Impacts of Outcomes Based Funding on Resource Allocation: A Case Study of Senior Administrators in Colorado

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IMPACTS OF OUTCOMES BASED FUNDING ON RESOURCE ALLOCATION: A CASE STUDY OF SENIOR ADMINISTRATORS IN COLORADO

A Dissertation
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
Educational Leadership

by
Monica L. Kosanovich
December 2019

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ABSTRACT

The purpose of this study was to understand the impacts of outcomes-based funding legislation on senior administrator’s resource allocation decision making at public doctoral granting institutions in Colorado. This qualitative study’s participants included five CFOs who were interviewed after the third fiscal year that HB14-1319 had been operating as the funding allocation model in the state. While there has been quantitative research on outcomes-based funding policies and their effectiveness, there are noted gaps in the literature for qualitative studies. To determine the potential impacts to senior administrator’s resource allocation decision making after the introduction and switch to an outcomes-based funding model, a case study approach was utilized.

Through data analysis five common themes were discovered in the CFOs experiences. These themes include student success measures, accountability, agency status quo, resource/tuition costs, and the politics of funding. These themes contributed to the findings of this study. The findings suggest that HB14-1319 priorities and goals set by the state were already priorities at Colorado doctoral granting institutions. Additionally, these outcomes-based funding goals set by the policy did not have any negative consequences attached to them, and the amount of funding provided by the state was insignificant to elicit a change in resource allocation behavior. The main objective of HB14-1319 was to provide transparency and accountability to the public for overall higher education spending. Lastly, it was found that doctoral granting institutions in Colorado have other sources of funding available to them as revenue.
DEDICATION

This dissertation is dedicated to my mother and my grandmothers. Your wisdom and modeling how women should pursue their goals even in tough times is inspiring. I hope to convey to Jillian & Genevieve the same passion to go after their dreams while treating people with kindness and graciousness that you have taught me.
ACKNOWLEDGMENTS

This accomplishment would never have been possible without the love and support of my life partner John. He picks me up every time I fall and dusts me to off to try again; he loves unconditionally and took on the lion’s share of parenting and chores to help me accomplish this goal. Most importantly he had faith that I could write a dissertation even on days I convinced myself it was impossible. Thank you love-you are truly an amazing human! Yes, we knocked out boredom.

I would also like to thank my committee and committee co-chairs for all their guidance and wisdom through this process. To be stretched to grow is an extremely difficult part of a PhD program, and each of you has taught me how to be a better observer, listener, and researcher. Dr. Frady thank you so much for agreeing to co-chair, your generosity has been immeasurable. To my mentor Dr. Knoeppel, no words can be enough thanks for sharing your wisdom and time with me. Every student should be so lucky to study under someone so talented in their field.

To my peers I went to school with for two years and survived summer school-you rock! You are all amazing scholars and I feel honored to have shared this Clemson experience with you. Until we meet again, hopefully at a fun conference- take care.

Finally, to my family I want to acknowledge that your support has meant the world to me. My parents gave me a love of learning and my daughters give me hope for the future. To my best friend Claire, whom I love like family, you have given me a daily listening ear and an open heart to share life’s ups and downs. You are the loveliest hardest working person in higher ed that I know, my admiration runs deep for you.
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Institutions of higher education in the United States are entering a new era in resource management and are actively engaging in dialogues about how to meet the goals of their institution through mission driven decisions (Hillman, Tandberg, & Gross, 2014). The competition for resources has never been greater in higher education while institutions have felt the pressure from legislators, parents, and students alike to validate the value of the education they are receiving (McKeown-Moak, 2013). Keeping in mind that the federal government is calling for millions of additional college graduates by 2020 (Hillman, Tandberg, & Gross, 2014), McKeown-Moak (2013) “emphasizes that it is imperative that institutions shift their focus to allocation methods that are student-centered and based on measures of success” (p.4). In an era of taxpayer justification states are demanding these measures of success be produced by tying funding to state institutions of higher education through goals set by outcomes-based funding (OBF) legislation (Hearn, 2015).

While this is a transformational time for institutional resource allocation there is a “common thread among all competing perspectives, that the focus on the internal dynamics of the institutions are the primary determinant of institutional action and direction” (Fowles, 2014, p. 276). However, Fowles (2014) also stated that there are still many unknows as far as the “ramifications of this financial shift in terms of both the day-to-day operations and long-term missions of public institutions of higher education” (p. 285). To advance the research in the field of higher education finance it is important to
investigate what impacts the introduction of OBF to the budgeting process of public institutions of higher education has had on resource allocation decisions.

**Significance of the Study**

Research has been slow to identify the impacts organizational financial strategies have on resource allocation. Many experts speculate that allocations create direct impacts on graduation rates, faculty workload, and research grant productivity at institutions, but are calling for more research to bring scholarly data to the discussion (Santos, 2007). Challenging financial and political conditions have prompted many colleges and universities to revise their internal management decision making (Shin, 2010). This leaves finance researchers to wonder if the funding models being used to make resource allocation decisions are the most rational predictors of success for their institutions (Rutherford & Rabovsky, 2014). Fowles (2014) agreed, “research has consistently found that the strings attached to new funding steers faculty and administrators in new directions that are potentially at odds with institutional missions, at least as these core missions have been defined historically” (p. 284).

Data shows “only half of all undergraduates attending public four-year colleges earn their degrees within six years, and strategies to improve college completion has become a salient concern in recent years” (Hillman, Tandberg, & Gross, 2014, p. 826). As the US economy continues to thrive and the need for a more skilled workforce grows, states have placed a priority on improving retention and graduation rates to meet this demand. Colorado specially addressed this concern by saying that “through the demonstration of value and performance, the public will be assured that its investment in
higher education is paying long-term dividends to the economic and civic vitality of the state of Colorado” (Colorado Competes, 2012).

While state appropriations continue to dwindle to historic lows the emphasis on revenue generation from tuition and fees has never been greater (Fowles, 2014). Institutions of higher education in the United States are actively engaging in dialogues concerning budgeting tools to remedy the situation. Specifically, experts’ question what tools are needed to most effectively assist them in achieving institutional goals and objectives within their strategic plans, while being accountable for the use of scarce resources, as allocated by state appropriations and student tuition fee revenue (Zierdt, 2009). Add in the popularity of OBF legislation across the country, it is no wonder that university administrators are seeking answers to the question, “How can 4-year institutions allocate limited resources effectively and efficiently and still maintain or increase productivity as measured in terms graduation rates?” (Gansemor-Topf & Schuh, 2006, p. 614).

Over the years, many have looked to funding formulas to find a one size fits all approach to the resource allocation decision problem. The reality is that funding formulas are very difficult to justify in higher education and hard to explain to outsiders (McKeown-Moak, 2013). Many believe that funding formulas follow the current fads in business practices and that administrators cycle through them until a model can be found that fits their current intuitional needs. As McKeown-Moak (1999) concluded, “formulas will never solve the resource allocation problems in higher education. They cannot recognize the full range of objective and subjective differences among institutions and
neither can they anticipate changes in the missions of institutions” (p.107). However, formulas are not without their place in decision making as “formulas, when properly designed, do provide an objective allocation mechanism that can provide more equity and independent funding of each institution without the power plays and patronage that inevitably characterize such allocation decisions” (McKeown-Moak, 1999, p. 107).

Additionally, some important points to consider in the funding debate as it relates to university administrators’ decision making include: how the student experience is shaped through funds available to support co-curricular programs and how faculty hiring needs are being met (Hendrickson, Lane, Harris, and Dorman, 2013; Santos, 2007). The changing role of faculty, the falling proportion of tenure and tenure-track faculty, changing modes of technology, instruction, and for-profit competitors are all factors to be considered when looking at an overview of the evolution of budgeting models in higher education (Ehrenberg, 2012).

Not to be forgotten as current financial models are being scrutinized at institutions is the overall competitive atmosphere being created by the push for a high standing in the rankings of colleges and universities. de Hann (2015) discussed that for institutions to obtain funding they must be able to demonstrate a specific caliber of teaching and research accomplishments to attract students. This marketing of an institution’s accomplishments to attract students “implies specific marketing capability in gaining recognition of their quality” (de Hann, 2015, p. 46). Additionally, “higher education institutions have always had the ‘gene’ of being competitive in trying to reach high academic standards, to achieve academic excellence, and to obtain international
reputation and status” (de Hann, 2015, p.46). If competition has become a goal in higher education are their resources being funneled directly to achieving this priority? Hillman, Tandberg, and Gross (2014) emphasize how “institutions are reallocating resources in response to the new policies, which supports the underlying theory of action that financial incentives may induce institutions to adjust their business practices” (p. 834).

It is important to understand that many public university leaders believe that the resource allocation decisions their senior administrators are making at their institutions are better than any that could be mandated by state legislation (Weerts & Ronca, 2006). Yet the overwhelming majority, currently 37 states, of public institutions must follow OBF legislative policy (Education Commission of the States, Policy snapshot, 2017). Kosten (2016) stated

As colleges are the primary stakeholders at the intersection between funding and delivering services to best serve their local populations, the incentive-based principles that undergird outcomes-based funding can quickly cause outright rejection to the idea if colleges are not involved in developing the system. (p. 483) These viewpoints support the need for additional research in the area of funding allocation decision making.

While there is extensive literature on OBF and the factors contributing to the trend in budgeting, little research can be found on what impacts it has on resource allocation decision making at public doctoral granting institutions. Practitioners and scholars want to know if the resource allocation decisions being made by administrators are the result of previous institutional behavior or if they are “unobserved factors
common to colleges in states with performance-based budgeting” (Kelchen & Stedrak, 2016, p. 317). Additionally, it is important to investigate if the senior administrators in charge of finances, chief financial officers, in higher education believe they have less control over their funding decisions now that OBF has been adopted in their state.

Since very little qualitative research has been undertaken on the impacts of OBF and every state can add or change the legislation policy yearly (Horn & Lee, 2019), it is important to investigate how one state implemented the transition in the budgeting process. By interviewing the administrators whose job responsibilities are directly impacted by the change in policy it can help determine whether impacts or changes in resource allocation decisions for their institutions have occurred. Following one state that adopted OBF legislation after significant research on best practices and has utilized a consistent model for funding will yield significant data for higher education finance scholars (A. Rauch, personal communication, October 26, 2018). The purpose of this research study is to add scholarly knowledge to the OBF debate.

**Statement of the Problem**

Policy makers and legislators are not assessing the potential impacts to senior administrators at the state public institutions with regards to how outcomes-based policy is affecting resource allocation decision making at their institutions. As a result, many wonder how OBF affects higher education administrators’ decision making related to allocations and use of resource dollars to best meet the mission and goals of their institutions.
In an effort to receive as much state funding as possible universities are following the priorities set by legislatures and policymakers to provide accountability to the taxpayers (Hearn, 2015) rather than their constituencies. “During this time of scarcity and heightened competition, government officials, accrediting bodies, and the general public have begun to demand more accountability about how public dollars are being used and how institutions measure success” (Hendrickson, Lane, Harris, & Dorman, 2013, p. 376). In this new accountability movement of education finance, the achievement of “outcomes” is being held up as the new gold standard for how institutions should manage their resources (Rutherford & Rabovsky, 2014).

The practice of “validating performance for value to constituents” (McKeown-Moak, 2013, p.3) has given rise to the popularity of OBF. The problem lies in the fact that virtually every state has a range of higher education institutions from community colleges to doctoral granting research universities with different funding levels from the state and different student populations to support. Additionally, each public institution has a chief financial officer working to make the OBF policy work for their specific institutional strategic goals. It is important to point out that the performance measure goals of OBF may not be the goals and objectives of the institution. In fact, current research suggests that these outcomes-based policies have “done little to improve educational outcomes and that the underlying theory of action behind performance funding is not well articulated or understood” (Hillman, Tandberg, & Fryar, 2015, p. 502).

Purpose of the Study
The purpose of this study is to better understand the critical role OBF is having in higher education and the impact it is having on resource allocation decisions by senior finance administrators at state doctoral granting institutions. To advance the knowledge in the finance field on OBF legislation it is important to tell the story from the perspective of the decision makers themselves. Since every state funds higher education differently through their state legislature, an in depth qualitative research study on one state’s public institutions can help focus on their rationale for implementing OBF and the specific impacts it has made.

Additionally, information will be gained about the unintended consequences, good or bad, that administrators in higher education have experienced with OBF policy implementation. To best understand if OBF policy is meeting the intended goal for the state it is worthwhile to research how senior administrators make resource allocation decisions for their institutions. It will also be important to investigate if senior administrators believe that OBF helped meet the state goals for higher education as set forth by the policy.

**Research Question**

The research question for this study is: how has incorporating outcomes-based funding HB14-1319 impacted the resource allocation decision making process of senior finance administrators at public doctoral granting institutions in Colorado?

**Theoretical Framework**

Theory is employed as a broad explanation for the behaviors being observed in this research study (Creswell & Creswell, 2017). The theoretical framework for this study
utilized two theories: principal-agent theory (Ross, 1973) and resource dependency theory (Pfeffer & Salancik 1978). As the theory will become the framework for the study (Creswell & Creswell, 2017) it will provide context to the “culture sharing behaviors and attitudes” (Creswell & Creswell, 2017, p. 62) of outcomes-based policy. Additionally, the theoretical explanation will become an “end point” for this qualitative study. It is important to use inductive logic to build from broad themes and patterns to generalizations that can be compared to personal experiences on OBF resource allocation decision making processes (Creswell & Creswell, 2017). The use of theory will illustrate how senior administrators in Colorado view and practice OBF policy in the overall funding decisions they are making for their resource allocations at their institutions.

**Principal Agent Theory**

When discussing principal-agency theory it is important to recognize that “performance funding policies often mirror a basic principal agent relationship, in which state policymakers, as principals, seek better ways to specify the contract with their agents, the public colleges in the state” (Hillman, Tandberg, & Fryer, 2015, p. 505). Since policymakers view higher education as an expensive investment in the state that affects the masses (Hillman, Tandberg, & Fryer, 2015) it is understandable why policy makers have set outcomes to measure the productivity of the agency. Kivistö (2005) stated that principal-agency structure is “applicable for illustrating and examining the inter-organizational relationship between government and publicly funded higher education institutions” (p. 13) and thus will be employed for this study. The use of principal agent theory will help introduce and describe the research question for this
study by explaining why it so important to study the impacts to the agents, senior administrators at the public institutions in Colorado, and the decision-making process they engage in.

**Resource Dependency Theory**

The second theory that was utilized in this study is resource dependency theory (Pfeffer & Salancik, 1978). Resource dependency theory is guided by the beliefs that “social context matters, organizations have strategies to enhance their autonomy and pursue interests, and power is important for understanding internal and external actions of organizations” (Davis & Cobb, 2010, p. 5). Santos (2007) found that by acknowledging the external forces an organization encounters one would have a better sense of how an institution prioritizes their resource allocations. The relationship between the state and public institutions is one with an unequal power dynamic because the resource provider (the state) holds resource and political power over the organization (Santos, 2007). Thus Santos (2007) wrote “resource dependency theory lends itself to the study of universities as complex organizations with often diverse constituents and competing goals by emphasizing the political dimension of these organizations and their relationship to the external resource environment” (p. 127).

From a theoretical perspective the relationship of higher education funding in Colorado can be thought of as a seesaw trying to find the right balance. On the one side you have principal agent theory at play with the state tying outcome measures to the funding they allocate to an institution. Doing so effectively gives the state more of a say in the decision-making process because they are allocating funds for the public good of
education. On the other side of the seesaw you have resource dependency theory utilized where institutions have more independence because they receive the majority of their funding from outside constituencies. Generally, institutions of higher education prefer to operate as independent entities with their own governing boards, mission and goals, and control over their finances and decision making. By utilizing resource dependency theory institutions of higher education are controlling the seesaw and the decisions they make about their resources and funding priorities. In the name of accountability lawmakers want to push the seesaw to a more balanced state for public institutions (Hagood, 2019). OBF in Colorado has been introduced to try and move the seesaw into a more balanced state.

**Model**

Figure 1.1 below is a model that depicts the distribution process of funding for institutions in the state of Colorado before HB14-1319 was signed into law. Prior to HB14-1319 the state provided funds to the institutions, which in turn allocated resources in support of their measures of productivity and internally measured their predetermined outcomes. The power for decision making was held at the institutional level where resource decisions were made in support of the institution’s mission and measures of productivity. Fowles (2014) explains that the norm in higher education finance is that institutions “operate with at least some degree of financial discretion in that general (unrestricted) revenues can be strategically allocated in alignment with broader institutional goals and priorities, however determined” (p. 274).
After HB14-1319 passed and an OBF model went into effect it created an intrusion in the flow of the model and shifted the decision-making power level. Figure 1.2 demonstrates where this shift occurred, by tying the state resources now between the state and the institution. The resources provided by the state of Colorado also came with predetermined outcomes selected by the OBF legislation. According to principal agent theory, the introduction of OBF will shift power to the area between the state and the institution where resources are now provided (Kivistö, 2005). This gives the principal, the state in this model, an overarching role where outcomes now need to be reported. This shift can potentially change the decision-making priorities at an institution thus creating impacts that would be observable at the institutional level.
This theoretical framework will be used to explain and discuss the phenomenon of OBF for the public doctoral granting institutions in Colorado.

**Definition of Terms**

**Outcomes Based Funding (OBF)**- “The use of public money to encourage colleges and universities to increase the numbers and percentages of students who earn high-quality degrees, certificates, and other credentials. It funds universities based on how well they perform key metrics” (Lumina Foundation, n.d.).

**Resource Allocation**- “The process of dividing money or skills between departments of an organization. This is considered an effective way to manage costs and support an organizations strategic goal” (Cambridge Dictionary, n.d.).
**Senior Administrator of Finance**- This is the administrator/executive in charge of monitoring cash flow, financial planning, and other related administrative financial activities within the higher education institution. They develop strategies that will best preserve the assets and income for the organization. Often referred to as the Chief Financial Officer (CFO).

**State funding**- The monies allocated by state legislature in support of public institutions of higher education.

**TABOR**- Taxpayer Bill of Rights. The state of Colorado amendment that requires that increases in tax revenue be tied to population and inflation increases.

**Tuition Dependency**- When an institution is reliant on revenue from tuition to cover a part of their overall operating costs.

**Summary**

Chapter one included an overview of this case study. I have explained the significance of the study, the problem, the purpose and the research question that will be investigated. Additionally, the theoretical framework using principal-agent theory and resource dependency theory along with a model demonstrating how they utilized in Colorado was presented. Finally, the key operational terms for this study were defined.
CHAPTER TWO
REVIEW OF THE LITERATURE

To answer the research question: how has incorporating outcomes-based funding HB14-1319 impacted the resource allocation decision making process of senior finance administrators at public doctoral granting institutions in Colorado, background information will need to be presented. To have a comprehensive view of the funding debate it is important to understand the revenue structure of public universities, examine the historical evolution of funding models in higher education, and have a grasp of the current climate of higher education today. Chapter two will also present the current scholarly literature on the OBF debate. This information will help bring context to this research study by providing the foundational information about higher education finance and how it has evolved into the current operating structure. Additionally, it is extremely important to understand how the state of Colorado education funding system is structured and the role that the principal agent and resource dependency theories play in higher education finance for the state.

