



TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Unintended Impacts of Performance Funding on Community Colleges and Universities in Three States

Hana Lahr
Lara Pheatt
Kevin J. Dougherty
Sosanya Jones
Rebecca S. Natow
Vikash Reddy

November 2014

CCRC Working Paper No. 78

Address correspondence to:

Kevin J. Dougherty
Associate Professor, Departments of Education Policy and Social Analysis and
Organization and Leadership and
Senior Research Associate, Community College Research Center
Teachers College, Columbia University
525 West 120th Street, Box 11
New York, NY 10027
212-678-8107
Email: dougherty@tc.edu

We wish to thank Lumina Foundation for its support of the research reported here. The views expressed in this paper are those of its authors and do not necessarily represent the views of Lumina Foundation, its officers or employees. We also thank William Doyle, Marcus Kolb, Richard Petrick, and William Zumeta for their comments on an earlier version of this paper. Any remaining errors are our own. We also want to thank Wendy Schwartz, Betsy Yoon, and Doug Slater for their able editing.

Abstract

This paper identifies and analyzes the types and numbers of unintended impacts—actual or potential—of state performance funding policies on higher education institutions. These impacts—which were not intended by the framers of the performance funding policy—were ones mentioned in the course of telephone interviews with over two hundred college personnel at nine community colleges and nine public universities in three states: Indiana, Ohio, and Tennessee. The respondents were senior administrators, middle-level administrators, academic deans, and department chairs at these institutions. This paper discusses each type of these reported impacts, making a distinction between impacts that we judge as actually occurring and ones that were stated as possibilities. The unintended impacts most frequently mentioned by interviewees were restrictions in admissions to college and a weakening of academic standards. Besides describing overall patterns, the paper also analyzes how interviewee responses varied by state, by type of institution (community college or university), by college capacity to respond to the demands of performance funding, and by position the interviewee held in the institution. The paper closes by providing policy recommendations to address these unintended impacts.

Table of Contents

1. Introduction.....	1
2. Theoretical Framework.....	2
2.1 Performance Funding in Higher Education.....	2
2.2 Performance Management of Government Agencies	3
2.3 Policy Implementation	3
2.4 Principal-Agent Theory.....	5
2.5 Conceptual Framework	7
3. Research Methods.....	7
3.1 Case Selection: The States	7
3.2 Case Selection: Community Colleges and Universities.....	9
3.3 Data Gathering and Analysis	10
4. Main Findings	11
4.1 Restrictions of Student Admission.....	13
4.2 Weakening of Academic Standards	24
4.3 Compliance Costs	30
4.4 Reduced Institutional Cooperation.....	33
4.5 Lower Faculty and Staff Morale	35
4.6 Less Faculty Voice in Academic Governance	35
5. Variation in Unintended Impacts of Performance Funding.....	36
5.1 Differences by State	37
5.2 Differences Between Earlier and Later Performance Funding Programs.....	38
5.3 Differences by Type of Institution: Community Colleges Versus Universities	41
5.4 Differences by Organizational Capacity Within Each Sector.....	42
5.5 Differences by Position of Interviewees	45
6. Summary and Conclusion	47
References.....	53
Appendix A: Characteristics of the Three States Studied	62
Appendix B: Performance Funding Programs in Indiana, Ohio, and Tennessee	63

1. Introduction

Since the 1970s, policymakers have become increasingly concerned about improving the performance of higher education institutions. In recent years performance funding—which connects state appropriations directly to a college’s performance on indicators such as student retention, graduation, and job placement—has become a particularly attractive way of pursuing better performance and increasing institutional efficiency (Burke, 2002, 2005; Dougherty & Natow, in press; Dougherty & Reddy, 2013; Harnisch, 2011; Jones, 2013; Longanecker, 2012a, 2012b; Lumina Foundation, 2009; McLendon, Hearn, & Deaton, 2006; National Conference of State Legislatures, 2014; Reindl & Jones, 2012; Reindl & Reyna, 2011; Zumeta, 2001).

Performance funding programs initially took the form of what has been called “performance funding 1.0.” Programs provided a bonus over and above regular state funding for public higher education. Most of these programs were quite small, typically involving only 1 or 2 percent of state funding. However, particularly in the last ten years, another form of performance funding—what has been dubbed “performance funding 2.0”—has become quite popular. In this case, performance funding indicators are embedded in the base state funding itself, rather than being a bonus. Moreover, the proportion of state funding driven by performance indicators can be much larger: it is now 80 to 85 percent in Tennessee (Dougherty & Reddy, 2013).

Organizational theory and research on policy implementation shows that despite the outcomes sought by policy framers, a policy can also produce outcomes that are not intended by policymakers (Merton, 1968; Mica, Peisert, & Winczorek, 2012; Moynihan, 2008; Radin, 2006). Research undertaken in the study reported on here, based on interviews conducted at 18 colleges across three states, shows that performance funding could produce sizable impacts that were not intended by policy framers. This paper builds on existing scholarship about performance funding by focusing on these unintended impacts. It provides a rich account of both observed and potential unintended impacts experienced and discussed at nine community colleges and nine four-year colleges in three states: Indiana, Ohio, and Tennessee. Our findings are based on 222 interviews with

senior administrators, middle-level academic and non-academic administrators, and department chairs at these institutions.

In this paper, we first present the theoretical constructs that frame our analysis, followed by a discussion of our methods and sample. Next, we present our main findings, indicating that the most commonly mentioned unintended impacts of performance funding are restrictions in admissions to community colleges, a weakening of academic standards and institutional cooperation, and unreimbursed costs of complying with performance funding demands. These unintended impacts—and others—are discussed in depth. In addition, we examine how reports of unintended impacts vary by state, by the college's capacity to respond to the demands of performance funding, by type of institution (community college vs. four-year institution), and by position held in the institution. We conclude by returning to our conceptual framework to explain how and why these unintended impacts occur, and by offering policy recommendations.

2. Theoretical Framework

2.1 Performance Funding in Higher Education

There are a good number of studies that document unintended impacts in the course of examining the implementation of higher education performance funding in various states. In their review of this literature, Dougherty and Reddy (2013) found evidence that performance funding is associated with reports of significant costs of compliance, a narrowing of institutional missions, restrictions on admissions of less-prepared (and less advantaged) students, and a weakening of academic standards.

Unfortunately, the studies that are summarized in the Dougherty and Reddy (2013) review of the literature do not provide a careful and sustained analysis of the nature of these unintended impacts and how their incidence varies by state and type of institution. Moreover, the analyses in those studies are not solidly rooted in more general theoretical perspectives. We turn to three theoretical perspectives that can illuminate the nature of the unintended impacts identified.

