what extent, if any, have these goals have been met? To what extent, if any, have there been unanticipated benefits?

7. What risks, if any, concerned you about using RCM at the University? To what extent, if any, did these risks come to fruition? To what extent, if any, have unanticipated risks or problems arisen?

Measureable financial outcomes

8. What impact, if any, did RCM have on revenue changes in your unit? Are you aware of analyses that can link revenue changes with RCM? **(A)**
9. What impact, if any, did RCM have on revenue diversity in your unit (for example changes in non-traditional revenue streams)? Are you aware of analyses that link changes in revenue diversity with RCM? **(B)**
10. How would you characterize RCM's impact on your unit? To what extent, if any, did RCM have a disproportionate impact on different academic disciplines? Can you provide examples of RCM's varied impact on different academic disciplines? **(A)**
11. To what extent, if any, has RCM enhanced understanding of cross-unit subsidies? To what extent, if any, has decision-making been altered due to an increased visibility of cross-unit subsidization? **(C)**

Other impacts and perceptions

12. To what extent, if any, have institutional characteristics (for example decision making processes and culture) changed in ways that may be linked to RCM implementation? **(D)**
13. To what extent, if any, did RCM create unproductive competition across colleges? For example, have you observed colleges engaged in inter-college competition to take advantage of RCM's financial incentives? **(D)**
14. To what extent, if any, do RCM's incentives influence decisions in your unit? To what extent, if any, is this good or bad? **(D)**
15. To what extent, if any, have you observed decision making in colleges driven solely by RCM's incentives? In other words, to what extent, if any, have you witnessed decisions of no substantive merit made only to gain a financial benefit provided by RCM's incentive structure? **(D)**

16. To what extent, if any, did RCM's cost pool structure lead you or other leaders to view administrative cost-pool units differently? **(E)**
17. To what extent, if any, does RCM create or reinforce barriers to inter-disciplinary cooperation? **(F)**
18. On balance, has RCM had a positive or negative impact on total revenues? **(A)**
19. On balance, has RCM had a positive or negative impact on the spread of revenues across academic disciplines? **(A)**
20. On balance, has RCM had a positive or negative impact on non-traditional revenue streams? **(B)**
21. On balance, has RCM had a positive or negative impact on the visibility of cross-subsidies? **(C)**
22. On balance, has RCM had a positive or negative impact on internal competition among colleges for students and their tuition? **(D)**
23. On balance, has RCM had a positive or negative impact on the relationship between academic and administrative units? **(E)**
24. On balance, has RCM had a positive or negative impact on interdisciplinary cooperation? **(F)**

Conclusion

25. Is there anything else you would like to add?

Appendix 2: Review by the Institutional Review Board



IRB Determination Form

Jp <perke001@umn.edu>

To: David Pappone <pappone@umn.edu>

Hello David,

Thank you for submitting the IRB determination form.

Since the data you are collecting is centered on the interviewees' expertise and not about themselves personally, this project does not require UMN IRB review.

The stamped form indicating this decision is attached.

—
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