Revenue Structure of Public Institutions

Public institutions are required to generate revenue and they do this in several ways (Hendrickson et al., 2013). The main revenue collection categories used to describe how revenue generation occurs at institutions of higher education include: the collection of tuition and fees, state appropriations, federal funding, and endowment income (Fowles, 2014). The largest category for most institutions is the collection of tuition and fees followed by state appropriations (Fowles, 2014). Combined, these two categories
make up the bulk of an institution’s revenue fund and are the area in which an institution has the most discretion in resource allocation decision-making (Fowles, 2014). As state public institutions of higher education are not-for-profit organizations it is important to point out that any excess revenue generated can be shifted within the organization to subsidize areas that may not be revenue generating or self-sustaining (Hearn, 2015). Fowles (2014) wrote that “resource shifting gets to the crux of the mission of the not-for-profit organization itself” (p. 274).

As the research question for the study asks: how has incorporating outcomes-based funding HB14-1319 impacted the resource allocation decision making process of senior finance administrators at public doctoral granting institutions in Colorado, the purpose of this study is to determine the impacts senior administrators in Colorado have experienced. Since the adoption of OBF it is important to recognize the decision-making discretion that comes with senior positions working for public institution in higher education. A significant point of reference for this study is “revenues can be strategically allocated in alignment with broader institutional goals and priorities based on how the institution determines them” (Fowles, 2014, p. 275). As every institution has a unique mission and set of goals how an institution spends its resources is a direct nod to what they value (Brown, 2007). Additionally, since institutions of higher education can operate with some degree of freedom on making resource allocation decisions it will be important to have the historical background underpinnings of finance funding models in the United States.
This relates to my study because OBF is a resource allocation from the state that is part of a public institution’s overall revenue stream. In order to have an understanding of how OBF will impact decision making one must understand that institutions of higher education are classified as non-profit organizations. The designation allows them to spend their internal resources in accordance with the mission and values of their independent institution. Once the allocation comes in from the state, senior administrators decide how to spend the money.

**Historical Overview of Funding Models**

**Base-Plus Funding**

The beginning of finance modeling in higher education began in the 1800s with governors making decisions year-to-year based on no established formula. As colleges and universities grew, decisions about how to allocate funding to public higher education were made “starting from an established base in annual or bi-annual budgets, policymakers then increased or stopped funding against that base by some set amount” (Hearn, 2015, p. 4). Decisions focused on “specific topical issues” (Hearn, 2015, p. 4) rather than long term goals. Hearn (2015) noted that the “administrative costs of the decision-making system were low, and very slow to respond to shifts in circumstances, missions, and priorities at the state, system and institutional levels“ (p. 5). It is important to note that this funding structure provided individual institutions with spending discretion, but decisions making did not focus on long term strategic vision.

**Enrollment-Based Formula Funding**
During the post WWII years (1939-1945) enrollment at universities grew by unprecedented numbers as the federal G.I. Bill subsidized the enrollment of the returning soldiers (Hendrickson et al., 2013). “States reorganized the governance of higher education systems with an eye toward establishing not only more efficient managerial and financing approaches, but also more effective planning and oversight in accordance with state priorities” (Hearn, 2015, p. 6). This new funding approach brought greater predictability, stability and transparency to budgeting processes of institutions. Hearn (2015) wrote that by “keying on enrollment numbers, allocations under the new formulas directly served state goals of improving access, raising increased access to the most prominent place in funding criteria” (p. 6). While this model of funding was the first to place emphasis on historical assumptions and cost data by creating a formulaic approach, it was still not considered strategic because of these historical assumptions (McGuinness, 2016).

**Early Performance Funding**

By the 1980s, institutions began incorporating performance-based elements into their allocation procedures (McGuinness, 2016, McKeown-Moak & Mullin, 2014). During this time in funding history “attention shifted somewhat from the costs attached to securing and employing institutional resources (notably, the costs associated with delivering education coursework to undergraduates) to the actual performance of institutions in using those resources” (Hearn, 2015, p. 7). This is the first time that performance incentives can be observed and were designed to be linked to campus funding levels by policymakers who sought to establish an accountability matrix (Hearn,
2015). These performance levels were measures in areas of student graduation rates, undergraduate access, measures of institutional efficiency, job placement rates, faculty productivity, and campus diversity (Cooley, 2015; Hearn, 2015, Nodine, 2016).

It is important to recognize that most “performance funding models were designed to supplement traditional formulas, essentially by providing some bonus funds at the margins of the larger, usually enrollment-driven core allocations” (Hearn, 2015, p. 7). The new performance funding approaches did not always consider the perspectives of all stakeholders in the model designs; they could not sufficiently differentiate between institutions based on mission and frequently they had inadequate data to work with (Hearn, 2015). While these models raised campus awareness of both institutional performance and state educational attainment goals they also succeeded in “increasing competition among institutions, building capacity for organizational learning, and altering academic policies, programs and practices” (Hearn, 2015, p. 8). Finally, Hearn (2015) stated “extraordinary variation in states’ implementation of performance funding over the 1980s and 1990s, severely limits analysts’ ability to perform sophisticated across-state analyses” (p. 9).

Outcomes Based Funding

To understand the current approach to funding in higher education today it is important to review the most popular strategy sweeping the nation. OBF, adopted in 37 states (Education Commission of the States, Policy Snapshot 2017), allows states to promote alignment with goals and objectives that are pre-defined measurable results of programmatic performance (McGuiness, 2016; Hearn, 2015). While funding formulae
have evolved from the original purpose of providing adequate and predictable resources to institutions; new factors have been introduced to include measurement of productivity (McKeown-Moak & Mullin, 2014). Funding systems are the major avenue of influence available to state policy makers in higher education (Crellin, 2015; McKeown-Moak, 2013). Hearn (2015) agree the “emphasis on making institutions and systems more accountable for their quality has prompted the adoption of OBF models, some of which put virtually all direct state funding for institutions at stake” (p. 1).

Being accountability driven has become paramount in the decision-making process for today’s administrators by their state’s educational policymaking leaders (Chingos & Baum, 2017; Favero & Rutherford, 2019;). Every state receives funding from the federal government for education, and this makes understanding the topic of OBF particularly relevant (Chingos & Baum, 2017; Hearn, 2015; Kelchen & Stedrak, 2016). With the rise in popularity of OBF policies, policymakers are increasingly committed to basing public higher education funding decisions on how institutions perform on valued measures such as program progress and degree completion (McGuiness, 2016; Hearn, 2015). The goal of outcomes-based budgeting is to directly connect states’ fiscal policies in a call for greater efficiency, greater affordability, and greater opportunities for student persistence and success (Hagood, 2019; Hearn, 2015).

OBF allows states to convey and promote alignment with goals and objectives for higher education by allocating state tax dollars to institutions based on measures of outcomes (Chingos & Baum, 2017; Crellin, 2015; Kosten, 2016). For this reason, it is important to understand the role outcomes-based modeling has on resource allocation
decision making at institutions for accountability purposes. McKeown-Moak and Mullins (2014) noted that when analyzing funding formulas, it is important to keep in mind that, “funding formula in the abstract is neither good nor bad, but there are good formulas and bad formulas” (p. 112). Additionally, formulas are “products of political processes” (McKeown-Moak & Mullins, 2014, p. 121) and generally compromises are needed to use formulas to provide a fiscal base to which funding can be added, or subtracted, if justified (McKeown-Moak & Mullins, 2014; Nodine, 2016).

While OBF places value on student access, progression, and completion (Hillman & Corral, 2018; Kosten, 2016) many experts have criticized the notion that criteria alone should be the deciding factors for funding. One of the main areas in the evolution of OBF that has come from research in the field is a change in the focus from meeting the needs of higher education to meeting the needs of students, the state, and its economy (Chingos & Baum, 2017; McKeown-Monk, 2013). It is important to recognize that economic analysis is complicated and has numerous indicators of performance; each state is able to customize the type of OBF model they adopt (Crellin, 2015; Kelchen & Stedrak, 2016).

“State funding methods for public colleges and universities have varied over time, with many of the recent changes reflective of evolving priorities and goals for higher education” (Miller, 2016, p.1). OBF is one of the top state funding modeling changes taking hold. Any administrator in higher education that participates in the funding process has praised or damned budgeting formulas depending on the impact the formula used has had on their college or institutional goals (McKeown-Moak & Mullins, 2014). Funding formula have changed from the “original purposes of identifying an adequate and
predictable resource base and distributing those resources equitably” (McKeown-Moak & Mullins, 2014, p. 120) to ones that can be complex, intrusive, and burdensome (Chingos & Baum, 2017; McKeown-Moak & Mullins, 2014).

While policymakers want institutions of higher education institutions to develop and deliver new, more effective academic paradigms, policymakers also want to improve access for underrepresented populations and ultimately increase educational attainment for a greater number of people (Hillman & Corral, 2017; Kosten, 2016). Administrators and policymakers generally agree that there is no perfect formula model, so it is important to understand why state legislators are shifting to OBF models for state allocation for higher education funding. It can be difficult for those not directly responsible for the overall institutional budget to see the connection between their actions and the budget this leave room for training opportunities at institutions (Umbricht, Fernandez, & Ortagus, 2017). This includes qualitative research that reports on how the implementation of the funding model change may be impacting the decisions made by senior administrators at their institutions. Kelchen & Stedrak (2016) state that the designs of OBF systems vary widely across states thus research comparing cross state design is challenging.

Finally, to summarize OBF, strengths and weaknesses of the practice should be considered. Strengths include: “a connection to state strategic goals and to national priorities of student degree completion and job placement” (Hearn, 2015, p. 13). Hearn (2015) adds that these strengths can be achieved by placing an “emphasis on evaluation standards, assessment, and measured goals, also having targeted incentives to influence
behavior, simple transparent models, and gradual implementation” (Hearn, 2015, p. 13). Hearn (2015) wrote that the weaknesses of OBF models include: “measurement challenges and reliance on continuing healthy state revenues” (Hearn, 2015, p.13).

Background information on the history of funding models in higher education finance is necessary information to understand how the OBF movement evolved. Since institutions of higher education have always been supported by state laws and state funding it is important context for this research study. It is also important to identify that expectations of accountability for higher education began in the 1980s with early performance funding models. OBF policies today have seemingly been built on the best practices of the past. Finally, this information relates to my study because it gives an overview of what OBF purports to be and yet informs how each state can attempt to customize for themselves this funding trend.

**Outcomes-Based Funding Negative Impacts**

As researchers continue to study the trend of OBF policies across the nation, recent scholarly articles have addressed the potential negative effects of this legislation. Hagood (2019) argued OBF policies may give an appearance of accountability to appease external stakeholder demands, but they can be largely symbolic. Unbricht, Fernandez, and Ortagus’ (2017) research “found evidence that OBF policies intended to increase accountability in higher education may be doing more harm than good and should be considered with great caution” (p.667).
Additionally, Unbricht, Fernandez, and Ortagus (2017) observed that OBF policies may be “asking institutions to improve outcomes that are largely predicted by backgrounds and experiences that occur before students set foot on campus” (p. 647). This recent research validates Zhang’s (2009) argument that graduation rates may not be the best measure of OBF policy as this can lead to selective admittance to a school. Additionally, Zhang (2009) found that student retention is often better explained by challenges and opportunities away from campus. This has critics of OBF policies wondering why these two outcomes are the most widely used performance indicators used to measure success of an institution.

Researchers are also discovering that OBF policies have unintended consequences for the access institutions who could benefit the most from increased funding. Hagood’s (2019) concluded that “performance funding polices are designed to benefit high resource, politically connected institutions and burden low resource, politically weak institutions” (p. 21). Favero and Rutherford (2019) agree that OBF policies can “reinforce existing inequalities across campuses and can have important consequences for institutions” (p.3).

Providing literature on the current climate in higher education relates to my study because in order to examine OBF policy in the state of Colorado it is important to understand what is happening in funding nationally with the changing expectations for higher education. These expectations created more demands to produce a skilled workforce for economic success in states. This also relates to my study by providing and overview of how tuition costs have shifted to become a critical revenue component for
institutions. These factors are all important when examining OBF as they are the reasons legislatures felt they needed more of a voice in higher education funding. Finally, reviewing the current literature on negative impacts related to OBF is relevant information for this study as this policy is new to Colorado and many scholars are still on the fence about if it works as intended.

**Current Higher Education Finance Climate**

Institutions of higher education must “behave like for-profit organizations, prioritizing revenue creation, on the other hand, they must also serve as nonprofit organizations, prioritizing the public good and serving as providers of knowledge and a path for educational development” (Pucciarelli & Kaplan, 2016, p. 312). This paradoxical statement sums up the current climate in higher education finance. How does an organization operationally function like a business and yet the product being “sold” is not a product at all?

For many, education is a highly personal and an ever-evolving quest for wisdom. Education in society is touted as a public good to better oneself, one’s community and should be available to all citizens (Lebeau, Stumpf, Brown, Lucchesa & Kwiek, 2012). How then has higher education gotten to a point where students complain that higher education costs too much and it delivers too little? As Watson and Watson (2013) wrote, “higher education is expected to educate knowledgeable workers while producing research to support and advance knowledge” (p. 43).
The original purpose of distributing funds in a rational and equitable manner by the states had been in practice for over 60 years (McKeown-Moak, 2013; Nodine, 2016). When looking back at higher education from a finance perspective McKeown-Moak (2013) wrote that the only constant has been the controversy among participants of the process surrounding the usage and evolution of funding models. From the 1950s -1980s higher education touted abundant financial resources and steadily increasing enrollments, making growth universal (Cameron, 1983; McGuinness, 2016). This universal growth created a reliance on higher education as a “principal economic engine” (Alexander, 2000, p. 412) and thus was increasingly used as a way to determine potential growth of the world economy (Alexander, 2000). Institutions of higher education were educating the workforce and advancing research for the technology driven economy (Alexander, 2000). Alexander (2000) wrote that for most “western democracies, higher education has become the critical link to future economic success” (p. 413).

The 1990s brought an era of government reporting and new funding expectations with the realization that strengthening development of human capital and research would in turn strengthen competitive positions in the world economy (Alexander, 2000). This new reporting responsibility brought an increased pressure placed on higher education to be more “accountable, more efficient, and more productive in the use of public generated resources” (Alexander, 2000, p. 411). Alexander (2000) wrote that accountability became the new buzz word associated with higher education finance as state legislatures’ expectations changed to try and stretch the public dollars flagged for higher education to serve more students and maximize economic returns.
Accountability continued to be a regular part of the finance vernacular as performance-based budgeting was popular in the 1990s (Hearn, 2015; Nodine, 2016). This popularity caused a shift to occur in higher education finance where instead of the whole focus being on internal institutional accountability, the emphasis changed to include external constituencies (Kivistö, 2008). “Parents, businessmen, governing boards, legislatures, etc. all became deeply involved in higher education accountability” (Shin, 2010, p. 50). Alexander (2000) predicted “society is not prepared to accept that higher education is self-justifying, and universities must become more responsive to national economic needs” (p. 412). While Kelchen and Stedrak (2016) found that “pressures for accountability increased dramatically over the past three decades due to concerns over the price of college and institutional productivity” (p. 302).

Higher education leaders also acknowledged that their institutions were becoming more complex. “These complex systems have complex missions, processes, and products, increasing diverse student bodies, challenging economic environments and complicated administrative structures” (Watson & Watson, 2013, p. 44). A common thread among all perspectives of higher education finance that was rooted in accountability was the shift in focus on internal dynamics and decision making as seen as the primary determinant of institutional action and strategic direction (Fowles, 2014; Hillman & Corral, 2017). Additionally, performance-based funding became a very convenient way for the government to compare and rank the productivity of one institution to another (Alexander, 2000; Hearn 2015).
While the funding of higher education has taken on a more utilitarian view from the government, higher education leaders have struggled to define and demonstrate educational objectives and achievements in utilitarian terms (Alexander, 2000). Institutions themselves generally have three basic missions: teaching, research and service (Pucciarelli & Kaplan, 2016). Demonstrating accountability through economic value and the quantification of fiscal resources to show a true measure of value has never been a foundational pillar in higher education missions (Alexander, 2000). Furthermore, when faced with the conditions of decline, “administrators defined their predicament exclusively as resource allocation problems or problems of efficiency, they tended to respond conservatively rather than innovatively and pursue strategies that were successful in the past to solve the problem” (Cameron, 1983, p. 364).

After the longest period of economic growth in US history in the 1990s (Hearn, 2015; Hillman, Tandberg, & Fryar, 2015) the world changed with the collapse of the dot-com bubble and the terrorist attacks of September 11th, 2001. The economy slowed down resulting in the recession of 2001, but for higher education finance it was a relatively quiet time with little reactionary change to funding models (Hearn, 2015; McKeown-Moak, 2013). Living on the hope that the financial climate would improve and working from a position to maintain the status quo, higher education finance was not prepared for the funding changes that lie ahead. When great recession hit in December 2007, “state appropriations for higher education declined by more than 20%” (McKeown-Moak, 2013, p. 4) and students were hit particularly hard by the financial crisis, leaving many with no means to pay for their education (Ellis, 2018).
Challenging financial and political conditions prompted many colleges and universities to revise their internal management processes, and in some cases, the new goals were not well articulated or based on the institutional mission (Pucciarelli & Kaplan, 2016). Brinkman and Morgan (2010) wrote that university budget processes needed to move from revenue planning to focus more on expenditure and cost patterns due to the financial crisis. “Researchers generally agree that higher education is often the first category of state discretionary spending to receive cuts during times of financial stress because higher education is to some extent capable of generating its own revenue through tuition” (Fowles, 2014, p. 275).

As many public institutions experienced significantly reduced funding from their state budgets during the recession, administrators looked for additional sources of revenue to continue operating normally (Pucciarelli & Kaplan, 2016). Increases in tuition became the new normal in higher education finance to “fill the gap” left by the decreases in state funding (McKeown-Moak, 2013; Nisar, 2015). Additionally, an enrollment push was a reliable revenue stream for many, and institutions looked to recruit international and out of state students who paid more than in-state students to attend their institutions (Ellis, 2018).

As tuition costs have continued to steadily rise in the years following the recession and the revenue reliance on tuition dollars has taken hold as a trend in higher education finance (Eason, 2017), it is no wonder that the students have increased their expectations on higher education institutions. The return on investment demands by students have started driving institutions to analyze the popularity of each major as
administrators focus on enrollment growth to keep revenue streams flowing (Ellis, 2018). “Like their students, colleges have adopted a more bottom-line ethos since the recession” (Ellis, 2018). Students today are looking for institutions who pitch themselves as having more employable options after graduation (Ellis, 2018). By 2017 “most states drew more revenue from tuition dollars than from educational appropriation” (SHEF Report FY17, 2018) placing further emphasis on how the costs and benefits of an institution’s business model has shaped notions about the purpose institutions serve (Ellis, 2018).