2.2 Performance Management of Government Agencies

It is clear that the patterns discovered so far in the study of performance funding in higher education are part of a more general phenomenon. Many of the same unintended impacts identified in studies of the implementation of performance funding for higher education also appear in studies of performance management in K-12 schools and government agencies in other policy areas (Forsythe, 2001; Heinrich & Marschke, 2010; Moynihan, 2008; Radin, 2006; Rothstein, 2008).¹ These studies report evidence that, faced with performance pressures, K-12 schools and other government agencies may resort to focusing on clients easy to help and give less attention to clients who need more help and are less likely to succeed (Grizzle, 2002, p. 365; Heinrich & Marschke, 2010, pp. 199–201; Rothstein, 2008, pp. 24–29, 40–45). Also, there are reports that schools have narrowed their missions to focus on only those for which they are rewarded, neglecting missions that are not rewarded. High schools, for example, have cut back their attention to social studies (Rothstein, 2008, pp. 9–23).

How are we to understand the nature of these unintended outcomes? To gain theoretical purchase on this reality, we turn to studies on policy implementation and organizational change in higher education.

2.3 Policy Implementation

The policy implementation literature arose out of the attempt to explain why policies as implemented or enforced not infrequently were at sharp variance with the goals of the policy framers (Honig, 2006; Matland, 1995; Mazmanian & Sabatier, 1989; Pressman & Wildavsky, 1973). One of the central divides in this literature has been between a perspective that emphasizes the intentions and actions of policy designers and one that stresses the views and reactions of the target populations and the “street-level bureaucrats” who deliver services to those target populations. This first perspective has been dubbed the “top-down perspective” and dominated the first wave of policy studies. The second perspective has been dubbed “bottom up” and has dominated later waves of

¹ Moynihan (2008, p. 5) provides a useful definition of performance management: “a system that generates performance information through strategic planning and performance measurement routines and that connects this information to decision venues.”

policy implementation studies (Honig, 2006; Matland, 1995; Mazmanian & Sabatier, 1989).

The top-down perspective. The top-down perspective dominated the early years of policy implementation studies. Its focus is on why local instantiations of national programs often deviate in form and results from the directions intended by policy framers in Washington. One factor often cited is local actors' lack of knowledge about the aims of the policy, in good part because policy framers left the goals of the policy too ambiguous and/or because they failed to communicate effectively those goals and associated rules (Matland, 1995, pp. 157, 161; Mazmanian & Sabatier, 1989, p. 41; Smith & Larimer, 2009, pp. 158–162). Another frequent explanation is lack of capacity at the local level, whether lack of expertise or lack of money and organizational resources (Honig, 2006, pp. 5–6; Matland, 1995, p. 161; Mazmanian & Sabatier, 1989, p. 41). A recent example of such an explanation comes in an analysis of the implementation of No Child Left Behind that pointed to the budget limits encountered by states and the lack of expertise of many states and local school districts in the psychometric techniques needed to work out state assessments (Sunderman & Kim, 2007, pp. 1072, 1077). A third explanation from the top-down perspective focuses on lack of will or good intent on the part of the immediate implementers (Honig, 2006, pp. 5–6; Mazmanian & Sabatier, 1989, p. 41).

The top-down perspective suggests, then, that unintended impacts may arise from the inability of local implementers to meet the goals of higher level policy designers. Because of obstacles they encounter, they resort to actions that may be harmful but allow them to meet the demands placed on their organizations. When institutions cannot be successful using legitimate means, they may resort to illegitimate means to realize socially expected goals (see Merton, 1968; Mica et al., 2012).

Bottom-up perspective. The bottom-up perspective arose in reaction to the emphases of the top-down perspective. It stresses the importance of understanding the distinct knowledge, goals, strategies, and activities of local actors. It sees local actors not as ignorant or incompetent but rather as carriers of different goals and understandings. According to this point of view, local divergence from the goals and vision of national policy framers is not implementation failure but rather mutual adaptation as local implementers attempt to reconcile macro-level demands with micro-level conditions

(Honig, 2006, pp. 6–7; Matland, 1995, pp. 148–149; Smith & Larimer, 2009, pp. 162–169). Bottom-up theorists argue that local implementers may do things differently than intended by policy framers because they have different goals. For example, while policy framers may be particularly concerned with organizational efficiency and push merit pay as a solution, local school administrators and teachers may be more concerned about maintaining comity among teachers and therefore prefer common, step-level increments in pay (Loeb & McEwan, 2006, pp. 174–176). The bottom-up perspective also emphasizes that, even when local actors share the same goals as policy framers, they may have different understandings of what those goals entail. Also, local actors may misunderstand new ideas as being the same as those they are already familiar with. These differences in understanding arise from different cognitive schema rooted in different organizational, professional, and other cultures (Coburn & Stein, 2006, pp. 25–27; Honig, 2006, pp. 16–18; McLaughlin, 2006, pp. 214–215; Spillane, Reiser, & Gomez, 2006, pp. 49–59).

The top-down and bottom-up perspectives should not be seen as mutually exclusive (Matland, 1995; Mazmanian & Sabatier, 1989). Each highlights different ways in which unintended outcomes may crop up in the process of policy implementation. The top-down perspective alerts us to unintended impacts that may arise due to inadequacies in the actions taken by policy framers, whether failing to communicate their goals well or failing to build up the organizational capacity of local implementers. Meanwhile, the bottom-up perspective alerts us to unanticipated impacts that arise from differences in goals and understandings between local implementers and policy framers.

2.4 Principal-Agent Theory

In addition to using top-down and bottom-up theoretical frameworks, we also draw on principal-agent theory to explore the important role financial incentives play in the implementation of performance funding (Lane & Kivisto, 2008; Miller, 2005; Moe, 1984). Originally from the field of economics, principal-agent theory has also become a major theoretical instrument in political science. Thus, the theory has several variations, but at its core, it focuses on how principals can ensure the compliance of their agents. It holds that while principals and agents do cooperate, they also have separate and often

opposing interests that may lead agents to act in ways counter to the interests of principals. As a result, principals must take steps to secure agents' compliance. The first-order step is to specify a more or less explicit contract or agreement, but that agreement must be backed up by oversight, incentives, and, if needed, sanctions. The perennial difficulty with oversight is information asymmetry: Agents often have specialized knowledge that principals do not; thus, it is not always easy to determine if agents are working as hard and as well as principals might want (Lane & Kivisto, 2008; Miller, 2005; Moe, 1984).