While the nation has rebounded in many ways from the great recession, the State Higher Education Executive Officers Association (SHEEO) found that higher education has been “slow to feel the effects of the economic recovery and states continue to face challenging budget environments (SHEF FY17, 2018). “The longer-term effects of the recession have been more profound and less obvious; they have altered campus revenue streams, influenced student’s choice of major, reshuffled the composition of the academic work force, and pushed colleges to emphasize their role as economic engines” (Ellis, 2018). The SHEF FY17 (2018) report wrote that more than half of states rely on student tuition and fees to fund the majority of the cost of public higher education today. “The trend across the majority of public institutions is an increased reliance on net tuition (tuition minus institutional financial aid) as a primary source of revenue” (SHEF FY17, 2018). Fowles (2014) reported too “increased dependence on tuition dollars as a source of revenue has accompanied increases in tuition price which have far exceeded both inflation and increases in median household income” (p. 274).
Predictions about the future of higher education often include warnings of impending doom (Eason, 2017). Pucciarelli and Kaplan (2016) wrote that the “general consensus is that the future of academia is and will continue to be complicated, challenging, and uncertain” (p. 312). With business practices becoming acceptable in higher education finance, institutions will need to continue to develop competitive strategies for change as well as devise adequate responses to change by developing strategic guidelines and policies (Pucciarelli & Kaplan, 2016). Many states have turned to OBF to give legislatures a voice in the decision-making process of institutions of higher education during these changing times of fiscal uncertainty (Favero & Rutherford, 2019).

As Cameron (1983) predicted, our culture values growth and expansion as signs of effectiveness. It should not surprise anyone that these expectations would apply to higher education too.

**State of Colorado Higher Education Funding**

The State of Colorado has gone through several funding models for their allocations of state dollars to public institutions of higher education. The early years began with detailed line item budgeting and by the “early 1990s appropriations for each governing board were consolidated into a single line item” (HB14-1319 Final Report, 2015). Each governing board then analyzed their various costs and revenues and adjusted accordingly. By the mid-1990s the state changed to an inflation-based approach whereby governing boards received more funding based on the Consumer Price Index plus changes to their enrollment (HB14-1319 Final Report, 2015).
In 2004 the state moved to a student stipend and fee-for-service model, which stayed in effect until HB14-1319 passed in 2014 (HB14-1319 Final Report, 2015). The student stipend and fee-for-service model, also known as the College Opportunity Fund (COF), is a model where the money from state appropriations is allocated to the institution where the student attends school through a stipend payment with additional fee-for-service contracts added in (HB14-1319 Final Report, 2015). This approach focused on the total funding needed per institution and is traditionally called the base plus funding approach, as defined in the historical budget overview section of this research paper (A. Rauch, personal communication, October 26, 2018).

The great recession that hit the United States in December of 2007 had dramatic impacts to higher education funding across the country and Colorado was no exception (Ellis, 2018). As the College Opportunity Fund (COF) model was in use in Colorado when the recession started, and state taxpayer appropriations for higher education were slashed to historic lows, funding from the state to public institutions was simply not there to be administered (A. Rauch, personal communication, October 26, 2018). The ripple effect of receiving virtually no money from the state to support public institutions of higher education was that operating revenue to keep the doors open needed to come from somewhere (A. Rauch, personal communication, October 26, 2018). One needs to look no further than the statistics related to the costs to attend a public school to figure out how Colorado institutions responded to the crisis. “In 2000, Colorado taxpayers footed 68% of the costs of a degree, with students chipping in one-third. By 2010, that ratio had
almost flipped, students now contribute up to 64% of the costs of Colorado public universities” (Eason, 2017).

The Colorado Commission of Higher Education (CCHE) and the Colorado Department of Higher Education (CDHE) along with concerned university officials and citizens began to look for solutions to keep post-secondary education affordable to the residents of Colorado (A. Rauch, personal communication, October 26, 2018). The belief that higher education plays a pivotal role for the state’s economy as “the engines that drive economic competitiveness in the national and global market and hold the key to the state’s economic future” (Colorado Competes, 2012) was the rallying call for change. While the commission noted that funding was not the only challenge facing higher education it was an important place to begin as they discussed in their 2010 report, The Degree Divided (A. Rauch, personal communication, October 26, 2018).

HB14-1319 was passed by the Colorado General Assembly and signed by Governor Hickenlooper in May 2014. This bill eliminated the existing funding structure starting in fiscal year 2015-16 and directed the CCHE to develop and adopt a new funding allocation formula (HB14-1319 Final Report, 2015).

The legislation specifically required:

- The project to be completed by January 1, 2015, less than eight months from the time it was signed into law;
- CCHE to engage in a facilitated process with “interested parties” and to incorporate the feedback into the final product;
• Funding be awarded to the colleges and universities based on Role and Mission Factors-offsetting the costs of providing program, while acknowledging the uniqueness of the individual institution-as well as Performance Metrics-number of students transferred, retained, and conferred

• CCHE provide tuition policy recommendations to the General Assembly by November 1, 2015 (HB14-1319 Final Report, 2015).

As a result of this legislation Colorado would fund both two and four-year institutions with the new funding model and would allocate the entire state appropriation through this model (HB14-1319 Final Report, 2015). With the passage of HB14-1319 the legislature changed the funding model formula to include the fee-for-service component based on achieving state goals (performance), the role and mission of the institution (type of school), while retaining the COF stipend in the mix (HB14-1319 Final Report, 2015). Figure 2.1 gives a visual representation of the variables used by the state of CO for this funding legislation change.

Figure 2.1 Higher Education Finance in Colorado: Before and After HB 14-1319

Note. Copyright 2015 by Colorado Department of Higher Education.
Additionally, to have a complete picture of the funding complexities in Colorado a discussion of the Taxpayer Bill of Rights (TABOR) must be included to understand the overarching structure of funding education for the state through the collection of taxes. TABOR has played a major role in the funding complexity of higher education in Colorado.

**TABOR**

In 1992 the state of Colorado passed an amendment to their constitution known as TABOR (Pens, 2016; TABOR Colorado General Assembly, n.d.). The Taxpayer Bill of Rights (TABOR) prohibits any tax increase without a vote by the people and limits the amount of revenue the state can retain and spend (Pens, 2016; TABOR Colorado General Assembly, n.d.). The TABOR guidelines are some of the strictest in the nation with regards to spending limits, and any excess revenue collected over TABOR limits must be returned to the taxpayers of Colorado (Berry, 2017; Martell & Teske, 2007; Pens, 2016). As reported by the Center on Budget and Policy Priorities (2017), Colorado is still the only state in the nation that has such an amendment to their constitution in place.

A simplistic understanding of the formula used for TABOR is:


Experts at the Bell Policy Center (2017) believe there are structural flaws with the TABOR amendment including that it has “seriously impaired that states ability to set budgetary and program priorities and respond to crises” (Colorado’s TABOR, 2017). It is important to note that even with the strong critics of TABOR it has not been repealed or

Since TABOR has such a strong foothold on the state of Colorado and increases in taxes to fund education were repeatedly voted down; a work around to the amendment was found (Eason, 2017). The state of Colorado entered a new era that many have labeled the “explosion of fees” (Eason, 2017). “Colorado has the third highest reliance on service charges- a broad category that includes, park fees, student tuition and textbook sales and patient charges at public hospitals” (Where States get Money, 2017). This equates to a fee-for-service model where the users of the product or service are paying a higher share of the cost; instead of the pool of taxes that would normally cover these services for the general public good (Where States get Money, 2017). This practice rose significantly for higher education funding when the great recession hit (Eason, 2017), as discussed above.

**HB14-1319 Funding Allocation Policy**

In September 2013 the Colorado General Assembly and Governor John Hickenlooper charged the Colorado Commission of Higher Education (CCHE) and the Colorado Department of Higher Education (CDHE) to develop and implement a new OBF allocation model (HB14-1319 Final Report, 2015). This new model was to oversee the operational funding for public institutions of higher education in the state of Colorado. The three primary goals that were agreed upon unanimously by CCHE, CDHE, and the Governing Boards of the public institutions of higher education in the state of Colorado include:
• Fund Enrollment through College Opportunity Fund Stipend;
• Honor each institution’s unique role and mission, including access to higher education in the rural areas of our state; and
• Reward performance—specifically retention and completion, including transfers from a community college to a 4-year institution (HB14-1319 Final Report, 2015).

The key goals for the HB14-1319 project, identified by CCHE, are to “provide greater tuition predictability for Colorado families and to ensure an accessible and affordable public higher education system for years to come (HB14-1319 Final Report, 2015). The new higher education funding model was presented in the HB14-1319 legislation.

This new funding model was a significant change for the state of Colorado in how they funded higher education (A. Rauch, personal communication, October 26, 2018). Previously, funding was based on historical budgeting and allocation of available funds rather than specific state policy goals (A. Rauch, personal communication, October 26, 2018). “The HB14-1319 legislation dramatically changes this by requiring that funding be based on common, measurable, and updatable factors and metrics” (HB14-1319 Final Report, 2015). It is important to emphasize that the CCHE and the CDHE believe that HB14-1319 is based on the national best practices in higher education financing (HB14-1319 Final Report, 2015).

The process of undertaking a change to the funding allocation model for a state is monumental (A. Rauch, personal communication, October 26, 2018). The Colorado
The Department of Higher Education (CDHE) stated that they “embarked on this project (HB14-1319) with optimism but also great trepidation” (HB14-1319 Final Report, 2015). They acknowledged that in 2013 when the funding model change discussions began Colorado was near the bottom of the nation in funding for higher education and they were wrestling with difficult issues such as affordability, completion, closing the attainment gap, and creating better linkages to K-12 and workforce partners (HB14-1319 Final Report, 2015). To have buy in for all the constituencies across Colorado the CDHE undertook the project of changing the funding allocation model for the state by committing to “a public, transparent, inclusive process to create a new formula that demonstrated direct links to polices of the CCHE Master Plan” (HB14-1319 Final Report, 2015). Above all the State of Colorado wanted to create “an affordable, accountable, and high quality public higher education system that is accessible to all Coloradoans without regard to their geographic location or their financial means” (HB14-1319 Final Report, 2015).

**Theoretical Framework**

This research study used principal-agent theory (Ross, 1973) and resource dependency theory (Pfeffer & Salanak, 1978) to explain the current funding dynamics of Colorado. The following section is an overview of these theories.

**Principal-Agent Theory**

Principal-Agent theory describes that the relationship between two or more parties where one-party delegates authority (principal) over the other parties’ actions (agent) (Kivistö, 2008). The governance of higher education meets the criteria set forth by
principal-agent theory to describe the relationship that currently exist (Dougherty, Jones, Lahr, Natow, Pheatt, & Reddy, 2016). The theory makes the assumption that public higher education in the United States is structured following the principal-agent theory because state universities “are funded and owned by public authorities and their legal status is public” (Kivistö, 2008, p. 341). The government delegates tasks to a university including teaching and research, they allocate resources to accomplish the task, and they have an interest in governing the accomplishment of the tasks (Kivistö, 2008).

This theory also makes an important assumption about the principal-agent relationship. It assumes that “informational asymmetries and goal conflicts are present simultaneously in the relationship” (Kivistö, 2008, p. 341). The asymmetries exist as a known entity because agents are more aware of their own abilities to complete tasks and often the resources needed to accomplish activities such as academic work (Kivistö, 2008). Goal conflicts occur when the principal and the agent’s desires concerning the end results are in conflict and they differ on the course of action to take to achieve the stated goals (Kivistö, 2008). Agency problems exist when the asymmetries and goals conflicts are in misalignment with the principals, thus leading the principals to seek out ways to control the agent’s behavior (Dougherty et al., 2016). This behavior modification can be achieved through outcomes-based policy implementation.

Kivistö (2008) wrote “higher education studies applying agency theory have utilized it primarily as a conceptual framework, as a tool to offer insights related to governance” (p. 340). OBF legislation is a prime example of the principal agent theory in practice as government policies have been passed into law to focus on monitoring how
well institutions are meeting the goals set forth by the state (Dougherty et al., 2016).

Legislatures achieve this by tying the amount of future funding to an institution through the accomplishment of goals set by the commission of higher education and state legislatures to monitor if institutions are “behaving in economic and operational terms” (Kivistö, 2008, p. 343). The better the outcomes that the agents produce, the happier the principal will be.

**Resource Dependency Theory**

Resource dependency theory is built on “three core ideas: (1) social context matters; (2) organizations have strategies to enhance their autonomy and pursue interests; and (3) power (not just rationality or efficiency) is important for understanding internal and external actions of organizations” (Davis & Cobb, 2010, p. 5). Santos (2007) found that “resource dependency theory lends itself to the study of universities as complex organizations with often diverse constituents and competing goals by emphasizing the political dimension of these organizations and their relationship to the external resource environment” (p. 127). Resource dependency theory presents a powerful lens through which to explain the behaviors of public institutions of higher education (Fowles, 2014). “It recognizes that although organizations are faced with competing demands from various stakeholder groups, survival and success necessarily prevents the organization from responding completely and simultaneously to all demands; rather, organizations must make strategic choices regarding outputs” (Fowles, 2014, p. 277).

Fowles (2014) emphasized that resource dependency theory can help administrators “develop a better understanding of the differing outputs and behaviors of
seemingly similar public institutions of higher education that is informed not just by the internal dynamics of the institution, but the dynamics of the environment in which an institution operates and the resources it requires for survival and success” (p. 277). This point is significant for this study as institutions should be similar in nature. While the principal-agent theory is a relatively straightforward connection of a behavior monitoring and control, resource dependency theory conceives of a much more complex set of relationships (Santos, 2007).

Kelchen and Stedrak, (2016) discussed that “resource dependency theory would suggest that colleges would be responsive to policy regimes that tie necessary funding to explicit performance metrics” (p. 305), however Kelchen and Stedrak (2016) report that little empirical research on the mechanism behind how they are influencing outcomes. Additionally, no qualitative research can be found utilizing principal agent theory in relation to decision-making and resource allocation.

These theories were chosen as the theoretical framework because they will be the used to frame the funding climate in the state of Colorado. Additionally, these theories will guide the creation of the interview questions and help discern what thematic information is prominent in the coding process. Finally, these theories will be utilized to provide a discussion for the findings of this study.

**Summary**

The purpose of this literature review is to provide information on how revenue generation is structured at public institutions, as well as a historical overview of higher education funding at American institutions. Information on the practice of OBF was
provided. This chapter also discussed the current climate of higher education funding and the higher education finance climate in the state of Colorado. Finally, an overview of HB14-1319 legislation and its goals was provided for the readers. This research study will contribute to the field of higher education finance through a case study approach that will be presented in the next chapter.
CHAPTER THREE
RESEARCH DESIGN AND METHODOLOGY

This chapter will present a detailed description of the research methodology I have selected for this finance qualitative case study. To answer the research question, “How has incorporating outcomes-based funding HB14-1319 impacted the resource allocation decision making process of senior finance administrators at public doctoral granting institutions in Colorado?” it is important to understand the criteria that make up case study research. Merriam (1998) explained that case studies should “uncover the interaction of significant factors characteristic of the phenomenon” (p. 29). Since OBF is new to the state of Colorado and senior administrators have had to implement the funding policy model into their business practices it is important to research the potential impacts associated to these senior administrator’s decision-making practices.

Umbricht, Fernandez, and Ortagus (2017) asserted “if higher education professionals are aware that they are being judged on metrics that are largely out of their control, then college and university administrators may try to comply with the letter but not the spirit of performance funding laws” (p. 647). This research study will focus on the impacts to senior administrators who must comply with the funding laws by probing for their personal insights on the spirit of the introduction of OBF to Colorado. By employing a case study method, it will give Colorado senior administrators a voice to share their experiences about the OBF phenomenon. Additionally, this case study will be following the recommendation of finance scholars Kelchen and Stedrak’s (2016) call for,
“additional qualitative research that is needed to explore the extent to which the desire to reach the outcome levels required for funding under OBF is an implicit or explicit part of a college’s budgeting process” (p. 317).

This chapter will present the research rational, design, and methodology used for this study and the context for the participants selected. This chapter also includes the research question, data collection process, and data analysis procedural plan for this case study. Finally, I present how trustworthiness will be achieved and the limitations associated with this study.

**Rationale for Case Study Research**

Yin (2013) stated that case studies allow for examinations of bounded phenomena within relevant specific contexts. OBF is one example of one such phenomenon that has occurred in higher education finance, growing in popularity to now include 37 states nationwide (Education Commission of the States, 2017). As all states in the United States fund higher education differently through their state legislatures it is important to study the specific context for each state (Kelchen & Stedrak, 2016). Even the states that follow OBF policy allocation models have their own unique set of requirements and goals set by their legislatures. Additionally, the individuals at each institution responsible for the implementation of the new OBF policy model will have insight about the potential impacts to their decision-making process and if the measures of productivity they have historically used have changed as a result of HB14-1319 legislation.

Utilizing a case study design implies the literal drawing of boundaries around a specific case to be studied (Mills, Durepos & Wiebe, 2012). This case study was
geographically, topically, and by Carnegie classification bounded to allow for a deeper understanding of the context and potential impacts of HB14-1319 for the state of Colorado. Bounding this study to public doctoral granting institutions gives clearly defined spatial and organizational boundaries (Mills, Durepos & Wiebe, 2012), as well as an internal context for institutional decision making for universities similarly classified as highest research productivity institutions. The criteria used to bound this case study include all public doctoral granting institutions in the state of Colorado.

Mills, Durepos, and Wiebe (2012) found that a case study approach “can be used as a research method to monitor an already implemented policy” (p. 100). In this case study I investigated the impacts of OBF policy HB14-1319 on decisions made by the senior administrators (CFOs) at public doctoral granting institutions in Colorado. Specifically, I interviewed the CFOs to investigate if they experienced impacts to their resource allocation decisions, job responsibilities, or measures of productivity following the implementation of outcomes-based policy legislation.

To have a reputable qualitative case study one must allow the research question to determine the best path forward to investigate a specific phenomenon (Stake, 1995). As the research question for this study is, how has incorporating outcomes-based funding HB14-1319 impacted the resource allocation decision making process of senior finance administrators at public doctoral granting institutions in Colorado, it was important to invite participants who have direct experience with the policy demands.

While specific problems will not be solved through qualitative research, a skilled researcher can make an audience aware of the context that human actions are having on a
phenomenon like OBF (Stake, 1995). Merriam (1998) believed that a case study investigates “a story that needs to be told and a strong qualitative case study can get an in-depth perspective on one specific area of interest” (p. 27). The CFOs of public doctoral granting institutions in Colorado have unique insight into the adoption and budgeting cycles associated with HB14-1319 to advance the literature of higher education finance. Scholars in the field of educational finance are expanding their research paradigms beyond empirical sources of data to consider what people working with these finance models have to say about the complex reasoning behind their decisions (Kaczynski, Salmona, & Smith, 2014).