Depending on the discipline, the application of principal-agent theory varies quite substantially. Principal-agent theory in economics sees the relationship between the principal and agent as primarily between unitary actors who are motivated by economic self-interest and bound by an explicit contract. Here, any "shirking" by the agent is purposeful and self-interested. In contrast, principal-agent theory in political science allows for multiple principals (such as different regulatory agencies) and even agents. Implicit contracts and definitions of the social good, and not just self-interest, motivate agents to respond to principal requests. Further, principal responses might also involve appeals to shared values (see Lane & Kivisto, 2008, pp. 150–154). The political science conceptualization better fits the situation of public governance of higher education institutions because (1) the contract between public higher education and government is often implicit; (2) higher education institutions are regulated and otherwise influenced by a host of different principals (including governors, legislators, higher education boards, accrediting and professional associations, students and parents, employers, etc.); and, (3) those institutions are influenced not just by resource flows from principals but also by principals' appeals to shared social and professional values (see Lane, 2007; Lane & Kivisto, 2008).

We find that principal-agent theory is highly compatible with policy implementation theory (Honig, 2006; Mazmanian & Sabatier, 1989). Akin to the top-down perspective in policy implementation, principal-agent theory points to the interest of the principal, in this case the state, in securing compliant behavioral changes in higher education institutions, and its use of monetary incentives to do so. However, to the degree that principal-agent theory (particularly its political science variant) acknowledges

conflicting interests and values, it also resonates with the bottom-up perspective. The agents at the institutional levels may resist the demands of the principals because they hold interests and values that conflict with those of the principals.

2.5 Conceptual Framework

When we pull together these various empirical and theoretical strands, they suggest that we view the unintended impacts of performance funding in higher education as part of a more general pattern involving accountability systems for government agencies generally. Moreover, they suggest that we view these unintended impacts from both a top-down and a bottom-up perspective: that is, as arising on the one hand from inadequacies of communication, expertise, and resources and on the other from differences in understandings, goals, and even interests within colleges conceived of as political systems with power conflicts. Hence, it is important that we carefully examine the perspectives both of policy framers and local implementers and, among the local implementers, the perspectives of those located in different parts of the colleges and universities. We cannot judge the impacts of performance funding from just the testimony of the policy framers or even that of senior administrators at the colleges responding to such a policy.

3. Research Methods

This study primarily uses qualitative data from interviews conducted at nine public two-year colleges and nine public four-year colleges in three states: Indiana, Ohio, and Tennessee. Data were coded and analyzed using the Atlas.ti software for qualitative data analysis. This analysis was supplemented by an examination of relevant documents, including public agency reports, strategic planning materials, and newspaper articles.

3.1 Case Selection: The States

We chose Indiana, Ohio, and Tennessee because they differ substantially in their performance funding histories and political and socioeconomic structures (see Appendices A and B). In terms of performance funding history, Tennessee was the first

state to establish performance funding (in 1979), with Ohio acting in the 1990s (1995), and Indiana still later (2007). All of these programs initially took the form of performance funding 1.0, providing a bonus over and above base state funding for public higher education. However, Ohio and Indiana in 2009 and Tennessee in 2010 established performance funding 2.0 programs that embed performance funding indicators in base state funding, rather than providing a bonus. Except in Tennessee, the new performance funding programs replaced the previous ones; Tennessee has retained its old program and uses it as a quality control measure.

Ohio and Tennessee connect a much larger proportion of their state funding for higher education to performance indicators than does Indiana. About four fifths of their base state funding is connected to performance indicators, compared with 6 percent in Indiana (see Appendix A).

The states also differ in how they govern their community college systems. Indiana and Tennessee have more centralized public systems than does Ohio. For example, Indiana places all its community colleges under one governing board for the Ivy Tech system, whereas the Ohio community colleges all have separate governing boards (McGuinness, 2003).

The states also vary significantly in political culture and structures (Berry & Berry, 2007; Gray, Hanson, & Kousser, 2013). Tennessee and Indiana are above average in the conservatism of their electorates, while Ohio is very near the national average (Erikson, Wright, & McIver, 2005). Ohio is well above the mean in the institutional powers of the governor, whereas Tennessee is well below (Ferguson, 2012). On legislative professionalism, Ohio's legislature is much higher than Tennessee's and Indiana's (Hamm & Moncrief, 2012). The states also differ in degree of party competition, with Ohio and Tennessee being more competitive than Indiana (Holbrook & La Raja, 2012).

Finally, the states differ considerably in their social characteristics: population, income, and education. Ohio's population is larger, wealthier, and better educated than those of Indiana and Tennessee (see Appendix A).

3.2 Case Selection: Community Colleges and Universities

The three community colleges and three four-year institutions in each state differ by their expected capacity to respond to performance funding (see Table 1). For community colleges, we picked colleges in the top, middle, and bottom third in their states in expected capacity to respond effectively to performance funding, based on college resources (revenues per student FTE), data-analytic capacity (ratings by two experts in each state), and number of at-risk students (percentage of students receiving Pell grants and percentage of minority students).² We rated the community colleges on each of these three dimensions as being in the top, middle, and bottom third, summed the ratings, and picked one college in each state from each group. We labeled these colleges as being “high,” “medium,” or “low capacity.”

Indiana presented a unique case because of the highly centralized nature of its community college system. Indiana has one community college—Ivy Tech Community College—that is the largest singly accredited statewide community college system in the country. Each year, the college enrolls nearly 200,000 students across 30 campuses, which are distributed across 14 regions. Our sample includes three of these campuses, and as in Tennessee and Ohio, we selected campuses that differ in their expected capacity to respond to performance funding, based on the same measures described above.

For the four-year institutions, we picked two public universities that were high and low in their expected capacity to respond to performance funding. These ratings were based on the same criteria used to pick the community colleges. Our third university in each state is a research-intensive institution that is high in expected capacity.

Table 1
Organizational Capacity of Community College and Universities

Capacity Level	Indiana	Ohio	Tennessee
High	Community College 1	Community College 2	Community College 1
Medium	Community College 3	Community College 1	Community College 2
Low	Community College 2	Community College 3	Community College 3
High1-Research Intensive	University 1	University 3	University 2
High2	University 3	University 1	University 1
Low	University 2	University 2	University 3

² The data for college revenues, percentage of students receiving Pell grants, and percentage minority students come from IPEDS (2011).