The strong economy of Colorado (McNichol & Waxman, 2017) and the consistency of having the same governor allocating funding for higher education during the budgeting cycles of this research study were also a consideration when I selected a case study methodological approach. While stable conditions cannot always be controlled for, when they happen to align it can be beneficial to the researcher for describing the context of the case (Mills, Durepos & Wiebe, 2012). Fewer environmental fluctuations and consistency across the targeted sampling population enabled me to draw conclusions about the impacts of OBF to CFOs as to “whether the implemented policy is effective throughout the entire scope of its use” (Mills et al., 2012, p. 101). Therefore, the conditions were ideal for interviewing these senior administrators about the potential impacts of OBF on their decision-making involving resource allocations over time. This research study will add to the existing literature for OBF in higher education.
Finally, Merriam (1998) wrote, “to understand an event and apply that knowledge to present practice means knowing the context of the event, the assumptions behind it, and perhaps the event’s impact on the institution” (p. 35). This case study research will provide new knowledge for higher education finance from participants’ directly having lived experiences with the introduction of OBF legislation to their job responsibilities. I will provide implications for practice in the field of higher education finance. OBF is the dominate allocation method for how states distribute funding to public institutions (Education Commission of the States, Policy Snapshot, 2017). In the current climate of higher education, administrators and scholars alike are researching ways to better prepare themselves for change and the potential new practices that may be adopted in the field of higher education finance (Kaczynski, Salmona, & Smith, 2014).

Research Question

The research question for this study was: How has incorporating outcomes-based funding HB14-1319 impacted the resource allocation decision making process of senior finance administrators at public doctoral granting institutions in Colorado?

Institutional Review Board

Prior to data collection, I received Clemson University Institutional Review Board (IRB) approval for this study (Appendix A). IRB approval is given to researchers who will conduct ethical research based on respect, beneficence, and justice for the participants of the study as presented in the Belmont Report of 1979 (Kaczynski, Salmona, & Smith, 2014).

Theoretical Framework
This case study utilized the principal agent and resource dependency theory as a theoretical framework to provide a broad explanation of the way in which OBF policy has influenced the decision making of senior administrators at public doctoral granting institutions in Colorado. The framework helped present and describe the dynamics of the power shift that happens when a state ties funding to a principal agent relationship through OBF legislation. Additionally, the theoretical framework for this study also provided an avenue to situate the findings of the research discoveries to expand the knowledge in the field of finance qualitative research. Using a theoretical framework for this research study was accomplished by enabling generalization of various aspects of the phenomenon instead of simply describing it (Creswell & Creswell, 2017). Finally, use of theory to connect the key variables guided the creation of the interview questions. During the data analysis phase, I employed the theories to discern what information was important, and what new issues were discovered from the data.

**Research Setting**

The research settings for this study included the public doctoral granting institutions in the state of Colorado. Colorado is a state located in the western United States that has 26 public, state-funded institutions. The Carnegie classification for institutions of higher education list Colorado as having: five doctorate granting universities, two masters colleges and universities, five baccalaureate colleges, and fourteen associate colleges (The Carnegie Classification of Institutes, 2018). Each of the five public doctoral granting institutions of higher education was contacted to be included in this study. As the Carnegie Classification of doctoral granting instructions bound this
research case study, and the state of Colorado only has a limited number of institutions with this designee, it was important to have participation from the entire sample pool.

While this study was being conducted the Carnegie Classification of Institutes moved the University of Colorado at Colorado Springs (UCCS) up into the doctoral granting institution category for 2019 (The Carnegie Classification of Institutes, 2019). Because my research question focused on past experiences of CFOs, I did not include the CFO at UCCS in my sample.

Colorado institutions implemented OBF starting in the 2015 fiscal year immediately following HB14-1319’s approval (Colorado Dept of Higher Education, n.d.). The state has been one of the later states to adopt OBF and the Colorado Commission of Higher Education (CCHE) did extensive research to customize the required outcomes to align with the states already established funding and key outcomes for higher education (Colorado Dept of Higher Education, n.d.). Colorado passed legislation policy changes introduced by the Colorado Department of Higher Education (CDHE) to “engage in a facilitated process to adopt funding factors for a new base-funding formula that considers both role and mission as well as performance” (Colorado Dept of Higher Education, n.d.).

Policy Overview

The policy emphasizes “transparency in higher education funding and key outcomes, such as timely graduation rates, and reflects a strong desire to make this formula more understandable to the state’s taxpayers, students, and families” (Colorado Dept of Higher Education, n.d.). The CDHE and the state legislature that passed the
policy believe that the new OBF modeling formula will support the statewide goals for higher education in the master plan created for the state (Colorado Dept of Higher Education, n.d.). The goals include:

1. Increasing the number of postsecondary credentials awarded to meet future workforce needs;

2. Improving student success through better outcomes in basic skills education, enhanced student support services and reduced average time to credential;

3. Enhancing access to, and through, postsecondary education to ensure that the system reflects the state's changing demographics while reducing degree attainment gaps (Colorado Dept of Higher Education, n.d.).

The reason the state of Colorado made the move to introduce OBF policy legislation was in response to four factors. They include, little to no improvement in the six-year graduation rate, increasing demand for college graduates, increasing cost to educate students, and declining state funding for higher education (Kuta, 2014).

Additionally, OBF was implemented as a way for Colorado to increase awareness for the funding needs of higher education in the state. Colorado does not include higher education as a constitutional mandate for the state (Kuta, 2014). Unlike K-12 education, health care, and corrections budgets in the state, higher education funding experienced yearly fluctuations compared to the other agencies (Kuta, 2014).

Finally, “Colorado ranks third in the nation in the percentage of citizens between the ages of 25 and 64 who hold a college degree: 46 percent, a figure that is projected to
grow to 51 percent by 2025” (Colorado Competes, 2012). A recent news article by the Denver Post reported,

In 2017 Colorado was the fourth lowest in spending on higher education per student and Colorado’s economy will require the second most educated workforce in the country, with 74 percent of jobs needing some post-high school training. But only 55 percent of Colorado adults have a degree or certificate today” (Eason, 2017).

This projection for an educated workforce that the state realizes it may not meet is one of the driving factors behind an emphasis on increasing retention and graduation rates for higher education.

**Context of the Study**

Context is important in qualitative studies, as human behavior does not occur in a vacuum; individuals’ actions should be considered in relation to their environments (Lochmiller & Lester, 2017). I examined the context and specific detail of the OBF phenomena in depth. It is important to understand the current funding atmosphere in higher education at public institutions for Colorado. With the rise in popularity of OBF practices, policymakers are increasingly committed to assessing public higher education funding on how institutions perform on value measures such as student enrollment, retention, and degree completion (Rutherford & Rabovsky, 2014). Hearn (2015) found that, “astute leaders are seeking to use well-designed incentives to ensure that public institutions deliver on their promises to people from all backgrounds, even in this challenging fiscal environment” (p. 2).
Additionally, it is important to understand the value placed upon OBF for institutional resource allocation because state funding for colleges and universities is coming under considerable pressure to account for every dollar used (Miller, 2016). Hearn (2015) described the phenomenon as one that puts an “emphasis on making institutions and systems more accountable for their quality has prompted the adoption of OBF models, some of which put virtually all direct state funding for institutions at stake” (p. 1). Being accountability driven has become paramount for today’s administrators by their state’s educational policymaking decisions (McKeown-Moak, 2013). Every state receives funding from the federal government for education, and this makes the topic of OBF particularly relevant (Hendrickson et al., 2013). With the rise in popularity of OBF policies, policymakers are increasingly committed to basing public higher education funding decisions on how institutions perform on valued measures such as program progress and degree completion (Hearn, 2015).

**Participants**

The participants selected for this case study include all five CFOs from the public doctoral granting intuitions in the state of Colorado. This pool of participants was selected because of their central role in the decision-making process involving state funds allocated through HB14-1319. No qualitative study to date has incorporated all the CFO’s of their doctoral granting institutions, making this study unique to advance the knowledge of the field of higher education finance. I chose to conduct interviews with the people most affected by the implementation of OBF in Colorado who have direct experience with the decision-making process at their institutions. As part of my interview
protocol I sent an email introduction of myself with an invitation to participate in my study. This was sent to all the current CFOs at public doctoral granting institutions (Appendix B). By interviewing the CFOs of these institutions, a true insider’s look at the financial decision-making processes of an institution of higher education was captured.

Each participant in this study holds the position of Chief Financial Officer, and four participants were Senior Vice Chancellors or Senior Vice Presidents in their roles at their institutions. All the participants in this study had over 20 years of finance experience and three of the participants had been at their current institutions for over 10 years. One participant had 15 years of senior administration experience for the state in higher education, and one participant had 11 years working directly for the Governor’s office of state planning and budgets in Colorado. The demographics of the participants in this study included: four women and one man: and no ethnic or religious identity information was collected from the sample participants. Confidentiality was a necessary part of this research as discussing financial decisions are often sensitive topics requiring discretion for the individual and the institution.

**Participant Interviews**

In this case study I conducted semi-structured interviews of the selected participants. Semi-structured interviews allow for flexibility to probe with follow up questions based on the response from the research participant (Stake, 1995). Merriam (1998) wrote that people are interviewed so others might learn “those things we cannot directly observe: feelings, thoughts, and intentions” (p. 72). To gain information about the impacts that HB14-1319 is having on CFOs at public doctoral granting institutions it
is important to have a firm grasp on the climate of higher education funding for the state of Colorado, as well as the perspectives of the individuals whose jobs are directly related to the HB14-1319 policy funding formula.

The boundaries of this study for sampling included all the CFOs at public doctoral granting institutions in Colorado and the documents available to the public related to HB14-1319. Using the principal agent and resource dependence theories as the guide for developing the interview questions I asked questions directly related to the relationship that exists between the state and the doctoral granting institutions. Interview questions used in this research study can be found in Appendix C.

Data Collection

The data collection process for this study involved a semi-structured interview to answer the research question: how has incorporating outcomes-based funding HB14-1319 impacted the resource allocation decision making process of senior finance administrators at public doctoral granting institutions in Colorado? To obtain information on the potential impacts to senior administrators at doctoral granting institutions after the implementation of OBF legislation it was important to collect data from the participants. Creswell and Creswell (2017) described data collection steps including “setting the boundaries for the study through sampling, collecting information through interviews, documents, and establishing the protocol for recording information” (p. 185).

Data was collected from semi-structured interviews with the CFO participants, the documents related to HB14-1319 implementation, and the current report of implementation status written by the CDHE for context. Additionally, the data were
verified though an additional step of having an expert reviewer closely involved with the writing and implementation of HB14-1319 review the findings for supporting validity. The semi-structured interviews were audio and video recorded through the Clemson secured WebEx service and the transcribed data were stored in the Clemson Box cloud storage service that is a password protected dual-authentication database.

My interview protocol began with an email introducing myself and my research study along with the participant consent information. This was sent to all five CFOs of the Colorado public doctoral granting institutions and their assistants (Appendix B). I called each of the administrative assistants one day after the email was sent to introduce myself personally, as they are generally the point person for a busy administrator’s calendar. I asked if they received the email and how far out it might be to get a 45-60-minute appointment on their CFOs calendar. Several CFOs responded personally agreeing to my request, while two had me work with their administrative assistants to find a time to interview with them.

After each participant or administrative assistant selected an interview time, I sent a confirmation email and included the interview questions that I would be asking (Appendix C). As a courtesy, I sent a reminder email with the interview questions attached to each participant and administrative assistant the day before the scheduled interview. The interviews took place over a five-week time period during the Spring 2019 semester. The semi-structured interviews ranged in time length from 35 minutes to 65 minutes and all were conducted and recorded using the Clemson WebEx conference service.
Each interview began by assuring the participant that their responses would remain confidential and their institution they would be assigned a pseudonym. I also informed them that I had participation from all five CFOs of the public doctoral granting institutions to help provide anonymity in the reporting process. During the interview I took notes in case of a technology failure. I included notes on the participants’ demeanor and body language during the interview itself to see if they reacted positively or negatively to any of the semi-structured questions that were asked.

After each interview was completed, I downloaded the audio file from the WebEx conference service to be professionally transcribed verbatim by Rev.com transcription service. After the completion of each interview and before I received the completed transcript back, I engaged in reflexive audio journaling to capture my thoughts and impressions of what the interviewee had told me about HB14-1319 and the impacts to their institution. I engaged in additional reflexive journaling after the completed transcript was returned and I listened to the audio interview again to read through the transcript for accuracy. Audio reflexive journaling was utilized several more times during the coding and data analysis process for each institution.

As a verbal processor by nature, I was able to walk and talk into my phone voice memo about the information I heard from the interviews. This process allowed me to reflect on the data, think about if there were institutional reasons the CFO would answer this way, and if I needed to ask more follow up questions based on the responses received. Audio journaling also helped me as a researcher talk through the interview data looking for repetition of answers from the participant. If a participant mentioned the same
point several times for different questions, that was noted. Additionally, I was reflexive about how the data was presented to me. Higher education finance can be a heavy topic with a lot of emotion communicated with the facts. I was reflexive on the communication style of my participants with the information that they were discussing during the interview. Finally, I used audio journaling to critique my interview style and what I wanted to improve on during the next interview.

**Documents**

The document analysis data that I engaged in included a review of the HB14-1319 act, the reports written by the state of Colorado department of higher education, the reports written by the Colorado Commission of Higher Education, news articles published on the topic surrounding the legislation, and the 2018 report on the implementation status of the higher education funding allocation formula. All the documents provided important context for the priorities that Colorado was looking to achieve through higher education. Additionally, as OBF was new to the state the process of introducing OBF was not without its critics. Reviewing these documents provided information from the early discussions on OBF and the predictions of who stood to gain and lose from the introduction of this policy. A review of these documents helped answer the research question, has incorporating outcomes-based funding HB14-1319 impacted the resource allocation decision making process of senior finance administrators at public doctoral granting institutions in Colorado?

**Managing the Data**
All the interviews that were conducted were recorded through the WebEx video conference service in my personal conference room provided by Clemson University. Upon completion of the interviews the audio files were downloaded and saved to the Clemson Box cloud storage service. The Clemson Box storage service is password protected with dual-authentication verification hosted by Clemson University.

Additionally, all research data associated with this study adhered to the regulations mandated by the Clemson University Institutional Review Board. Once the audio files had been saved, they were sent to and professionally transcribed verbatim by Rev.com. Rev.com is a professional transcription service with a strong reputation for accuracy of their work. Additionally, once the transcriptions were returned they were assigned a pseudonym to provide anonymity. Finally, after the transcribed interviews were returned, I saved them on the Clemson box cloud storage service with their audio version counterparts. Chapter four will present the data and findings for this research study.

Data Analysis

Creswell and Creswell (2017) advised that “a strong data analysis process requires sequential steps are followed during the study to move information from the general to the specific, and to be aware that the process can involve multiple levels of analysis” (p. 193). Mills, Durepos, and Wiebe (2010) agreed that data analysis should use an “analytic approach and synthesizing strategy as part of the meaning-making process for case study research” (p. 926). Thus, a five-step data analysis process was employed for this research study.
The steps of the analysis process were organizing and preparing the data for analysis, looking at and reviewing all the data, coding the data, creating descriptions and themes, and representing the data in narrative form (Creswell & Creswell, 2017). The first step in the five-step process of my data analysis process was to organize and prepare the data (Creswell & Creswell, 2017). After this organization process was completed for all five CFO interviews, I moved on to step two which included looking at and reviewing all the transcription data (Creswell & Creswell, 2017). Saldaña (2016) described the goal of data analysis as one that should capture the participants’ essence and content.

Step three of the data analysis process involved hand coding the participant interviews and review of the documents related to HB14-1319 (Creswell & Creswell, 2017). Saldaña (2008) explained “a code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute” (p. 3). These short phrases or descriptions provided by the participants were identified and used in the initial coding scheme to help create a codebook for this research study (Saldaña, 2016). Step four of the data analysis process created descriptions and themes from the coded data (Creswell & Creswell, 2017). Using Saldaña (2016) coding technique of pattern matching was then utilized to begin umbrella theming the data. Five themes were identified from the coding process. Finally, step five of the data analysis process according to Creswell and Creswell (2017) is to present the findings of the research study through the descriptive themes in narrative form. The data analysis technique and findings from the research study will be presented in chapter four.

Trustworthiness
Lochmiller and Lester (2017) defined trustworthiness as the “degree to which your data collection, analysis and presentation of findings are presented in a thorough and verifiable manner” (p. 180). Strategies that I have selected to establish the trustworthiness of this study include, triangulation, the use of thick descriptions to convey the findings, and reliability. A quality case study will occur by presenting a clear chain of evidence of how the research findings were achieved through the presentation of my data analysis. Beverland and Lindgreen (2010) agreed that “establishing a data base, developing a clear understanding of key concepts and assumptions, providing clear and unambiguous definitions of the units and interactions, and carefully defining the boundary of the theory used in the case study.” (p. 56) add to the credibility of the research.

Additionally, to increase trustworthiness of this case study an external peer reviewer was utilized for debriefing. This peer debriefing helped check the dependability and confirmability (Schwandt, Lincoln & Guba, 2007) of the themes discovered during the data analysis phase of this research study. In the exploration phase for this case study I met a senior level director at a state agency who has been directly involved with the research and implementation of HB14-1319. This individual had extensive knowledge in OBF policy practices across the country and the funding climate of the state of Colorado. While meeting to learn about the historical information related to HB14-1319, this individual offered to review my discoveries after the data collection phase to offer verification and validation of my findings to increase the trustworthiness of this study. After the data analysis was complete, we discussed the data findings and validated the accounts given. Creswell and Creswell (2017) discuss that this process can help “resonate
with people other than the researcher by involving an interpretation beyond the researcher” (p. 201). This review of my data happened on April 26, 2019 via a conference call.

**Triangulation**

To accomplish triangulation in this case study I drew upon multiple data sources to build a coherent justification for themes discovered (Creswell & Creswell, 2017). The three points for triangulation of data in this study included: participant interviews, a document analysis, and member checking by participants to ensure the researcher has accurately captured the information from the data collection. In addition to the interviews of the participants, document analysis included the review of all the public reports, news articles, websites related to the HB14-1319 legislation, and institutional websites involved as participants in this study. During the member checking process, I emailed the participants a transcribed copy of the interview and asked them to respond if any of the transcript did not convey the information we addresses or if they had any concerns.

**Rich Thick Descriptions**

The objective of having rich thick descriptions in qualitative research is to be able to convey the findings in a way that takes the reader “to the setting and give the discussion an element of shared experiences” (Creswell & Creswell, 2017). Since this case study asked CFOs to share their personal opinions on any impacts from the adoption of OBF legislation it is important to convey their experiences fully and accurately. Stake (1995) noted that thick descriptions lead to experiential understanding so that the reader...
can conceive that multiple realities exist and can be brought to light through qualitative studies.

As the researcher conducting this study, I felt a very deep ethical responsibility to accurately describe the data being presented to me. By being able to increase the credibility with concrete details (Lochmiller & Lester, 2017), I provided a focused look at the phenomenon of OBF and potential impacts it is having on CFOs decision making at their institutions in Colorado. The use of rich thick descriptions was utilized in the narrative presentation of the data.

**Reflexivity**

It is important to exercise reflexivity when conducting case study research. Lochmiller and Lester (2017) defined reflexivity as “the process of intentionally accounting for your assumptions, bias, experiences, and identities that may impact your research study” (p. 95). In qualitative research, the construction of knowledge in data collection and analysis will be directly controlled by the researcher who functions as the human instrument for the study (Kaczynski, Salmona, & Smith, 2014).

As discussed earlier in the data collection section of this study, I kept an audio recorded reflexive journal during this research study and engaged in reflective exercises during the research process. This allowed me to “take stock of biases, feelings, and thoughts, so as to understand how these may be influencing the research” (Watt, 2007, p. 84). Through regular audio journaling I sharpened my research skills by logging my discoveries and perceptions throughout the process. By engaging in reflective journaling,
I was able to better determine how I came to believe the knowledge I learned over time (Watt, 2007).

**Reliability**

To investigate the phenomenon of OBF and advance the knowledge in the field of educational finance it is important to focus on conducting a qualitative research study that will “improve practice, programs, processes, or policies” (Lochmiller & Lester, 2017, p. 9). To establish a case study with strong reliability a researcher must create a solid interview protocol, as well as make a statement about their subjectivity. Yin (2013) wrote that to achieve reliability in qualitative research one must document the steps and procedures taken for the case study research. In addition to documenting all procedures of this research study, I placed a high standard on exhibiting attention to details. The transcripts were checked for mistakes after transcription, data coding was reviewed to ensure the themes coded captured the authentic meanings from the participants, and all the collected data was securely stored during the research process.

A strong interview protocol was essential to this case study as interviewing participants was the primary data source. The interview questions were written to align with the research question and conceptual theories for this research study. Quality interview questions helped increase the reliability of the data obtained from the interview through a shared language and created congruency in the protocol (Castillo-Montoya, 2016). Receiving feedback on the interview questions and piloting the interview protocol added to the reliability of this research study.

**Pilot interview**
A pilot interview was conducted to test the recoding capabilities of the WebEx video conference technology, as well as my interviewing techniques as a researcher. A senior administrator at Clemson University graciously agreed to volunteer time as a sample participant for this study. As a senior administrator holding an executive management level position this volunteer had the same seasoned veteran status as the interview participants. This individual is keenly aware of the financial issues facing higher education and regularly reports on the current climate of state fiscal priorities of a public doctoral granting institution. Additionally, this volunteer reviewed the interview questions to make sure they had the proper flow, wording, and clarity. The edit suggestion for the interview questions included: breaking one question into two separate questions and adding a link to CDHE website about HB14-1319 for the participants to have quick access to needed information on this policy. Finally, the pilot interviewer provided constructive feedback on my interview technique.

**Positionality**

Acknowledging a researcher’s subjectivities are critical to a qualitative research study. Given (2008) stated,

The purpose of a subjectivity statement is (1) to help researchers identify how their personal features, experiences, beliefs, feelings, cultural standpoints, and professional predispositions may affect their research and (2) to convey this material to other scholars for their consideration of the study's credibility, authenticity, and overall quality or validity (p. 2).
I am a practitioner-scholar who has worked in higher education finance as a budget officer and related business roles for 15 years at a private university in the state of Colorado. While I attended a state public institution for my undergraduate degree nearly 25 year ago, I have never worked for a Colorado public doctoral granting institution. I have also never worked as a senior level administrator, nor do I have a background in policy work. Finally, I am not a business analyst or auditor and I have no prior relationship to the participants selected for this study.

As a researcher it is important to acknowledge, “who researchers believe themselves to be as individuals, their backgrounds, and how these are related to those they study” (Given, 2008, p. 2). My current life experiences relevant to this study include that I am a resident of the state of Colorado and have children who plan to attend a Colorado public doctoral granting institution. I have a strong interest in the funding of the state institutions of higher education and the phenomena of OBF. The goals set forth in HB14-1319 resonate with me, I admire that the state is trying to help stabilize tuition for students to make sure that everyone who wants to attend postsecondary education will have the opportunity. Finally, I personally agree that policy can evoke necessary changes for the benefit of the citizens of a state, but I also believe that just because something is a popular trend does not mean it will work effectively for every state. Only through research can the answers be discovered on the impacts of newly created legislative policy.

Limitations
To address the limitations of this study it is important to recognize that qualitative research studies promote a subjective paradigm (Stake, 1995). A limitation of this study is that administrators can be very hesitant to talk about financial issues and decision making. A competitive edge mentality where administrators are unwilling to speak about how resource allocation decisions are made (for fear of the information being leaked to the public) is a possibility. Also, senior administrators may hold back in their comments on potential impacts of the HB14-1319 due to the small sample size. To help overcome these potential limitations I reassured the participants at the beginning of our interviews that confidentially is of the utmost importance. I also explained that I would send them a copy of the transcript for member checking and that if they found any information they would like taken out, I would do so.

While an institution may be financially stable at the current moment in time, this does not guarantee that a poor decision will not have long lasting financial consequences. Additionally, this research study was situated on the experiences that senior administrators had with the HB14-1319 policy to date. To have a fuller understanding of the impacts to Colorado on senior administrator’s decision-making a follow up to this study is suggested.

Finally, as two of the identified outcomes for HB14-1319 included increasing graduation and retention rates for Colorado it is important to mention that current research shows these may not be the best indicators of an OBF model success (Zhang, 2009). While they are the most commonly used metric to identify success of an outcomes-based financial model, they are only one small piece of the puzzle (Hillman,
Tandberg, & Fryer, 2015). Acknowledging that some of these issues impacted this case study is important to the research process.

**Summary**

This chapter included a discussion of the case study research methodology that was used to answer the research question: how has incorporating outcomes-based finding HB14-1319 impacted the resource allocation decision making process of senior administrators at public doctoral granting institutions in Colorado? The rationale for a case study approach, research setting, context, and participant descriptions were presented. Additionally, the data collection process and how the data was managed to ensure a high-quality research study were detailed. Finally, I presented the measures implemented to maintain the trustworthiness for the study. They include triangulation, reflexivity, a pilot interview and my subjectivity statement. Finally, the potential limitations of this study were addressed. The next chapter I will discuss the results of the data collection and analysis.
CHAPTER FOUR

RESULTS

The data presented in this chapter will help answer the research question: Has incorporating outcomes-based funding HB14-1319 impacted the resource allocation decision making process of senior finance administrators at public doctoral granting institutions in Colorado? In this chapter the data collected from semi-structured interviews of the five CFOs at Colorado public doctoral granting institutions, and the information obtained from the document analysis will be presented.

This chapter will begin with an overview of the institution’s basic statistical information from where the CFOs hail and a review of the data analysis technique for this case study. I will present the themes identified after coding the transcripts and documents.

Colorado Public Doctoral Granting Institutions

The state of Colorado has five public research doctoral granting institutions (The Carnegie Classification of Institutes, 2018) that are subject to following the funding allocation model defined in HB14-1319. The CFOs at all five institutions agreed to participate in this research study and provided me with background information about themselves, their current position responsibilities, and identified themselves as the person who makes the resources allocation decisions at their institutions. To have participation from all five CFO’s at the doctoral granting institutions in Colorado was unprecedented. It is important to point out that access to the individuals who make financial decisions at doctoral granting institutions is difficult due to the tremendous job responsibilities they
hold and making themselves available for this qualitative research study was an extraordinary gesture on their part. The pseudonyms for the five doctoral granting institutions are the names of prominent mountain peaks in Colorado and were assigned randomly.

Table 4.1 below gives a snapshot of the institutional statistics of the participates in this study. It includes information on the current student enrollment, percentage of the budget from the state before and after HB14-1319, and the change in reported retention and six-year graduation rate retrieved from the Integrated Postsecondary Education Data System (Graduation Rates, n.d.). Retention and graduation rates are included in this table as they are identified as outcome goals for HB14-1319 OBF policy. However, it is important to clarify that specific incremental outcome goals for each institution are not public information.

Table 4.1 Participant Institutional Facts

<table>
<thead>
<tr>
<th>Total Student Population</th>
<th>% of Budget from the State before HB14-1319</th>
<th>% of Budget from the State after HB14-1319</th>
<th>2015-2018 Retention Rate from 1st-2nd year</th>
<th>% change</th>
<th>2015-2018 6 year Graduation Rate % change</th>
</tr>
</thead>
<tbody>
<tr>
<td>34,510</td>
<td>4%</td>
<td>4%</td>
<td>+1%</td>
<td>+3%</td>
<td></td>
</tr>
<tr>
<td>19,558</td>
<td>14%</td>
<td>16%</td>
<td>Flat</td>
<td>+6%</td>
<td></td>
</tr>
<tr>
<td>6,268</td>
<td>10%</td>
<td>10%</td>
<td>+1%</td>
<td>+4%</td>
<td></td>
</tr>
<tr>
<td>12,862</td>
<td>21%</td>
<td>21%</td>
<td>Flat</td>
<td>+4%</td>
<td></td>
</tr>
<tr>
<td>33,413</td>
<td>11%</td>
<td>11%</td>
<td>-2%</td>
<td>+2%</td>
<td></td>
</tr>
</tbody>
</table>

Data Collection Analysis
Interviewing the five CFOs at the public doctoral granting schools provided unique information about their experiences with the HB14-1319 legislation and the impacts on their resource allocation decision-making priorities at their institutions. I began the process of coding the data from the transcribed interviews after my last interview had taken place. After each interview was completed and transcribed, I read through the transcript while listening to the audio recorded interview for accuracy. Additionally, while reviewing the transcript I added in my handwritten field notes to the hard copy so that all the information from the interview was available in one place. During this beginning phase of the data transcription I also began to work through documents related to HB14-1319 to further explore the material available to the public on the legislation. These documents were organized by time according to pre-implementation years (prior to 2015) and post-implementation of HB14-1319 starting in fiscal year 2015. Yin (2013) described that an open coding approach can be used to generate categories from interviews, documents and field notes.

As my research interview questions were grounded in the principal agent theory and resource dependency theory, I organized my thoughts around how the data related to these theories as I began the data analysis for this research study. As higher education finance has a specific language that all scholars and practitioners in the field use, I also began the coding process by looking for these key terms as an organizational marker for finance concepts. I completed my first round of initial coding (Saldaña, 2016) and created a codebook with 31 codes. Following Saldaña’s (2008) directive, I looked for “similarity, difference, frequency, sequence, correspondence, and causation” (p. 6) in the transcripts
to identify these codes. Table 4.2 displays the codebook created from the data of the participant interviews and the document analysis.

**Table 4.2 First Round of Analysis: Creation of the Codebook**

<table>
<thead>
<tr>
<th>Clusters</th>
<th>Codebook</th>
</tr>
</thead>
</table>
| Cluster 1:8 Initial Codes | -Retention of students  
-Graduation expectations/actual  
-Student programing  
-student support offered  
-financial aid available  
-Job readiness programs  
-tuition guarantee program  
-research rich experiences |
| Cluster 2: 5 Initial Codes | -Current funding model  
-Current resources  
-Mission identity  
-Transparency  
-current % of budget from state |
| Cluster 3: 6 Initial Codes | -measures of productivity  
-Expectation from OBF  
-Knowledge of new funding model  
-minimizing consequences  
-Resources available from state  
-% of budget from HB14-1319 |
| Cluster 4: 5 Initial Codes | -tuition predictability  
-tuition dependent  
-Value of higher education to public  
-Public expectations of tuition  
-Ways to increase resources |
| Cluster 5:7 Initial Codes | -Value of higher education to legislatures and policy makers  
-State has a say in outcomes  
-sustainability over time  
-predictability of future funding  
-cultural change in funding mentality  
-lots of constituencies (players)  
-Current political climate no longer collaborative |
Following my initial coding round where the 31 codes for my codebook were identified I participated in a reflexive journaling session before completing a second round of coding. A second round of coding the interview data was conducted to look for additional codes that may have been missed. None were found to add to the initial 31 codes. During this second coding session I began to notice key phrases from the interviews and began to color code them based on the frequency and consistency across the interviews. After the third round of coding looking for frequency of the 31 codes across the transcripts and reflexive journaling and I noticed a consistency of patterns emerging across responses of each of the CFOs. Stake (1995) wrote, “the search for meaning is the search for patterns” (p. 78).

As I began to observe the relationship between the patterns of codes, “expected codes and codes of conceptual interest” (Creswell & Creswell, 2017, p. 195) began to appear across the interview data. This process brought my initial 31 codes down into 10 distinct patterns. To distinguish these 10 patterns, I grouped the phrases and sentences together that conveyed similar messages or used similar language by the CFOs during their interviews. These patterns were also identified because of the frequency and content they presented in the interviews. Additionally, I assigned these patterns a color to identify them and looked for similar patterns across the documents in my document analysis. Table 4.3 presents the clustering of codes form the codebook into patterns for the data analysis.

Table 4.3 Second Round of Analysis: From Codes to Patterns
Second & Third Coding: 10 Patterns emerged from Codebook

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Codebook</th>
</tr>
</thead>
</table>
| Cluster 1: 2 Patterns emerged | -Retention of students  
-Graduation expectations/actual  
-Student programing  
-student support offered  
-financial aid available  
Job readiness programs  
-tuition guarantee program  
-research rich experiences |
| -Institutional support of Student Programming  
-Measures of student success | |
| Cluster 2: 2 Patterns emerged | -Current funding model  
-Current resources  
-Mission identity  
-Transparency of decision making  
-current % of budget from state |
| -Institutional mission identity through decision making  
- Institutional Funding model prior to HB14-1319 | |
| Cluster 3: 2 Patterns emerged | -measures of productivity  
-Expectation from OBF  
Knowledge of new funding model  
-minimizing consequences  
-Resources available from state  
-% of budget from HB14-1319 |
| -State allocation after HB14-1319  
- Additional outcomes tied to new funding model | |
| Cluster 4: 2 Patterns emerged | -tuition predictability  
-tuition dependent  
-Value of higher education  
-Public expectation  
-Ways to increase resources |
| -Funding predictability (Resources)  
-Tuition dependency/cost to students | |
| Cluster 5: 2 Patterns emerged | -Value of higher education to legislatures and policy makers  
-State has a say in outcomes  
-sustainability over time  
-predictability of future funding  
-cultural change in funding mentality  
-lots of constituencies (players)  
-Current political climate is no longer collaborative |
| -State goals: Value of higher education in Colorado  
-Policy players/Constituencies | |
I noticed consistency and repetition between the participant transcripts from the 10 patterns that had been identified and began grouping the patterns into potential umbrella themes. For organizational purposes, I wrote out sticky notes that represented the patterns I had identified and placed them in categories on large sheets of paper representing potential themes to see if each institution had contributed to the particular pattern identified. To extrapolate the themes from the data patterns I looked for frequency of use and consensus among interview participants. This led me to consolidate the 10 patterns into five overarching themes.

Following the technique of Mills, Durepos, and Wiebe (2010) the “identification of themes can be done deductively, on the basis of theoretical constructs that the case study researcher wishes to investigate” (p. 926). The tenants of principal agent theory and resource dependency theory were identifiable in the CFO responses and I analyzed the respondent’s answers to uncover these thematic dimensions from their point of view (Weerts & Ronca, 2006). Through a process of “logic linking” (Yin, 2013) the data from patterns observed and aligning the data based on thematic findings, five main themes emerged in this research study. Table 4.4 displays the patterns that evolved into the five overarching themes of this research study.

**Table 4.4 Third Round of Analysis: Emergence of Themes**

<table>
<thead>
<tr>
<th>Patterns Leading to 5 Final Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theme</strong></td>
</tr>
<tr>
<td><strong>Pattern</strong></td>
</tr>
</tbody>
</table>
### Student Success Measures
- Institutional support of Student Programming
- Measures of student success

### Accountability
- Institutional mission identity through decision making
- Institutional funding model prior to HB14-1319

### Agency Status Quo
- State budget allocation after HB14-1319
- Additional outcomes tied to new funding model

### Resources/Tuition Costs
- Funding predictability (Resources)
- Tuition dependency/cost to students

### Politics of Funding
- State goals: Value of higher education in Colorado
- Policy players/Constituencies

Additional data for this case study involved a document analysis. Documents reviewed included: all public reports, news articles, and websites related to the HB14-1319 legislation, as well as the institutional websites of the participants in this study. These documents were reviewed and coded following the coding analysis protocol used for the CFO participant interviews. Additionally, these documents provided history and context surrounding the policy implementation of HB14-1319. As this study sought to find the potential impacts of the HB14-1319 legislation, it should be noted that to date only one published report, *Report on Implementation Status of Higher Education Funding Model* has been published with future recommendations for the state where HB14-1319 is concerned.
Themes identified

The interviews for this research study gave CFOs an opportunity to voice the impacts they have experienced with OBF legislation HB14-1319. I began each of the semi-structured interviews by asking the CFOs about their institution’s mission, what the measures of productivity are, and how they historically allocated resources in support of their mission and goals. The following sections will present the themes that emerged from the information shared in the interviews.

Student Success Measures

While each institution has their own unique mission and values statement it is important to report that all the CFOs unanimously responded that their priority when considering measures of productivity for resource allocation revolves around students. The strategic decisions they identified ranged from increasing financial aid, focusing on retention, supporting job readiness programs, and providing students a tuition guarantee to be able to plan the true cost of going to college. Each participant in this study viewed and discussed student success measures through their own strategic initiatives depending on the student populations they serve on their campuses.

Pikes Peak and Mt Evans both commented that they feel they have a particular niche in serving first generation, underrepresented minority, and low-income students as a research institution. In turn, they focus their funding efforts on attracting and supporting these student groups. Specifically, one participant felt they “meet their student success measures by having a true understanding of the demographics of the students they serve and offering support services accordingly.” They described themselves as “mirroring the
diversity of the Denver community” and as they are close to gaining Hispanic-Serving Institute (HIS) recognition status their students’ needs are quite different from the more residential campuses across the state.

For Maroon Bells and Longs Peak postgraduate career attainment is a sign of strong student services efforts during their upperclassman years on campus. Maroon Bells specifically identified their commitment to working towards student success by “offering greater affordability to offset their high tuition cost.” Their CFO shared:

We have committed that every non-college opportunity fund piece of the allocation we get from the state we will give back to the students in terms of financial aid or student programs. By 2020 we plan to give the entire 16 million from the state allocation to support affordability and to support access.

Probing more on what Maroon Bells meant by “support access” the CFO responded, “As an institution [we] have a strategic initiative to increase the diversity at their institution.” By offering more financial aid opportunities they hope to attract more first-generation students, students of color and women to their programs. Additionally, the CFO commented, “once the students have matriculated to campus providing student support services during their college experience is part of the planned initiative as well.”

All the CFOs responded that as far as a measure of productivity their institutions have placed such a high priority on student success that they have established strategic committees focused on what they believe are best practices around student support at their respective institutions. One commented that "you can’t just give someone a scholarship and expect students to persist and graduate, you must support them.” Longs
Peak is extremely proud of the fact that “9 out of 10 graduates would choose to attend Longs Peak again.” For this institution a high alumni satisfaction rating suggests that while students attended school on their campus, they felt they had adequate support to succeed.