3.3 Data Gathering and Analysis

With data triangulation in mind, we conducted numerous telephone interviews in each state with a wide variety of actors and thoroughly examined available documentary data. Among our documentary sources are public agency reports, newspaper articles, and academic research studies (books, journal articles, and doctoral dissertations). These interviews took place between August 2012 and April 2014. The community college interviews were done first, followed by the university interviews.

At each institution, we attempted to interview the following categories of people: senior administrators, including the president and the vice presidents reporting to the president; deans and other middle-level academic administrators; non-academic middle-level administrators, such as the director of institutional research; chairs of different departments representing a range of disciplines and degrees of exposure to outside accountability demands; and the chair of the faculty senate (see Table 2). We relied on the department chairs and the chair of the faculty senate to illuminate faculty opinion.

Table 2
Categories of College Personnel Interviewed

Non-academic personnel	Academic personnel
<ul style="list-style-type: none"> • President • Vice president for finance • Vice president or director for student services • Vice president or director for admissions and enrollment services • Director of institutional research 	<ul style="list-style-type: none"> • Provost or vice president for academic affairs • Director of developmental education • Dean of arts and sciences or equivalent • Two chairs of department within that school or division: one in humanities and social sciences and one in math and natural sciences • Dean of professional school or division • Two chairs of departments within that school or division. One of these would be a program that is subject to strong outside accountability demands such as nursing. • Chair of the faculty senate

Table 3 presents the number of people interviewed at each college in each state. The interviews were semi-structured. While we used a standard protocol, we adapted it to each interviewee and to material that emerged during an interview. All interviewees were promised confidentiality, and we have masked their identities.

Table 3
Number of Interviewees

Institution	Indiana	Ohio	Tennessee	Total
Community College 1	14	12	12	38
Community College 2	10	13	12	35
Community College 3	10	13	14	37
University 1	10	11	12	33
University 2	13	15	12	40
University 3	14	15	10	39
Total	71	79	72	222

The interviews were transcribed, entered into the Atlas.ti qualitative data analysis software system, and coded. We also coded documentary materials if they were in a format that allowed it. Our coding scheme began with an initial list of “start” codes drawn from our conceptual framework, but we also engaged in open coding, adding and altering codes as necessary as we proceeded with data collection and analysis. To analyze the data, we ran queries in Atlas based on our key coding categories. Using this output, we created analytic tables comparing perceptions of the same actor, motive, event, or context by different interviewees or data sources (see Miles & Huberman, 1994). In the event of any major divergences between different accounts, we conducted additional interviews to resolve those discrepancies.

4. Main Findings

Our cross-state analyses reveal frequent reports of unintended impacts across the three states (see Table 4). The most commonly mentioned unintended impacts of performance funding (PF) are restriction of admissions to community colleges and universities (68 interviewees), weakening of academic standards (59 interviewees), compliance costs (20 interviewees), lessening of institutional cooperation (14 interviewees), decrease in staff morale (11 interviewees), less emphasis on missions not rewarded by PF (9 interviewees), and decrease of faculty voice in academic governance (7 interviewees). Note that these totals reflect the unintended impacts reported only for

performance funding 2.0 programs, and therefore do not include reports of unintended impacts from Tennessee’s 1979 program. See Appendix B for a description of performance funding in each state; in this paper we primarily consider impacts of the Indiana 2009 program, the Ohio 2009 program and its 2013 revision, and the Tennessee 2010 program. Our main unit of analysis is the number of unduplicated interviewees who discussed a given unintended impact. However, we also indicate the number of institutions at which we received mentions.

Table 4
Summary of Reports of Unintended Impacts in Three States
(Number of Individuals Reporting)

	Community College Interviewees	University Interviewees	Community College Institutional Representation	University Institutional Representation	Total
Restriction of Student Admissions	24	44	6 of 9 institutions	8 of 9 institutions	68
Weakening of Academic Standards	32	27	8/9	8/9	59
Compliance Costs	11	9	5/9	5/9	20
Lessening of institutional cooperation	7	7	2/9 (not OH)	4/9 (not OH)	14
Lower morale	7	4	4/9 (not OH)	4/9	11
Narrowing of institutional mission	4	4	3/9 (not TN)	3/9 (not IN)	8
Less faculty voice in academic governance	3	4	3/9 (not IN)	1/9 (not IN and TN)	7
Other	11	9	n/a	n/a	20

Because of the relatively recent adoption of several performance funding programs, and their ongoing implementation, we have differentiated between observed unintended impacts and potential unintended impacts. We classified instances as “observed” when the interviewee discussed that an impact has occurred or concrete steps have been taken toward producing it (e.g., specific steps already taken by the college to

change admission practices in ways that restrict access for certain kinds of students). Unintended impacts are classified as “potential” if the respondent noted that there was the possibility of a certain impact occurring, but it has not yet occurred or no clear steps have yet been taken toward producing that impact.³ The following discussion of the most frequently mentioned unintended impacts employs this distinction.

4.1 Restrictions of Student Admission

The most frequently cited unintended impacts of performance funding across our colleges was restricting the admission of less-prepared students. Such a move to greater admissions selectivity clearly undermines the open-door mission of the community college (Brint & Karabel, 1989; Cohen, Brawer, & Kisker, 2013; and Dougherty, 1994). And while increased selectivity might not be regarded as unwelcome in the case of selective four-year colleges, it is problematic for the many urban and rural public universities that have been committed historically to expanding college access and that enroll many low-income and minority students (Jenkins & Rodriguez, 2013). Table 5 shows the number of interviewees who discussed this unintended impact across our three states; the table further shows whether the respondents indicated that the unintended impact had already occurred (“observed”) or whether it was a possible future impact (“potential”).

Across our 18 institutions, there were 27 interviewees who discussed restricted admission practices that we classified as observed.⁴ There were another 41 interviewees who reported unintended impacts that we classified as potential restrictions of admissions, for a total of 68 interviewees.⁵ The prevalence of restricted admission practices is also apparent in the representation of this unintended impact across our institutions (see Table 4). Respondents at six out of nine community college, and eight out of nine universities in our study discussed this unintended impact.

³ The first two authors of this report separately classified each unintended impact mentioned as observed or potential. Where their classifications diverged, they met to resolve the discrepancies. In the few cases when they could not resolve a discrepancy, the principal investigator, Kevin J. Dougherty, cast the tie-breaking vote.

⁴ Authors’ interviews IN CO #5; IN Uni2 #8; IN Uni3 #1, 2, 3, 4, 5, 7, 9, 11, 12, 13, 15, 16, 17; OH Uni1 #5; OH Uni2 #5, 6, 12, 16; OH Uni3 #3, 4, 8, 10, 15, 17; TN Uni2 #8.