The other measures of productivity that were discussed by all participants in this study included retention and graduation rates. These measures of productivity are also the prescribed ones written into HB14-1319 as part of the required metrics for funding under the model. When discussing the topic of retention, one participant commented “student success measures around retention were not only a good thing for the student, but a good thing for the institution, and ultimately a good thing for the bottom line,” This response follows the line of logic thinking in higher education finance that having students persist on and stay at an institution has benefits for all involved. The student is more likely continue in their educational pursuits, the institution can plan and budget appropriately for class size and majors, and ultimately tuition dollars to the school are not lost.

It is not surprising that retention and graduation rates were identified as one measure of productivity identified by CFOs: this is a common matrix used across the country to signify success of an institution. Whether it is the proper metric to use is still being debated by scholars, but since so few commonalities exist across all institutions these measures of performance have become commonplace with OBF policy.

As discussed in chapter three, a critical component of the revenue stream that funds institutions in Colorado is tuition revenue directly paid by the students. As Colorado schools are dependent on tuition as a revenue source, it is important to not have
students leave before completion of their degree. From a purely financial perspective when students stop out, or drop out, of college and do not persist on to graduation, they are lost tuition dollars that cannot be replaced easily. Many institutions have created purposeful retention student services programs to help students persist through to graduation. These include first year seminar style classes to meet peers, faculty connections/mentors for first year students, and student support and advising centers (DeAngelo, 2014). It is clear from the CFOs responses that they recognize students as a funding priority and have positioned the resource allocation decision making priorities accordingly.

Mt Elbert reported that they are “providing a research rich experience for students with a tuition guarantee so students can plan appropriately for what their college education will cost.” Probing further into this tuition guarantee response, the CFO explained that tuition has increased every year since the recession and in the early recovery years it was sometimes dramatic. The unpredictability of what college would cost from year to year was a potential indicator of why students were stopping out. Internal exit interviewing of students leaving their school showed that this lack of being able to plan for yearly tuition increases was indeed affecting their retention rate and overall ability to persist through to graduation. As a stated priority of HB14-1319 and built on the advice of a strategic student success committee, the idea for a tuition guarantee was born. The tuition guarantee states that students will pay the same rate for tuition and fees for four consecutive years at their institution. This program has been in
place since 2016 and assessment data is forthcoming to see if the program has achieved it’s desired effect on retention and graduation rates.

**Accountability**

The new OBF model necessitated additional reporting measures be added to the CFOs job responsibility. Through the semi-structured interviews, I asked questions directly related to how the new OBF model changed their institutions current finance model and their job. Specifically, I wanted to see if the new reporting structure of state funds added additional layers of complexity and impacted decision making on accountability.

All five CFOs responded to this area of inquiry with a resounding no, that HB14-1319 did not add any additional internal complexity or accountability to their current resource allocation models and job responsibilities. One participant from one of the larger institutions commented that the “sliver of the budget they receive from 1319 is so small that it has not impacted us at all with regards to the added reporting.” Pikes Peak responded that they “felt a tremendous amount of energy was invested in this legislation for not a high return on investment for the institutions.”

Additionally, Mt Elbert responded that they personally were involved with the HB14-1319 policy discussions from the very beginning stages and they felt “the end result was very complimentary to what they were already doing on their campus.” Thus, it did not require much change on their side to implement. Longs Peak added that “bigger schools are more nimble and able to withstand ups and downs, so we have been fine.”
A pattern that emerged was the perspective that the introduction of OBF model policy not only did not add accountability to their institutional finance model or job; it also did not change the oversight they received from the state. Mt Elbert directly pointed out that the “oversight from the state remained unchanged but the conversation around funding is what changed.” One participant felt there was “too little oversee with the policy and what is there is misdirected.” Following up to gain clarity about this statement this participant responded that they felt the model “tried to be all things for all people” and that for their institution “it does not harm us, but it does very little to help us.” Finally, Longs Peak commented that they felt that “people (higher education administrators) were still frustrated with the model because they did not fully understand the inputs and outputs.”

While all the CFOs agreed that HB14-1319 did not add accountability to their institutions or job responsibilities they all agreed that they are 100% committed to the performance and transparency statistics that the legislature sought. Mt Elbert pointed out that they “loves the mission of being a public university and the conversations around 1319 have helped be a driver for change.” Many institutions agreed there needed to be unifying discussions around shoring up the public’s and legislative confidence of where their tax money is going in support of higher education. Longs Peak added, “we are never going to fix all the problems with funding but HB14-1319 created a framework to begin to try.” Finally, Mt Evans gave a summary about HB14-1319 with regards to the added accountability theme by saying:
1319 was more around trying to incent specific behaviors and specific accountability around the levers that were performance based- connecting that to the state’s master plan on higher education.

The document analysis found that no public documents referencing specific additions to institutional accountability or CFOs job responsibilities were added due to the implementation of HB14-1319. While the participants did address that there was “a lot of paperwork” on reporting outcomes to the state these reports are not public record. In fact, outside of the retention and graduation rates that are reported to IPEDS nationally, Colorado has not made the other metrics institutions report under HB14-1319 available to the public. Finally, as public doctoral granting institutions were not specifically distinguished from other types of institutions in the document review the general patterns that fed into this theme included: percentage of the budget, transparency, and knowledge of how the new funding model works. In summary this theme described that no additional institutional accountability took place for CFOs at public doctoral granting institutions in Colorado with the implementation of HB14-1319.

**Agency Status Quo**

A third theme that emerged was that the CFOs stated they made no changes to their decision-making priorities when it came to resource allocation after the implementation of HB14-1319; their agency stayed status quo. All of the participants stated that they had not made any changes to their decision-making process as a result of the implementation of HB14-1319. One CFO went so far as to say that they have “continued on the same path they have been on for 25 years.” Pikes Peak commented that
they had not made any changes to their decision making because they felt “the state masterplan for higher education is consistent with the best interests they have in place for their students already.” While one participant added,

The theory out there right now is that everyone is going to get the average increase in funding as opposed to where the model would have put them—so why change our processes?

This comment by the CFO is very telling and needs further explanation. On the one hand it shows that the CFO believes their resources allocation decision processes they have at their institution are in line with the tenants of OBF principles. On the other hand, it shows that senior administrators are questioning the effectiveness of this model when it comes to allocating funds across the state. To be more specific, no goal conflict is being created by not meeting the outcomes set by the state so why change behavior if everyone will receive the average fund allocation anyway? So, the message being delivered by the state according to this CFO is that there is no need to be a winner in OBF because everyone is going to get a participation medal.

In terms of probing deeper into the decision-making process area, questions were asked relating to how their decision making has shifted and how that impacted their ability to act as an independent institution. The responses were again similar across the participants. To the questions asked about oversight from the state Mt Elbert explained, “the dollars involved are genuinely not a motivator and that makes it a challenge to be a driver of change.” Longs Peak again reiterated that the funding coming from the state is only one (small) component of their revenue stream. One participant asked if they could
be blunt and their response was a firm “NO! HB14-1319 had not caused any changes to our decision-making process.”

Maroon Bells was the only institution that responded “no” to the change in decision making priorities line of questions but shared an alternative reasoning for their response. They are a considerably smaller, more specialized research doctoral granting institution and have an extremely high tuition rate (the 4th highest resident tuition in the county for a public institution). Their CFO commented that they want to keep undergraduate enrollment low and selective. Their campus is geographically landlocked, and they have no plans to expand. They believe they are “lopsided when it comes to the discussion of OBF for the state of Colorado.” Since the implementation of the HB14-1319 funding allocation model they have seen no change in their funding allocation from the state and they attribute this to a special status they have received because of their unique identity and ability to attract high caliber students. The CFO believes they would be disadvantages by some of the priorities set by HB14-1319 it they followed the funding model exclusively.

This special status opinion by this CFO points out that no goal conflict is happening from the introduction of OBF to entice change. In this instance, however, no goal conflict is a good thing. The institution is not being forced to increase enrollments when their niche is being a small specialized research institution. The CFO commented directly to the point “we act more like a private institution than a public one because of our high tuition rate, so they have not made any adjustments to our internal decision-making process.”
While this “no change in decision-making processes” sentiment was echoed by all the participants in the study, they all stated support for the OBF approach the state has implemented. Mt Evans commented that 1319 created an “opportunity to put the budget in a new light so institutions did not have to worry about where future funding was coming from.” One participant commented “all Colorado schools are being asked to be more accountable than they have been in the past and HB14-1319 is a way to do that.” Finally, Mt Elbert commented that “the goals of 1319 aligned well with their strategic goals (metrics), so no changes to their decision-making processes have taken place.”

One positive impact that was discussed by several CFOs was that the introduction of OBF created an environment that CFOs used to educate the faculty and staff about higher education funding and state allocations. Many CFOs commented that they used implementation of the policy as a teachable moment. Mt Evans believes that “the OBF legislation created a very transparent process and brought together higher education in Colorado.”

No specific language was found in the document analysis that specified the need for CFOs to change their decision-making priorities from the implementation of the new allocation funding model. However, in the 2018 report on Implementation status of HB14-1319, a conclusion drawn by the Colorado Commission of higher education was that “institutions need additional time to effectively modify behavior to meet the goals and set themselves up for greater opportunity for success within the funding model metrics and factor.” This conclusion is clearly not reflective of the CFOs for public doctoral granting institutions, as they reported no need to modify behavior or change their
agency status quo to meet the goals of HB14-1319. The general patterns observed in the documents related to this theme included: measures of productivity, percentage of the budget, expectations and minimizing unintended consequences.

In summary, the theme of agency status quo showed CFOs experienced no changes to decision-making and no changes regarding their resource allocation for institutional priorities after the implementation of HB14-1319. The CFOs felt it was business as usual for their decision-making processes and that their priorities as public doctoral granting institutions already aligned well with the state masterplan for higher education.

**Resources/Tuition Costs**

One of the main goals of the HB14-1319 legislation was to try to give Colorado families greater tuition predictability at public institutions across the state to ensure an accessible and affordable education opportunity. Since the balance of funding in Colorado shifted after the great recession to having the students pay considerably more in tuition, it was appropriate to find out if the CFOs felt impacted by this tuition goal as it relates to their resource allocation decisions. To answer the research question, data needed to be collected on the tuition goal set forth in HB14-1319. During my interviews, I asked the CFOs if their decision-making priorities had shifted to align with the HB14-1319 goal to provide greater tuition predictability for Colorado families. Their responses about tuition stability all involved referencing the stable economy Colorado has enjoyed since the introduction of OBF by the legislature. Maroon Bells, Mt Evans, and Mt Elbert all commented that tuition has stayed predictable with only moderate increases over the
last 5 years due to the strong economy and stable positive funding amounts from the state for higher education overall.

While commenting about resources and tuition and the goals of HB14-1319, one participant pointed out “Colorado is consistently ranked as a highly desirable place to live thus attracting many out of state applicants.” This CFO stated they believed that this desirability factor to live in Colorado helps to attract interest from nonresident students who want to reside on their campus. Additionally, this participant believed that this increase in demand from nonresident students has led to the passage of a recent Senate Bill, HB18-206. This bill shifts the allowable percentage of resident vs nonresident enrollment requirement for Colorado public institutions (Niedringhaus, 2018). The resident rate was set at 66.7% and will adjust down to a 55% resident, while the nonresident rate will increase from 33.3% to 45% (Niedringhaus, 2018). This bill also allows for increases in international students’ enrollments from 12 to 15% (Niedringhaus, 2018). This is important to note as international students generally pay an even higher tuition than non-residents because they do not qualify for any aid relief from the federal government. These shifts in the admissions percentage of the student body are a direct and effective way to increase funding at an institution through tuition costs.

This new bill, 18-206, is anticipated to positively impact all institutions in Colorado with additional revenue from tuition (Mt Elbert). When discussing this new change to the resident and nonresident formula one participant explained “accepting out of state non-residents (who pay nearly triple the tuition) was a funding opportunity that needed to be explored.” The general sentiment when talking about this shift was that the
CFOs were committed to keeping tuition stable in Colorado and this was another opportunity to do that through increased revenue. While it does increase resources at an institution and keep tuition stable for resident tuition at an institution further research will need to be conducted on the impacts of this change.

A point that Longs Peak discussed when talking about the tuition stabilization goal associated with HB14-1319 was “tuition has become such a major component of most school funding, that even when the legislature can give a lot of money to higher education, they (legislators) get frustrated that tuition pressure is still there.” Mt Evans agreed with this sentiment and added, “We used up our ability to increase tuition when looking at what the market can bear. There is no more room for increases, so tuition predictability has become imperative in the state of Colorado.”

A finding from the document analysis was that the theme of resources/tuition costs staying stable was one of the main accountability reasons the legislatures called for a goal of tuition predictability for Colorado families. It is referenced in virtually every document reviewed during this research study. The general patterns observed in the documents reviewed related to this theme included: tuition predictability, value of higher education, increasing resources, and public expectations.

In summary, the theme of resources/tuition costs found that CFOs credited the strong Colorado economy and increases in overall funding for higher education as reasons for resources and tuition staying stable. The CFOs also commented that they believe that tuition predictability is very important so that the citizens of Colorado will not lose faith in the higher education system overall. The introduction of legislation that
increased nonresident enrollments to increase revenue is too new for CFOs to comment on, but the intent to keep tuition stable and predictable is welcomed. No participant stated that tuition predictability was an impact from OBF, but they did all agree that educating the public about why tuition increases is a priority.

**Politics of Funding**

HB14-1319 was intended to try to eliminate the lobbying that institutions were engaged in with the legislature in an effort to increase their institutional funding in the years prior to the new funding model (A. Rauch, personal communication, May 1, 2019). The political dynamics of higher education funding and policy making are inherently linked to how CFOs responded to HB14-1319. Participants’ responses highlighted these nuances.

Pikes Peak and Mt Evans CFOs, the two institutions with the largest allocation of funding from the state, responded that they learned how challenging the political process is because “there are so many players.” Similarly, Longs Peak and Mt Elbert felt there are a lot of voices trying to “control the funding issue without a true understanding of higher education organizations.” Mt Evans explained that everyone involved in writing HB14-1319 had “different goals and political agendas coming into the process and most people did not get out of it what they wanted.” One participant responded:

> We need to understand what is going on politically as far as accountability, competition, and being able to leverage what we think we need. We need to be ready for what could be forced upon us to reinvent ourselves and change the way we are doing business.
This response is not surprising given that a new governor was elected in November 2018 and while he is the same political party as the previous governor, people are waiting to see what he does with higher education funding.

One participant explained, “the political environment had stayed stable since the implementation of HB14-1319 with the same governor and funding for higher education has been more in the spotlight than it ever has.” While some years have had more increases that others, there was still not a year that funding was cut since the introduction of HB14-1319. This stability in funding is reported in the implementation status of HB14-1319 by the CCHE. They reported an 11% increase in FY 2015-2016; in FY 2016-2017 the funding level was flat, a 2.5% increase in FY 2017-2018, and an increase of 8.95% in FY 2018-2019 (Implementation Status Report, 2018). This information is important, as the OBF allocation model in Colorado has never been utilized in a deficit funding environment in the state.

Additionally, in the beginning stages of talking about OBF legislation back in 2014, a climate of collaboration was identified, and everyone interested in the process was invited to participate as citizens and leaders in Colorado. It is mentioned numerous times in the document analysis as an ideal way for policy formation to happen. As HB14-1319 is nearing the five-year mark and the legislature is reviewing how to move forward the collaborative environment in politics seems to no longer exist. HB14-1319 specifically had language written in it that the model was not to be “implemented and abandoned but rather monitored and reworked over time”. Many of the CFOs commented that they wonder how things will move forward. While discussing the politics of funding
Mt Elbert commented, “there is a perception that higher education overall is still not doing well, so you need to have continued oversight, you need to be monitored and have reporting. That just comes with public institutions now.”

When speaking directly about the politics of involvement from the state Pikes Peak commented, “funding plays such a small role it is a misconception that legislative state government will really affect institutional decisions.” Mt. Evans called the funding process put forth a zero-sum game, “the challenge is you can’t goal seek unless you want to make an OBF model with winners and losers and Colorado did not do that.” This statement by the CFO is reflective of the tenants that make up principal agent theory.

Lastly, when speaking about the politics of funding and the introduction of OBF to Colorado, Mt Evans offered, “politically we needed a cultural change around reallocating resources toward strategic priorities of the institution and I don’t believe that 1319 has driven that at all.” Longs Peak commented, “this funding model that was presented to us in HB14-1319 is really is not how performance funding management works. This is funding satisfaction from a political perspective.” Only one institution, Maroon Bells, responded that they felt the state has less involvement now in allocating higher education money. They believe that the state has taken the stance of, “don’t talk to us (state) about more money you have a model to use.”

Senior administrators at public granting institutions in Colorado have a firm grasp on the politics of higher education funding in the state. They embraced the change that came with the OBF model in the interest of trying something new and to offer more accountability to the public as state supported institutions. They are, however, realistic
that HB14-1319 did not accomplish the true OBF status as it tried to be all things for all people and that just made things status quo for them as research institutions.

A finding of the document analysis was that the theme politics of funding was addressed from the early discussion stages of HB14-1319. As public doctoral granting institutions were not specifically distinguished from other types of institutions in the document review the general patterns that fed into this theme included: convey higher education value to policymakers, sustainability of policy over time, and predictability of future funding.

In summary, the theme politics of funding discovered that the CFOs found the beginning stages of discussion about the OBF model coming to Colorado a very political process with many players. Many CFOs felt that while the introduction of OBF effort was collaborative most institutions did not get out of the legislation what they wanted. However, the public doctoral granting institutions were not harmed by a lack of funding allocations from the new model. Several felt this political effort was more of a funding satisfaction model to knock out the lobbying that had been taking place prior to HB14-1319.

**Themes Identified Summary**

Table 4.5 is a summary of the themes identified with supporting quotes from the participants of this research study.

**Table 4.5 Summary of Themes**

<table>
<thead>
<tr>
<th>Themes Identified</th>
<th>Participant Quote in Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Success Measures</td>
<td>We have committed that every non-college opportunity fund piece of the allocation we get from the state we will give back</td>
</tr>
</tbody>
</table>
to the students in terms of financial aid or student programs. By 2020 we plan to give the entire 16 million from the state allocation to support affordability and to support access. (Maroon Bells)

**Accountability**

There is too little oversight with this policy and what is there is misdirected. (Pikes Peak)

1319 was more around trying to incite specific behaviors around the levers that were performance based and connecting them to the state’s master plan on higher education (Mt Evans)

**Agency Status Quo**

The dollars involved are genuinely not a motivator and that makes it a challenge to be a driver of change. (Longs Peak)

We are continuing on the same path we have been on for 25 years (Mt Elbert)

**Resources/Tuition Costs**

Tuition has become such a major component of most school funding, that even when the legislature can give a lot of money to higher ed, they (legislatures) get frustrated that tuition pressure is still there (Longs Peak)

We used up our ability to increase tuition when looking at what the market can bear. There is no more room for increases, so tuition predictability has become imperative in the state of Colorado. (Mt. Evans)

**Politics of Funding**

There is a perception that higher education overall is still not doing well, so you need to have continued oversight, you need to be monitored and have reporting. That just comes with public institutions now. (Mt. Elbert)

This funding model that was presented to us in 1319 is not really how performance funding works. This is funding satisfaction from a political perspective. (Longs Peak)

**Summary**

In this chapter the data collected from this research study was presented. The data collected sought to answer the research question: has incorporating OBF HB14-1319 impacted the resource allocation decision making process of senior finance administrators at public doctoral granting institutions in Colorado? I provided the basic statistical facts
about the institutions represented in the study, their allocation of funding from the state before and after the implementation of HB14-1319. The five themes discovered during the research analysis were identified and presented. They include student success measures, accountability, agency status quo, resources/tuition costs, and the politics of funding.
CHAPTER FIVE
CONCLUSION AND RECOMMENDATIONS

Favero and Rutherford (2019) stated that OBF models now “occupy center stage
in discussions among practitioners and scholars regarding the mechanisms by which to
hold public institutions of higher education accountable” (p. 3). In today’s climate of
scarce resources there have been calls for funding accountability leading to the popularity
and rise of OBF models (Hearn, 2015). These new OBF policy allocation models need to
be researched to investigate if they are having impacts related to senior administrator’s
decision making. Recent quantitative studies have shown to be inconclusive when
measuring state goal attainment for OBF (Horn & Lee, 2019) thus it is important to
examine the legislative intent behind the decision of a state to adopt OBF policy.
Colorado’s late adoption of OBF made it an ideal qualitative case study to examine the
potential impacts to senior administrator’s resource allocation decision making at their
institutions.

The findings of this study provide a better understanding of how senior
administrators have prioritized resource allocations after the implementation of OBF.
This research on CFOs experiences is meaningful for the evolution of higher education
funding and in Colorado specifically. By investigating impacts from the new funding
model, as well as decision making priorities related to their institutional measures of
productivity, this study can add to the discussions about the future of OBF. Additionally,
this study could be particularly useful for states that are still considering the adoption of
OBF policy legislation as a state allocation model. This chapter will summarize this research study and the five themes identified by the CFO participants. In this chapter I pair discussion of the findings with the literature the theoretical framework. Recommendations for implications to the practice of OBF and future research will be offered.

Summary of Study

The popularity of OBF across the country has continued to expand. Thirty-seven states follow some form of a state OBF allocation model (Education Commission of the States, 2017). This study was conducted to add to the finance literature on the impacts CFOs are reporting related to OBF policy decision-making after adoption of a new funding allocation model by the state. Specifically, this study explored how CFOs at public doctoral granting institutions in the state of Colorado experienced the OBF model after HB14-1319 went into effect. This case study was geographically bound by the state of Colorado and by the administrators that work at the five public doctoral granting institutions. As case study is a research method employed to understand the human experience (Stake, 1995), it was logical to study the phenomena of OBF legislation and the potential impacts it has had on senior administrator’s decision making. The following section will provide context for how the state of Colorado adopted an OBF policy for higher education.

In 2012 the CCHE published a new master plan for higher education entitled *Colorado Completes: A Completion Agenda for Higher Education.* The primary goal identified by the authors is to, “increase the number of Coloradans aged 25-34 who hold
high quality postsecondary credentials, certificates and degrees, to 66% by 2025” (Colorado Competes, 2012, p. 3). Since appropriations for higher education in Colorado were among the lowest in the country (Colorado Competes, 2012), it was a not surprising that a call for change in the funding model took place.

To address the funding issue and call for more accountability in higher education in Colorado, HB14-1319 was passed by the general assembly and signed by Governor Hickenlooper in May 2014. This bill created a new funding allocation model for all public higher education institutions starting in fiscal year 2015-16. The three agreed upon goals by CCHE, CDH, and the governing boards of all institutions of higher education in Colorado include:

- Fund Enrollment through College Opportunity Fund Stipend;
- Honor each institution’s unique role and mission, including access to higher education in the rural areas of our state; and
- Reward performance—specifically retention and completion, including transfers from a community college to a 4-year institution (HB14-1319 Final Report, 2015).

This new funding model was a significant change in how the state funded higher education. As such, understanding how senior administrators interacted with the legislation and what impacts they experienced as a result of this process change were crucial. A qualitative case study design was selected as the best research method to investigate the potential impacts of OBF legislation on resource allocation decision making. Merriam (1998) explained that studying a process is ideal for case study
research. A researcher will make “meaning of the process by monitoring, describing the context, and discovering the extent to which the program has had the effect that it did” (Merriam, 1998, p. 33).

**Themes**

For this case study I conducted interviews with the five CFOs of the public doctoral granting institutions in Colorado. The interviews were transcribed and then analyzed through thematic coding, pattern matching, and theming of the data (Saldaña, 2016). Document analysis and policy insider reviewers were also utilized in this study to support the findings and implications for future research in the field of higher education finance. As OBF was new to the state of Colorado, it was important to investigate how CFOs were impacted by the introduction of a new allocation funding model. From the data analysis five themes were discovered.

**Student Success Measures**

All the CFO participants in this study responded that the main measure of productivity in their resource allocation decision making revolved around student success measures. Each CFO provided specific examples of their strategic initiatives at their individual institutions and how they were supported though their resource funding priorities. They included increasing financial aid, focusing on retention and job readiness programs, and providing students a tuition guarantee to plan the true cost of going to college.

In this study it was found that the measures of productivity identified by the participant institutions were student success measures, retention, and graduation rates.
These productivity measures align directly with the current research that successful OBF models should focus on meeting students’ needs to persist to graduation. This study found that institutions in Colorado are allocating resources to promote student success measures. This theme aligns with the work of McKeown-Moak (2013) who discussed that it is “imperative that institutions shift their focus to allocations methods that are student-centered and based on measures of success” (p.4).

**Accountability**

All participants responded that they experienced no change in the accountability measures related to outcomes in their role as CFO from the implementation of the HB14-1319. Several of the senior administrators with larger student populations reported that the amount of funding allocated to their institutions was such a small portion of their budget that it added little in the way of how they were performing their job responsibilities. Many of the CFOs around the state of Colorado were invited to participate in the initial discussions surrounding the drafting of the OBF legislation. As active participants of the open forum process they offered their opinions during the initial discussion phase held by the Colorado department of higher education and educated the policy writes on current accountability practices at their institutions. Several of the participants in this study commented that they knew no additional accountability to their job requirements would be added from this policy change because the legislation that was written and approved aligned with their own institution measurable performance outcomes.

**Agency Status Quo**
The third theme that was discovered in this research study was that the CFOs felt that the introduction of HB14-1319 did not have any impacts on their agency decision-making choices regarding how they allocated resources at their institutions. The participants reported that it was, business as usual, for them because the amount of funding they received from the state had not changed from what they were allocated prior to the implementation of HB14-1319. Notably, the participants discussed that the introduction of OBF in the state of Colorado had not been a driver of change in their decision making because for most of the participants the dollars allocated from the state were not a motivator.

**Resources/Tuition Costs**

A goal that was put forth by the Colorado department of higher education was to, “provide greater tuition predictability for families and to ensure an accessible and affordable public education system for years to come” (HB14-1319 Final Report, 2015). This goal in the HB14-1319 policy lead to a theme of resources and tuition costs in this study.

The great recession that hit the United States left a major funding gap in higher education that was common in most states (Ellis, 2018). Colorado was particularly hit hard since they followed TABOR and were unprepared for a budget crisis (Is TABOR Hurting Education, 2018). Colorado institutions responded by trying to make up the missing state allocation funds through dramatic increases in tuition (Eason, 2017). Once the economy began to rebound from the recession the state of Colorado needed to address
the issue of how students now paid nearly double compared to pre-recession rates (Eason, 2017).

Moving forward from the recession the legislature felt that public accountability for keeping tuition predictable was needed (A. Rauch, personal communication, October 26, 2018). Thus, it became part of the HB14-1319 policy goals. The CFOs reported that they did not believe that resources and tuition costs at Colorado institutions had stayed stable due to the HB14-1319 goal. Instead they believed that the strong economy and growth that Colorado had been experiencing for the least several years helped keep resources flowing to higher education and in turn kept tuition costs stable.

**Politics of Funding**

The final theme that appeared in the data was identified as politics of funding. As all legislation written is political in nature HB14-1319 is no exception. One of the touted benefits of adopting OBF legislation is that it is intended to eliminate the lobbying done by institutions for self-serving purposes. While this benefit to stop lobbying from individual institutions was achieved, the participants of this study acknowledged that having a new funding allocation model based on OBF goals changed the political dialog. The CFOs commented that OBF created a new set of constituencies to contend with around the issues of higher education funding in the state of Colorado.

The participants responded that they felt like there were a lot of voices trying to control the funding issue without a true understanding of how higher education functions or their individual institutional priorities. Since HB14-1319 was the first OBF policy for the state it is not surprising that Colorado experienced what Favero and Rutherford
(2019) described as “multiple actors attempting to influence the policymaking process” (p. 21).

Some participants commented that through the introduction of OBF they learned how challenging the political process is with numerous players and agendas. Finally, the participants in this study unanimously agreed that the introduction of OBF to the state of Colorado was welcomed by the higher education community to offer transparency to the public. However, they agreed this policy legislation missed the mark by trying to politically be all things to all institution types in the area of higher education funding for the state of Colorado.

Situating the Findings in the Literature

From the five themes that emerged in this research study five findings were discovered about the CFOs experiences from the implementation of OBF policy HB14-1319 in the state of Colorado. The findings include: the goals of HB14-1319 were already being addressed as institutional priorities, the goals set by OBF did not have any negative consequences attached to them, OBF allocation was not large enough to change CFO behavior, the purpose of the law was to provide transparency through accountability for the public, and doctoral granting institutions have other sources of funding available to them as revenue. Each of these findings will be discussed in the following section and situated in the OBF literature.

**HB14-1319 Goals already Priorities**

When creating a new OBF model one of the main elements that should be included by state policy makers is a strong connection to the attainment goals of the
governing body for higher education (Crellin, 2015; Lumina Foundation, n.d.). In Colorado these attainment goals were set by the department of higher education who oversees all public institutions of higher education. To create goals for an OBF model that will be applicable for the varying institutional types across a state the outcomes desired must be universal so each institution can work towards successful achievement. This universal outcomes philosophy created a low bar for the goals being set to receive funding. Hearn (2015) wrote that states often adopt and promote objectives for OBF that are pre-defined and measurable and based on programmatic performance expectations. As such the typical outcomes that are part of the funding matrix for OBF legislation include retention and graduation measures, as was the case for the state of Colorado.

The doctoral granting institutions of Colorado included in this study already had the state higher education priorities as their own institutional priorities. Thus, doctoral granting institutions did not have any new or expanded goals placed upon them as a result of the HB14-1319 legislation. This made the process of adopting OBF legislation seamless for the doctoral institutions since their goals already aligned with the state. As Hearn (2015) pointed out a strength of OBF policy is a connection to state outcome goals and priorities. It is important to note that the overarching intent of HB14-1319 was not to change outcomes through goal setting but to create transparency and accountability for the public on how taxpayer dollars are being utilized in higher education (A. Rauch, personal communication, May 1, 2019). Having the participants of the study validate that their priorities were also state higher education goals was expected.

**No Negative Consequences**
The participants from this study unanimously stated that as CFOs of public doctoral granting institutions in Colorado they felt no pressure to perform any differently than before HB14-1319 was implemented. The participants responded that the new OBF model did not fiscally advantage or disadvantage their institutions based on how they performed on their specific goals. As reported by the participants, the funding allocation percentage from the OBF model remained virtually the same from the state before and after the introduction of HB14-1319. Favero and Rutherford (2019) stated that “if the distribution of performance effects is not expected to widen (funding discrepancies), no school will be harmed by a performance funding policy” (p. 21). This appears to be true for the OBF model established in Colorado for the participants in this study.

This research study focused exclusively on public doctoral granting institutions who traditionally have larger budgets and enrollments than other types of institutions. Even with the large budgets and student service expectations, the themes in this study revealed that CFOs felt they experienced no negative consequences from the OBF policy change. This study confirms that Colorado displayed what Rutherford and Rabovsky (2014) described as a lack of initiative to change institutional behavior.

Additionally, an underlying tenant of OBF policy is that “policy makers believe financial incentives encourage educational outcomes improvement” (Miller & Morphew, 2017, p. 757). While this sentiment may ring true with legislators and the general public, it seems that institutions of higher education in Colorado are neither receiving incentives nor penalties to their funding based on outcomes achieved.
With no consequences or penalties to future funding for OBF goal attainment and funding staying virtually the same, there was no need for CFOs to warrant a change of decision-making behavior. One CFO commented, that the funding model adopted did not create winners and losers per se, it was more of a funding satisfaction model to make everyone appeased across the board.

**Funding Insignificant for Change**

The percentage amount allocated to each institution did not change despite the introduction of HB14-1319. Rutherford and Rabovsky’s (2014) assessment of why change may not occur can be applied to Colorado’s situation. They surmise that when performance funding is used for only a small share of funding picture at an institution, leaders may not invest resources to react to the new policies (Rutherford & Rabovsky, 2014). One reason this may have occurred can be attributed to the small percentage of funding from OBF that makes up the total overall revenue stream at each institution. Fowles (2014) agreed by stating that “institutions operate with some degree of financial discretion and general revenues can be strategically allotted, however determined” (p. 274). The CFOs responded that they looked favorably on HB14-1319 but that they did not need to change any practices in reaction to the new policy.

Dougherty et al. (2016) discussed that the funding, from the state was insignificant for change because, “institutions are revenue maximizers and will make a strong effort to improve their performance if the amount of funding involved is significant enough” (p. 148). Many scholars agree that the funding level for higher education from the state needs to be at a level to be a driver for institutional change
(Favero and Rutherford, 2019; Hillman, Tandberg, & Gross, 2014; Lumina Foundation, n.d.) Therefore, the assertion by Hillman, Tandberg, and Gross (2014) that OBF policy overall has not delivered on its promise of being an accountability funding strategy with regards to increasing educational outcomes has been proven in Colorado.

**Transparency through Accountability**

The state of Colorado introduced OBF through HB14-1319 for numerous reasons but one of the most publicly discussed benefits was that it would add transparency and accountability to higher education funding allocations (A. Rauch, personal communication, October 26, 2018). As was the case in Colorado, when state funding could not adequately fund higher education the institutions were left to maximize revenues for themselves, so they raised tuition and fees to supplement (Kelchen & Stedrak, 2016). As this scenario continued to play out in Colorado the public outcry that tuition needed to be reined in caused the department of higher education to act. They wanted to reassure the public that accountability to control costs and keep tuition stable was a priority (Eason, 2017). One of the ways they addressed the problem was to make it a goal of HB14-1319.

The logic for keeping tuition affordable was so that more students would be able to attend school, persist in school, and graduate. This idea suggests that affordable tuition will lead to more graduates, and more graduates will fill the workforce needs in the state. To keep tuition affordable legislators believed that institutions need to be transparent and accountable with how they allocate their funding (A. Rauch, personal communication, October 26, 2018). Hillman, Tandberg and Gross (2014) noted “as states have renewed
interest in increasing college completions many have turned to OBF as a solution for achieving the goal” (p. 827). Additionally, Fowles (2014) pointed out, institutions became more beholden to operating funds with an increased reliance on tuition as public appropriations declined; as was the case after the recession in 2008 for Colorado (Eason, 2017).

By being able to provide the public with “greater tuition predictability for Colorado families and to ensure an accessible and affordable higher education system for years to come” (HB14-1319 Final Report, 2015) transparency and accountability were foundational to OBF legislation in Colorado. Building on the work of Rabovsky (2012) and Tandberg and Hillman (2014), Hagood (2019) suggested “policies (OBF) may serve a symbolic purpose by giving the appearance of accountability to appease the demands of external stakeholders without jeopardizing institutions’ resources (p. 2). The CFO participants in this study confirmed that the introduction of OBF in Colorado created more transparency around how public monies are allocated and used for educational funding. One participant explained that legislatures wanted the general public to understand that money allocated to public institutions comes with a reasonable set of expectations for outcomes that benefit the state as a whole.

However, while HB14-1319 essentially created a mechanism for this public reporting (A. Rauch, personal communication, October 26, 2018), it failed to educate the public on how higher education funding works. One CFO explained that the general public does not seem to be overly aware of what strong retention and graduation rates mean in higher education for a state. They went on to explain that the public cares more
about tuition pricing at public institutions and why tuition keeps going up when funding has been increased yearly. Additionally, it is difficult to explain to the public the concept of education for the public good and the costs that are associated with running an institution of higher education.

Finally, a participant of this study commented that tuition dependency at Colorado institutions is also the driving factor for tuition increases. Tuition dependency occurs when an institution is dependent on the revenue from students to cover a portion of the operating costs to run an institution. Fowles (2012) discussed that an increased reliance on tuition is a trend in higher education that is attributed to the declines in state funding.

Finally, CFOs in this study reported that they have always tried to keep tuition affordable and to do everything in their power to keep tuition increases as minimal as possible. Offering a quality education for the residents of Colorado continues to cost more every year and trying to keep tuition stable from year to year is becoming exceedingly difficult (A. Rauch, personal communication, May 1, 2019). The CFOs reported that as public institutions they embrace the perceived need to show accountably for how funds are being allocated to keep tuition affordable. However, they are keenly aware that the increased funding from the state and the introduction of the HB14-1319 model were also significant drivers for helping keep tuition stable in Colorado.

While no research can be found that directly correlates tuition staying stable as a result of OBF policy, accountability as an underlying tenant of OBF has been addressed. Rutherford and Rabovsky (2014) discussed that “strong financial incentives, combined with long-term stability, are the most important elements of effective accountability.
policies” (p.24). Umbricht, Fernandez, and Ortagus (2017) agree that the essential goal of a state budgeting policy is to improve efficiency through accountability. By adding increased funding to higher education and the accountability from an OBF allocation model the CFOs of Colorado public doctoral granting institutions believe more transparency for the public has been created.

**Additional Funding Sources**

The final finding of this research study is that doctoral granting institutions in Colorado have additional sources of funding to draw from and are not heavily dependent on resources from the state. Hagood (2019) pointed out that institutions with high resources and selectivity, as doctoral granting institutions generally are, often have other stable revenue streams to rely on. These additional resources include tuition revenue from students and funding from research grants (Hendrickson, Lane, Harris, & Dorman, 2013). Either the federal government or private corporations can fund these grants.

**Situating the Findings in the Theoretical Framework**

Principal agent theory and resource dependency theory provide a context for understanding senior administrators’ reactions to and attitudes about HB14-1319. The findings of this research study show that both theories are demonstrated in the overall funding landscape of Colorado, but in differing intensities. While the introduction of OBF brought principal agent theory into play, resource dependency theory stayed the dominate actor in the funding landscape. Figure 5.1 is a current visual representation of the seesaw balancing funding arena of Colorado that was described in chapter one of this research study. Based on the results of this study I concluded that the seesaw rose only
slightly off the ground on the principal agent side. This minimal movement can be attributed to the fact that funding associated with HB14-1319 is now tied to outcomes required by the legislation in Colorado. Institutions still operate and prefer to operate following the resource dependency theory.