⁵ Authors’ interviews IN CC1 #5, 7; IN CC2 #2, 17; IN Uni1 #5; IN Uni2 #1, 2, 4, 5, 7, 12; OH CC1 #1, 4, 15, 16; OH CC2 #4, 5, 6, 10, 12, 14; OH CC3 #1, 2, 3, 4, 5, 6, 7, 10; OH Uni1 #13; OH Uni2 #2, 3, 4, 5, 7, 16; OH Uni3 #5, 7, 13; TN CC2 #5; TN Uni1 #5.

With regard to community colleges, restricted admissions is of concern because of the mission of community colleges as traditionally open-access institutions, accepting of all students—regardless of their ability and previous academic records—as long as they have completed a high school diploma or GED. Community colleges have long struggled with low persistence and completion rates. A recent report by the National Center for Education Statistics showed that only 14 percent of students at a community college complete a certificate or associates degree within three years (Horn, 2010). Given these historically low rates of completion, when states start to hold institutions accountable for the number of graduates they produce and the number of students who successfully complete a certain number of credits, community colleges are placed in a difficult position. Any institutional changes to either academic programs or student support services will likely take some time to affect student persistence and success, but performance funding programs demand and reward more immediate results. For many colleges, the resolution of this difficult situation may lie in cutting back the admission of students less likely to graduate, thus closing the historically open door.

For universities, raising the admission requirements may not at first appear to be as problematic as it is for community colleges. However, our findings reveal that several of the universities that are raising their standards were historically mass-access, community-based institutions. At those institutions, increasing selectivity would also lead to a reduction in the number of low-income and minority students enrolled.

This section highlights several of the most commonly mentioned mechanisms by which institutions are reported as actually or potentially restricting admission of less-prepared students. Table 5 below shows the number of mentions for each of these mechanisms. Table 5 also highlights two important findings that will be further discussed below in the section on the differences by state. First, there is a significant difference in the number of reports of restricted admission practices between the community colleges and the universities in Indiana. In the Indiana community colleges, these reports most often consisted of potential future impacts, while at the universities steps to restrict admission were more often reported as having already occurred. A second important finding that will be discussed at greater length later in this paper is the low number of

reports of restricted admission practices at both community colleges and four-year institutions in Tennessee.

Table 5
Reports of Mechanisms by Which Institutions Could Restrict Admission
(Number of Individuals Reporting)

Type of Restriction Mechanism				Community	University	Total	Potential	Observed
	Indiana	Ohio	Tennessee	College Total	Total			
General restrictions	8	13	1	6/9	4/9	22	21	1
Raising admission requirements	16	12	2	0/9	7/9	30	7	23
Selective student recruitment	3	11	0	2/9 (OH only)	6/9	14	10	4
Targeted financial aid	0	6	0	1/9 (OH only)	1/9 (OH only)	6	5	1
Other	4	3	0	2/9	1/9	7	5	2
Total “duplicated” individuals reporting	31	45	3			79	48	31
Total “unduplicated” individuals reporting	26	39	3			68	41	27

Note. The total number of unduplicated individuals reporting is the total number of interviewees who mentioned one or more form of restriction of admissions. It is lower than the total number of “duplicated” individuals reporting because some interviewees mentioned more than one mechanism by which institutions may potentially or do restrict admission.

General restrictions. Our findings include 22 reports from individuals who discussed general restrictions of student admission in response to performance funding.⁶ Nearly all of these reports were classified as potential impacts of performance funding. In only one case did the respondent discuss a restriction of admission that had already occurred. Furthermore, of these 22 mentions, 16 of them came from community college respondents, and these individuals spoke very broadly about the *possibility* of limiting access without mentioning any specific steps or actions to reduce admission. All of these reports from the community colleges are thus classified as “potential” impacts. Because of the performance funding policy’s focus on degree completions, respondents from community colleges expressed concern that community colleges would no longer being

⁶ Authors’ interview IN CC1 #5, 7; IN CC2 #2; IN Uni1 #5; IN Uni2 #2, 5, 7; OH CC1 #1, 4, 16; OH CC2 #4, 5, 6, 10, 12, 14; OH CC3 #6, 7; OH Uni2 #2; TN CC3 #4.

able to remain open-access institutions given the pressures from the performance funding program to produce more graduates.

A dean at an Ohio community college reported that the college could be more successful under the 2013 revision of the funding formula if it did not admit students more likely to struggle in college: “I guess if we weeded the students out that really don’t have any plan of being a completer here, that’s helped with our success rates.” Similarly, a senior administrator from an Indiana four-year institution said that because of the pressure from performance funding, the institution is less likely to offer admission to “weaker” students “because if they are weaker ... there is a chance they will bring down your performance numbers.”

In addition to these general concerns about institutions restricting admissions, our interviewees discussed several mechanisms by which their institution is either currently restricting admissions or could in the future restrict the admission of less-prepared students. They include raising admission requirements, decreasing the number of “conditional student admits,” targeted student recruitment, and redirecting institutional aid to better-prepared students’ education.

Raising admission requirements. Across our institutions, there were 30 reports by respondents at universities of restricting access in response to performance funding by raising admission requirements. Twenty-three respondents mentioned it as an observed impact and seven as a potential impact.⁷ Admission requirements could be raised either by requiring higher standardized test scores and grade point averages or by decreasing the number of conditionally admitted students that are accepted each year. It is of note that these 30 respondents are all located at four-year institutions across the three states; there are none at community colleges. One mid-level non-academic administrator at an Ohio university discussed how the university was raising the academic profile of the student body in order to improve the university’s performance on the state metrics:

Instead of a graduation rate of 80 percent, we really need to bump that up so that we have a higher graduation rate. And some of that is being achieved by [changing] the type of student that we bring in. If we increase the quality of the student coming in, we anticipate then that completion of

⁷ IN Uni2 #4, 5; IN Uni3 #1, 2, 3, 4, 5, 7, 9, 11, 12, 13, 15, 16, 17; OH Uni1 #5, 13; OH Uni2 #3, 5, 6, 12, 16; OH Uni3 #3, 5, 8, 17; TN Uni1 #5; TN Uni2 #8.

courses will go up, and then your retention will go up, and then your graduation will go up. It's kind of like a little domino. So by raising our average ACT score of our incoming class by one point, the question is, "Can we anticipate then higher course completions, higher number of degrees awarded?" ... So yes, there's a deliberate approach being made by our enrollment management office.