**Figure 5.1 Current Funding theory Utilization in Colorado**

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**Principal Agent Theory**

Principal agent theory describes the relationship that exists between two parties (state and institution), and it is assumed that higher education is structured this way as state legislatures allocate funding to their public institutions (Hillman, Tandberg, and Fryer, 2015). Kivistö (2005) defined principal agent theory as “illustrating and examining the inter-organizational relationship between government and publicly funded higher education institutions” (p.1). Principal agent theory subscribes to three factors: (1) the
principal (state) delegates the task, (2) the principal gives money to accomplish the task, and (3) the principal has an interest in governing the task (Kivistö, 2008). Adding OBF policies tightens the relationship between the state and public higher education institutions. This happens because the funding allocation amount is tied to the required outcomes from the OBF policy legislation.

When situating my findings of this study to the principal agent theory (Ross, 1973), it is clear the implementation of HB14-1319 created no reason for institutions to change their view of themselves as minimal agents of the state. While OBF tightened the relationship between the public doctoral granting intuitions and the state, the CFOs reported that they were already invested in the tasks that the principal was interested in governing. Additionally, HB14-1319 did not change or even shift the power dynamic that already existed in the state with regards to funding; demonstrating that institutions had other sources of funding available to them. The CFOs also reported that they received the same amount of funding from the state before and after the legislation implementation. This supported the finding that OBF allocations were not large enough to change CFOs behavior. While principal agent theory is in use in Colorado, the findings of the study suggest that this theory did not make much headway to become more utilized as a result of the introduction of OBF.

**Resource Dependency Theory**

Resource dependency theory is framed on three core ideas “strategies to enhance autonomy and pursue interests, social context matters, and that power is important for understanding internal and external actions of an organization” (Davis & Cobb, 2010).
Resource dependency theory presents a powerful lens through which to explain the behaviors of public institutions because the theory says that organizations make strategic choices regarding outputs (Fowles, 2014). This theory uses a more complex set of relationships in its logic and is not as straight forward as principal agent theory (Santos, 2007). Current research shows that OBF policies have a place in resource dependency theory application (Dougherty et al., 2019). Hagood, (2019) noted “the underlying theory of action behind performance funding is rooted in resource dependency as financial incentives will lead to changes in institutional behavior that will ultimately improve student outcomes” (p. 1). This study found that resource dependency theory is the dominant theory in practice for funding decision-making at public doctoral granting institutions in Colorado.

The first core idea that defines resource dependency theory, institutions use strategies to enhance autonomy and pursue their interests (Pfeffer & Salanak, 1978), was represented by the fact that each public institution has a separate and unique mission statement. In this research study I asked each participant to identify their mission statement, as well as, the measures of productively used to achieve outcomes. While all the participants answered that they measured outcomes through student success measures, each institution defined student success differently based on the strategic goals they had set for themselves as an institution. CFOs confirmed that institutional resource allocations are used in pursuit of these interests and goals. Many of these goals overlapped with HB14-1319 goals supporting the finding that the goals of OBF policy were already being addressed.
The second core idea, social context matters (Pfeffer & Salanak, 1978), can be aligned with my finding that the purpose of the law was to address accountability not to change outcomes. The CFOs in my study all reported that tuition pricing is a concern for everyone in Colorado, not just the legislators and the public. The substantial tuition increase that came after the recession in 2008 had made the social context of tuition pricing an extremely important area of strategic emphasis at institutions. The students paid double what the state provides in funding (Eason, 2017) and that makes them a constituency with a voice. To provide accountability to this constituency HB14-1319 addressed tuition.

The CFOs recognize that the intent behind HB14-1319 was to help keep tuition predictable and increase the number of educated citizens for the projected workforce shortages in the state (HB14-1319 Final Report, 2015). The CFOs in this study understood their institutions’ place as leaders in the research field of Colorado schools. Additionally, they understood that this doctoral granting designee allows them to attract high achieving students. These high achieving students are viewed as part of their social context. They have set their funding priorities according to the constituencies they serve through their mission and goals. The finding that OBF allocations were not enough to change CFOs behavior was demonstrated in their continued decision to allocate their resources in support of their social context, affirming that Colorado institutions prefer to follow resource dependency theory.

The third core idea in resource dependency theory is that power is important to understand internal and external actions of organization (Davis & Cobb, 2010). The
findings that institutions had additional sources of funding, and that the OBF goals already were already addressed by the institution were situated here. As stated earlier, the participants in this study recognized that as doctoral granting institutions with high achieving students they have additional funding opportunities available to them. They have power, perceived or real, other institutions may not. The participants in this study all supported the implementation of HB14-1319 for the transparency and accountability that was brought to publicly funded institutions of higher education in Colorado, but they acknowledged that the outcome priorities set by the state already aligned with their institutional priorities. Having internal and external actions of decision making at their institution align with the outcome goals ensured institutions would keep their power position.

Finally, this core idea can also be confirmed through the finding that goals set for OBF allocation did not have any consequences for not meeting outcomes. As presented numerous times, the percentage of funding received by the participants institution from the state was not impacted by the legislation. This point adds to the strength of the theory that the environmental, as well as internal dynamics of the institution (Fowles, 2014), did not need to change.

**Research Question Answered**

The research question for this study was: How has incorporating outcomes-based funding HB14-1319 impacted the resource allocation decision making process of senior finance administrators at public doctoral granting institutions in Colorado?
Incorporating outcome-based funding has not changed the resource allocation decision making process of senior administrators at doctoral granting institutions in Colorado for several reasons. First, the state allocation portion of funding from the policy is only a small portion of their overall revenue stream and senior administrators feel no additional accountability added to their job responsibilities as a result. Second, the CFOs reported that the goals in HB14-1319 were already priorities at their institutions before the legislation, so no changes to their decision-making priorities occurred. As principal agent theory states you need misalignment of goals to cause conflict to insight a change in behavior (Kivistö, 2008). No goal conflict occurred, thus no changes to how CFOs were making decisions for allocating resources at their institutions happened.

Third, each CFO interviewed during this research study made reference to their special status as an institution in the Colorado higher education community. They identified themselves as the STEM school, the flagship university, the Land Grant institution, having a Normal school designation, and being the Colorado-centric urban campus mirroring the demographics of Denver. Through these special status designations that have evolved over time in Colorado, each CFO explained that they felt they had an extra sense of security where funding was concerned.

Whether this sense of security was perceived or real was not the focus of this study, but what it did display was that CFOs were not expecting to have any potential negative impacts from this policy change. Additionally, this special status of an independent identity in the landscape of doctoral granting institutions gave the CFOs additional funding avenues to explore if their allocations from the state were going to be
impacted by the addition of OBF. This discovery fell directly in line with what resource dependency theory states. That social context matters, institutions have strategies in place to enhance autonomy, and that they understand their power based on internal and external actions (Davis & Cobb, 2010).

The final reason incorporating OBF has not impacted the resource allocations decision making process of senior administrators at public doctoral granting institutions in Colorado is the strong economy and growth of the state (A. Rauch, personal communication, May 1, 2019). Not only has the economy stayed strong since the recession, but also funding for higher education continued to increase yearly since the introduction of HB14-1319 (Implementation Status Report, 2018). This coincidental stability in funding, the allocation percentage from the state remaining the same over three budget cycles, and the consistency of the same political party in office since the implementation of HB14-1319 has led to the mentality that it is business as usual at the public institutions. Again, since no goal conflict had been created by the introduction of HB14-1319 at Colorado public doctoral granting intuitions; no potential impacts had been reported.

**Implications for Practice**

In scholarly literature that has addressed the phenomenon of OBF there is currently no concrete measure to assess if the OBF model that has been implemented in a state has been working to achieve goals (Horn & Lee, 2019). This study highlighted the fact that the intent of implementing OBF legislation in Colorado was not opposed by senior administrators. In fact, many CFOs welcomed the transparency that the legislation
created around state funding allocations. While the intention was good, one participant stated that they “believe the HB14-1319 policy misses the mark to be an effective change agent.” To address this concern several recommendations will be made about OBF policy legislation for Colorado.

The process of implementing OBF across the United States has continued to evolve. While the legislature would like to try a one size fits all approach, each state is unique in its educational funding structure, institutional types, and state priorities. Thus, each state should strive to find the right balance of OBF for the allocation of their own state funds. It is extremely challenging to have one policy that will work effectively across all the diverse institutional types in a state and thus the recommendations presented below are for the doctoral granting institutions in Colorado. Currently, OBF is being used as a mechanism for public reporting on how taxpayer money is being used in the funding of higher education.

For the public doctoral granting institutions in Colorado I suggest that HB14-1319 continue forward on the current path using the allocation model in place so that consecutive years of assessment data can be collected. Only after a minimum of five years of assessment data can recommendations be made to how the model may need to be reworked, changed, or abandoned. A factor worth considering in keeping the HB14-1319 model functioning as adopted is that it has helped create a sense of stability in funding policies, so as not to limit opportunities for significant long-term change (Dougherty et al., 2014).
As funding in Colorado has not had a year that required budget cuts for higher education since the implementation of HB14-1319 it is optimal for data assessment to continue under the same favorable conditions. However, this can also be a hinderance in that there is no data on how senior administrators will change their decisions making using the model if the economy takes a turn and budget cuts become inevitable across the state for higher education. While no one wishes for another recession it is an important consideration to keep in mind that OBF has only been utilized during a period of a stable economy.

Another recommendation that I will make for OFB in Colorado is that the outcomes expectation associated with this policy be adjusted to measure changes in the institution’s performance against itself. It is more ideal than measurement based on a set of universal outcomes values for all doctoral granting institutions. The reasoning for this recommendation came from information obtained from a study participant. They discussed that they are one of the most selective, purposefully small, and geographically locked against expansion schools in the state and they are not performing well based on the formulaic model set by the HB14-1319 policy. This institution is hailed as one of the finest specialized research institutions in the state with a top 100 US News and World Report ranking, causing one to question the method Colorado is using to measure outcomes (A. Rauch, personal communication, May 1, 2019). Taken a step further, each institution could be analyzed for the outcome factors that are challenging at their own institution and used as a benchmark or as a personal scorecard to improve targeted goals.
OBF could then set goals for improvements on these specified target area and tie funding to measuring performance gains against itself for each institution.

A final recommendation to improve practice for OBF would involve increased organization training to improve the practice of OBF in Colorado. While the legislature and implementation team in charge of developing HB14-1319 certainly had a lot to be proud of for writing, passing, and implementing the policy in nine months, organizational training at the institutional level was a missed opportunity. Faculty and staff at public institutions need to be informed and involved with the state strategic initiatives related to HB14-1319. Organizational training must occur for continued support of the policy. This training would be especially important given the fact that funding for higher education has stayed consistent since the introduction of HB14-1319. No budget cuts have been reported, and only one year experienced a flat budget cycle (Implementation Status Report, 2018). Clarity needs to be provided that the funding in higher education can be attributed to the stable economy and population growth, and not solely from the use of the allocation funding model.

While funding for higher education in Colorado was made more of a priority since the introduction of HB14-1319, Colorado is still ranked as the fourth lowest in the nation for higher education funding (Eason, 2017). Higher education in Colorado this year will receive a 9% boost from the legislative session (Implementation Status Report, 2018). However, the participants of this study question if this amount will be enough of a driver for the strategic priorities set forth by HB14-1319. As the Pew Policy Center
(2017) reports, “Colorado is still feeling the effects of TABOR and may never catch up where higher education is concerned” (n.d.).

It is difficult to explain to Colorado citizens why tuition is continuing to rise even after the increase in funding from the state and the introduction of HB14-1319. A typical student, parent or legislative representative does not understand the complex nature of higher education funding and the operational costs associated with running an institution. Continued education on higher education finance will be imperative, especially where OBF is concerned. Finally, it is important to point out that a limitation of my study was that recommendations for practice are based on this study specific of public doctoral granting institutions in Colorado. Implications for practice would include a different specific set of recommendations were this study focused on the regional, baccalaureate or access institutions in the state.

**Recommendations for Future Research**

“Clearly, performance funding deserves close attention both from policymakers and from researchers” (Dougherty et al., 2016, p. 4). It is my strong belief that future qualitative research studies involving senior administrators need to continue. This qualitative study could be replicated in any state that follows OBF policy across the country. Additionally, replicating this study in states that have had OBF policy for more than three years would be beneficial. The extended length of time would allow institutions, which sometimes can be slow to adopt to change, to report out longer term impacts that have been observed by senior administrators. These potential impacts would be unique for each institution especially during a period of flat or no funding to higher
education. Future research could also address how decision making may have been impacted under these conditions.

This study did not include in the other two other categories of institutions that make up higher education in Colorado. The regional or four-year baccalaureate institutions and the access institutions who made up of the community colleges across Colorado would have a unique and varied story to tell. These two groups of institutions need to have a replication of this study to be able to give a complete picture of impacts from HB14-1319 on the state of Colorado higher education community. Each of the CFOs from these intuitions could offer significant insight into the potential impact OBF is having on their own resource allocation decisions. As public intuitions they all adhere to the OBF allocation model but have different mission and goals and serve different student populations than their doctoral research counterparts.

Finally, future research should also include a replication of this study in Colorado for senior administrators at public doctoral granting institutions three years from now. During this research study a new governor was sworn into office and while the economy and population of Colorado has continued to grow.

Following changes to HB14-1319 is also important. Assessment data has also been collected, reported, and many constituencies have begun to look at the effectiveness of this OBF policy on their institution. While the original backers of this legislation wrote into the act that it would not be abandoned but reworked over time, Coloradoans are watching to see if this will ring true (A. Rauch, personal communication, May 1, 2019). If CFOs at doctoral granting institutions have had no impact to their institutional funding
or decision-making responsibilities, many may wonder why OBF in Colorado has being utilized at all.

**Summary**

The primary focus of this chapter was to provide an overview of the research study conducted and a review of the context OBF in the state of Colorado. Additionally, the five findings from this study were situated within the current OBF literature. The principal agent theory and resource dependency theory utilized as the theoretical framework for this study were summarized, and the findings were also situated within these theories. Finally, an answer was presented to the research question: Has incorporating outcomes-based funding HB14-1319 impacted the resource allocations decision making process of senior administrators at public doctoral granting institutions in Colorado? Lastly, implications for practice within higher education finance and areas for future research were presented.
APPENDICES
Appendix A

IRB Approval

Dear Dr. Frady,

The Clemson University Office of Research Compliance reviewed the protocol titled “Impacts of Outcomes-Based Funding on Resource Allocation: A Case Study of Senior Administrators in Colorado” and a determination was made on February 6, 2019 that the proposed activities involving human participants qualify as Exempt under category 2 in accordance with federal regulations 45 CFR 46.104(d), http://media.clemson.edu/research/compliance/irb/new_exempt_categories.pdf.

No further action, amendments, or IRB oversight of the protocol is required except in the following situations:

1. Substantial changes made to the protocol that could potentially change the review level. Researchers who modify the study purpose, study sample, or research methods and instruments in ways not covered by the exempt categories will need to submit an expedited or full board review application.

2. Occurrence of unanticipated problem or adverse event; any unanticipated problems involving risk to subjects, complications, and/or adverse events must be reported to the Office of Research Compliance immediately.

3. Change in Principal Investigator (PI)

All research involving human participants must maintain an ethically appropriate standard, which serves to protect the rights and welfare of the participants. This involves obtaining informed consent and maintaining confidentiality of data. Research related records should be retained for a minimum of three (3) years after completion of the study.

The Clemson University IRB is committed to facilitating ethical research and protecting the rights of human subjects. Please contact us if you have any questions and use the IRB number and title when referencing the study in future correspondence.

All the best,
Nalinee

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Appendix B

Email Introduction and Request for Interview

Hello,

My name is Monica Kosanovich, and I am a Colorado native and a PhD candidate at Clemson University. I am conducting research about outcomes-based funding and decision making for resources allocations at several public institutions across the state. Specifically, I am looking at resource allocation decision making as it relates to your institution and I am interested in your experience with the HB14-1319 policy. I am doing a qualitative research dissertation in the area of finance because I believe a gap in the literature exists on the impacts from outcomes-based policy legislation on senior administrators. I have attached the CO website for specific information from CDHE for your reference.

I would like to invite you to participate in my study with the full confidence in knowing that your identity and your intuitions identity will be protected and blinded for my dissertation. A pseudonym will be assigned to your interview responses as a way to protect your privacy and the institution you work for. Additionally, the 8 interview questions are attached to review- as I know you are extremely busy and I appreciate anytime you can give me. I have also attached the Clemson IRB consent form for your review.

Your participation will involve one WebEx video conference interview that will last approximately 30-45 minutes. Once the data has been transcribed a copy will be sent to you for review to make sure I have captured your responses accurately. Participating in this research has no known risks and all notes and video recordings of the interview will be kept on the Clemson Box secured server that is only accessible by the researcher with duo authentication in place.

I have included your administrative assistant on this email request so that I may communicate with them about your schedule. As a previous budget officer for the University of Denver I am very aware of how busy you are and how booked out your schedule can be during this time of the year. I will make myself open for any available time that you can offer me in the coming months of March and April. I am very grateful if you would consider my invitation to participate.

If you would like to participate, please respond to this email and I will follow up to schedule the interview time with your admin. Again, thank you for your time and your willingness to consider my request. As a graduate of a Colorado public institution, a finance practitioner-scholar, and a mother of future college bound children I deeply care about the future of higher education and am writing a dissertation that I believe is meaningful and useful for our state.

Kind Regards,

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Appendix C

Interview Questions

Pre-Interview information:
Please provide me with background information about yourself. (I will pull bio if available)
   a. What are your current position responsibilities?
   b. What is your role in the resource allocations at your institution?
   c. What percentage of your operational budget comes from the state, now and before HB14-1319 was passed?

Interview Questions:

1. What is your institution’s mission and what are the measures of productivity you use? How have you historically allocated resources at your institution in support of your mission and goals?

2. Please tell me how the balance of state funding and tuition revenue has changed at your institution after the adoption of policy HB14-1319?

3. Since OBF policy was introduced in CO how has it shifted your decision-making priorities for resource allocations at your institution based on the HB14-1319 goal to: provide greater tuition predictability for Colorado families and to ensure an accessible and affordable public higher education system for years to come?

4. The CCHE stated that the outcomes-based policy formula in HB14-1319 was written to ensure that it would not just be implemented and abandoned but rather monitored and reworked over time. Do you find this statement to be true for your institution, why or why not?

5. How has HB14-1319 impacted your ability to be an independent institution?

6. How do external sources of funding, beside state funding, play a role in the dynamics of your resource allocation decisions at your institution?

7. As a senior administrator in charge of funding decisions can you please share your opinions on funding model HB14-1319? What have you learned and how have you changed as a result of this policy?

8. Finally, is it fair to say that the state has changed the level of oversite with regards to state allocations for higher education through outcomes-based funding? If so, does HB14-1319 offer the proper amount of oversite, too much or too little? Please elaborate.
References


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