A senior-level administrator at another Ohio university explained that performance funding may spur a greater conversation about whether college-for-all is appropriate goal for higher education:

[I]f we're trying to improve our graduation rate, then we're going to need to admit more academically qualified individuals and not really look at those individuals who do not meet that standard. It'll probably shift the conversation, I think, to one where we're really thinking about who comes to college and should they come to college, because if our funding is tied to graduation rates and you know that you only graduate 35 percent versus an [another institution] at 85 or 95, you're never going to survive.

In Tennessee, there were far fewer reports of restricting admission in response to performance funding. However, a mid-level non-academic administrator at a Tennessee university noted that the institution has become more selective since 2010 (the year that the PF 2.0 program was implemented):

I think that, over the past few years, at least since 2010, we have started being a bit more selective in terms of the students that are admitted to [the university]. What we know is that our average student ACT score is now between 26 and 27, which is comparable to our peer and aspirational institutions.

Finally, in Indiana, a university faculty member discussed its transition from being a broad-access institution to one that is more selective about the students it admits and how this shift was influenced by performance funding:

When I was here in the '70s, late '70s, and into the '80s, we were an open-admission institution that was here to serve an underserved population.... We were designated last year, for the first time, as a selective institution. And I think

that the performance funding has played a role in that because you are going to do much better with your retention and your completion rates if you raise your admission standards.

Several respondents at Indiana universities stated that their institutions have dramatically lowered the number of conditional admits that they are accepting.⁸ Ten of these fourteen mentions involved potential impacts. According to an interviewee at an Indiana university, conditional admits are students who did not meet admission requirements but were given the opportunity to take a test; if they scored at a certain level, they were conditionally admitted to the institution. At another Indiana university, conditional admits did not have to take a test but had to meet certain requirements, including attending regular advising session and achieving a certain GPA by the end of their second year. According to our data, the decline of this practice is directly related to the institutions' move toward becoming more selective. As one interviewee also explained, less-prepared students require additional resources; by reducing this population, the institution is able to re-direct resources elsewhere in the institution. A senior administrator at an Indiana university discussed the reduction in conditional admits and how this coincided with the decision to move away from being an open-access institution:

[T]here's no question, we revised [our] admissions policies. Now, we've actually increased our academic standard of progress and increased expectations. The combination of narrowing the chute in terms of admissions along with those increased academic standards of progress actually has led to a real buzz among the area high school counselors because it goes against what the narrative of what [this university] has traditionally been. I had one mother call me a couple of summers ago and said, "I told my son he could always get into [this university] and now you're not admitting him." So that phrase, "you could always go to [this university]," it's not happening. That's an unintended consequence that frankly for us, for our reputation and our positioning, I'm comfortable with navigating. I think it was a change that had to happen.

⁸ IN Uni2 #4; IN Uni3 #1, 2, 5, 7, 9, 11, 15, 17.

One consequence of decreasing the number of conditional admits could be a decrease in the enrollment of minority students. This is important to note because—although the performance funding formula in Indiana does include a metric to encourage the enrollment of low-income students, and there is a strong correlation between income and race and ethnicity—the rising admission standards could have had the unintended consequence of decreasing the number of African American students. One of our respondents noted this danger:

I think we have got data to show that, since we've eliminated the conditional admits, it's dramatically reduced the number of African American students at our institution. ... So I mean we've improved the quality of the freshman class, the retention is higher. But we've lost a lot of students.

Unfortunately, we do not have access to the data referenced by this interviewee. However, we examined Integrated Postsecondary Education Data System (IPEDS) enrollment data from 2009–2012 and found that between 2010 and 2012, the percentage of African American students at this institution increased by 0.5 percent. Across the other universities in our sample, the changes in African American student enrollments were subtle, ranging from a decrease of 1.3 percent to an increase of 1 percent. Overall, six universities saw African American student enrollments decline, while three institutions experienced an increase. Again, it is important to note that these are marginal changes; moreover, we did not have IPEDS data from fall 2013 or fall 2014.

Despite the negative implications of restricting enrollment, the practice was strongly defended by both faculty members and senior administrators. For example, a faculty member argued that, before this shift occurred, there were too many students admitted who were unprepared for college-level work:

Well okay, in my honest opinion, tightening up the standard ... how do I want to put this ... the people that you talked to spun that as a negative. But here when you consider the fact that we were letting in a lot of students who probably shouldn't have been in college. ... I don't mean that in a terrible way. I'm very egalitarian, but students probably should have gone and done remedial work at Ivy Tech [Indiana's multi-campus community

college] or something before they came here. And that has really tightened up. And I think that's a good thing.

Selective student recruitment. Fourteen respondents at six out of nine four-year institutions and at two of nine community colleges discussed different ways that their institutions are practicing (4 respondents) or could practice (10 respondents) selective and strategic recruitment practices.⁹ In order to maximize the likelihood that their students will graduate, these institutions are increasing or might increase their efforts to attract better prepared students, including out-of-state and international students. At the same time, respondents discussed how their institutions might de-emphasize or are actually deemphasizing recruitment of students from high schools with many less well-prepared students.

A senior administrator from an Ohio community college explained that the focus on various metrics of student success might lead to a focus on recruiting students that are more likely to be successful, but noted that this practice would be in opposition to the open-door community college mission:

One unintended consequence may be that if you're getting incentives on how many students persist and complete or transfer, aren't you going to try to recruit students who are smarter and who have better ability? So, then, what happens to the other students? Isn't our admission an open-door policy?

Another senior administrator explained that during recruitment, each student requires significant attention and effort. Therefore, by cutting back on this outreach and support, the college could reduce the number of students that are not college-ready:

In so-called recruiting practices, there's a lot of hand-holding that goes on with students in community colleges. I know in our own institution there's tremendous hand-holding with students. They have to be reminded of everything. They have to be reminded of a deadline. They have to be reminded of what paperwork and what tests they have to take. It's a tremendous amount of time and effort we place in just getting one student into class. So if that's the case, you could merely de-emphasize that portion of

⁹ Authors' interview IN Uni2 #1; IN Uni3 #3, 7; OH CC1 #15; OH CC3 #1, 2, 3, 5, 7; OH Uni2 #4, 5, 7, 16; OH Uni3 #15.

your services, and invariably a number of those students are going to fall by the wayside.

At an Indiana four-year institution, a senior administrator discussed how the performance funding formula could shape what types of students they recruit and how this change could lead to conflict with the institution's mission of access:

It could be that some institutions might make decisions about their admissions and their enrollments that respond very closely to that. For example, exclude students of color from urban high schools, because they are a liability.

A senior administrator at one four-year institution in Ohio discussed the tension that arises from being an institution in an urban community and trying to serve students in that community, even though they might not be as well-prepared as other students and therefore may not be likely to contribute to good institutional outcomes, as defined by performance funding:

[T]here's a recognition [as has been brought up in some discussions] of the fact ... that the more we focus on suburban kids with high GPAs and high ACT scores, the less we're able to serve ... an urban population that tends to be from poorer school districts. And even if they do have GPAs that appear to be good, their ACT scores reflect a lack of preparation. ... I mean there's a tension between continuing to recruit a very diverse student population and being an urban-serving institution and being an institution that has high performing students who are successful in getting a degree.

Targeted financial aid. Six respondents at one community college and one university in Ohio discussed how their institutions were considering restricting admissions by shifting the focus of the college's institutional aid program from providing assistance to needy students to attracting better-prepared students (Authors' interview OH CC3 #1, 3, 4; OH Uni3 #7, 10, 11). A senior administrator at the Ohio community college explained how performance funding could encourage the college to offer scholarships to higher performing students who are more likely to complete:

My theory is that we're going to be raising the bar for who we give some of our scholarships to. As I told the

president, if it was my business I would be looking for ways to attract people that I thought were very likely to complete. And along with that, I would be looking for what are the tendencies or what are the attributes for those that tend to be non-completers. Now I think that raises some ethical questions because we are an open-access institution, and so we still need to offer that access, but I think we also need to tweak and, again, encourage more completions as opposed to just numbers of enrollment.

Although this unintended impact is still classified as “potential” given that the proposed changes have not yet gone into effect, the discussion surrounding redirecting aid has moved beyond being purely hypothetical. As the following senior administrator notes, performance funding has motivated the college to work on developing new scholarships in order to focus recruiting efforts on students more likely to be successful at the institution:

We have an institutional grant that we call the “X Scholarship.” ... Heretofore, any student who graduated from a local high school was able to come to [our college] with a guarantee that their tuition needs would be met either by Pell Grant or by that X Scholarship. And what we’re finding is we need to tweak that to put more emphasis on those students who are serious about their education. I can’t tell you what the recommendations are going to be because I didn’t work closely with the committee. But I think, from what I understand, the recommendations are winding their way up to [senior college leadership]. ... So I anticipate that there will be some recommendations aimed at completers as opposed to purely access.

At an Ohio university, respondents also discussed the possibility of a shift toward offering merit aid in order to attract higher performing students. A faculty leader noted:

If we are incentivized to go to a much higher completion rate, that kind of favors the idea of handing out merit-based [financial aid]. Because let’s just face it, I can graduate a valedictorian in three years no problem. That’s pressing the easy button.

As this section has demonstrated, there are numerous paths that both four-year institutions and community colleges have taken or could take to restrict admission and

enroll better prepared students who are more likely to graduate on time. Whether institutions are raising or are considering raising their standardized test and GPA requirements, targeting certain student populations for recruitment while ignoring others, or offering merit aid, such practices would reshape who enrolls in public institutions of higher education. They would favor better prepared and more advantaged students to the detriment of minority and low-income students and students who are not as well prepared by their secondary schools.

Indiana, Ohio, and Tennessee have tried to address the threat of institutions moving to deemphasize admission of less-prepared students by providing extra funding to institutions for graduating students who are deemed at risk. Low-income students are targeted by all three states, with one or another state also addressing race/ethnicity and age (Dougherty, Jones, et al., 2014; see also Fingerhut, 2012; HCM Strategists, 2011; Indiana Commission for Higher Education, 2011a; Ohio Board of Regents, 2011b, 2011c; Tennessee Higher Education Commission, 2012a).¹⁰ These premiums can have a considerable impact on institutional allocations. In Tennessee, they can shift institutional allocations by as much as 12 percent, with an average of about 4 percent (Authors' interview TN PF2 #1d). However, it is not clear that this is enough—particularly in Ohio and Indiana—to really deter colleges from becoming more selective and turning away less-prepared (and less-advantaged) students. As we have seen, we have frequent reports in those states—though not in Tennessee—that colleges and universities are restricting admissions now or might end up doing so in the future. Moreover, senior administrators at several colleges and universities reported to us that the premium provided for at-risk students had little impact on their institution's actions (Authors' interviews IN Univ2 #1b; OH Univ3 #18; TN CC2 #2b; TN CC3 #10b; TN Univ2 #1b; and TN Univ3 #5b). For example, a senior administrator at an Indiana university that had benefited from the premium for low-income students stated:

Yes, that pays off for us. How much does that influence us?
Those are our students anyway. These are the backgrounds
including financial that they bring. Now we would be

¹⁰ Ohio initially did not provide this funding bonus for community colleges because simulations indicated that it seemingly would not affect community college revenues one way or the other (Ohio Board of Regents, 2011a; Authors' interview OH PF2 #1f). However, such a bonus will appear in the state funding formula for community colleges for fiscal year 2015 (Ohio Association of Community Colleges, 2013).

putting an emphasis on enabling all of our students to complete their degrees anyway. We're certainly not against it because it's been an advantage for us in recent years. The funds are not at any kind of level that's going to change our ability to allocate funds, and ... it probably has a minimal influence of how we would prioritize degree completion for our students.

It is heartening to hear that institutions still remain committed to admitting and graduating at-risk students. However, it is of concern that the premium provided for such students does not seem to be strengthening that motivation as much as one might want. We will return in the Summary and Conclusion to what additional steps might be in order.

4.2 Weakening of Academic Standards

The second most commonly mentioned unintended impact of performance funding was weakening of academic standards. Across our community colleges and four-year institutions, 59 interviewees discussed this unintended impact. Table 6 shows the total number of mentions of weakening of academic standards by state, mechanism, and whether they were observed or potential instances. Referring back to Table 4, this unintended impact was reported at eight out of nine community colleges and eight out of nine four-year institutions.

The majority of respondents indicated that this was a *potential* consequence of performance funding and has not yet come to fruition. Forty-one respondents indicated that performance funding has the potential to cause colleges to weaken their academic standards in various ways,¹¹ while eighteen respondents indicated that performance funding has actually led to weakening of academic standards.¹² Respondents noted several ways in which academic standards could be or have been weakened, including lowering academic requirements in class, reducing degree requirements, and moving students more quickly through developmental education.

¹¹ Potential reports: Authors' interviews IN CO #7; IN CC1 #2, 4, 6; IN CC2 #2, 5; IN Uni2 #10, 12; OH CC1 #8, 15; OH CC2 #1, 3, 9, 11, 14; OHCC3 #1, 5, 9, 13; OH Uni1 #4, 9, 13; OH Uni2 #5, 7, 9, 14, 16; OH Uni3 #4, 9, 10, 15; TN CC1 #7; TN CC2 #1, 3; TN CC3 #2, 3, 4, 5, 11; TN Uni1 #2, 12.

¹² Observed reports: Authors' interviews IN CO #6, 7, 8; IN CC1 #13; IN Uni1 #2; IN Uni2 #6, 10, 11; OH CC1 #7; OH Uni2 #3, 5; OH Uni2 #13, 16; TN CC1 #9; TN CC2 #7; TN CC3 #11; TN Uni1 #10; TN Uni2 #7; TN Uni3 #2.

Table 6
Reported Mechanisms by Which Institutions Could Weaken of Academic Standards
(Number of Individuals Reporting)

Mechanism	Indiana	Ohio	Tennessee	Total	Observed	Potential
Lowering academic demands in class (grade inflation)	7	15	10	32	3	29
Reducing degree requirements	9	3	2	14	11	3
Reducing time in developmental education	0	3	1	4	1	3
Grade forgiveness policies	0	3	0	3	2	1
Advising into easier courses	0	0	1	1	1	0
Other	0	4	1	5	0	5
Total “duplicated” individuals reporting	16	28	15	59	18	41
Total “unduplicated” individuals reporting	16	28	15	59	18	41

Note. The total number of “duplicated” and “unduplicated” individuals reporting are the same because none of our respondents mentioned more than one form of weakening of academic standards.

Lowering academic demands in class (grade inflation). Pressure to practice grade inflation and lower academic demands in class, both as a potential and observed unintended impact of performance funding, was reported by 32 respondents at community colleges and four-year institutions in the three states.¹³ Twenty-nine interviewees mentioned potential impacts and three mentioned actual ones. A senior campus administrator at an Indiana community college worried that the push for completions, which is the most heavily weighted metric within the Indiana performance based funding formula, will force faculty and institutions to move students through to graduation without care for whether or not academic standards are maintained:

It’s putting faculty in a position of the easiest way out is to lower the standards and get people through. And so it’s something that’s of great concern I think.

In Ohio, several administrators and faculty members at one community college expressed concern about potential grade inflation in response to the 2009 performance funding program (Authors’ interview OH CC1 #7, 8, 15). A faculty member stated:

¹³ Authors’ interview IN CO #7; IN CC1 #2, 4, 6; IN CC2 #2, 5; IN Uni2 #6, 10, 12; OH CC1 #8, 15; OH CC2 #3, 9; OH Uni1 #9; OH Uni2 #5, 7, 9, 13, 14; 16; OH Uni3 #10, 15; TN CC1 #7; TN CC2 #1, 3; TN CC3 #2, 3, 5; TN Uni1 #10, 12; TN Uni2 #7; TN Uni3 #2.

You hear all the terrible things in other parts of the nation as well as our own [state] about grade inflation, and just all the bad things that can happen when you want to be able to produce numbers to get funded on.

This sense of pressure is likely to increase in Ohio as it moves to base 50 percent of state funding for community colleges on performance indicators in fiscal year 2014 and 100 percent by fiscal year 2015. Several respondents at Ohio community colleges expressed concern that the 2013 revision of the performance funding formula could result in weakened academic standards (Authors' interview OH CC2 #3, 11, 14; OH CC3 #1, 5, 9). A senior level administrator at a community college argued:

I think it's also going to be important to keep academic standards high, which is something that's very important to us here at [this college]. But we do hear that there are other colleges where they are planning to just basically just abolish Fs and get people through that way and call them completions. ... I don't know that any college is actually planning to just abolish Fs. But I think that what we hear is that there is an incentive built-in to potentially get into grade inflation, so the incentive is there.

In Tennessee, the watering down of academic demands in order to produce higher completion numbers was cited as a potential unintended impact of performance funding by one college dean. The respondent acknowledged that the college's administration had not exerted such pressure—in fact, they had actively rejected doing so—but the respondent felt that the potential is there:

The push is to get students to graduate, or at least the message that we get is [that] students have to graduate. There's concern among faculty [that] that's going to become the overriding goal and they're going to be forced to water down the curriculum, which does not sit well with faculty on any level. ... A number of the programs have [a] very set curriculum, and there seems to be a push to change that just so that you can get students to be able to graduate. In other words, to substitute courses that aren't necessarily in the curriculum and that doesn't always sit well [with faculty].

Within the universities, there was also widespread concern about grade inflation and pressure to lower academic expectations, including reducing course requirements in order to maximize performance on the state indicators. In Indiana, one senior administrator questioned whether the performance indicators were incentivizing institutions to improve quality or actually encouraging institutions to lower quality in order to increase completion numbers:

It's just kind of a theoretical question as to whether these are effective metrics. You know, somebody could probably reduce the academic quality on their campus and allow students to pass through their programs much easier. Receive a credential and improve their bottom line in terms of degree production. I've always said that is kind of almost counterintuitive to what they want to do.

Meanwhile, a faculty member at an Ohio university discussed a feeling of "pressure" not to fail students by inflating grades:

Well, in an effort to promote student success, there is a substantial pressure to minimize the failure rates of the students in some of these undergraduate courses. And of course that would translate into inflation of grades in order to make sure that the students are passing all of these courses and so forth. So I as a faculty member have a concern as to the watering down of our course materials as well as the quality of our majors, the programs.

When asked a follow-up question about how this pressure is expressed, the same faculty member continued:

It's not a direct pressure. It's simply public discussion of which courses have high failure rates, low failure rates, and they are essentially promoting those courses that have low failure rates as being successful, [as] well as being those courses that promote student success. So it's implicit, but I think there is a general implicit pressure.

Finally, a faculty member from Tennessee also highlighted the pressure felt by faculty members to contribute to better student outcomes. As this individual explained, they see restricting admission as a non-option because it would run counter to the goal of

increasing the number of graduates, so they see the only other option as lowering academic demands:

Yeah. I know that sounds strange but the average faculty person, if you ask them how do you increase student outcomes, it's raise admission standards, which is directly in opposition to what the state wants, which is more graduates. They seem somewhat in opposition to each other. The other option that faculty see is [that] you must be just asking me to water down what I'm doing, which faculty are not going to accept. In Tennessee, there seems to be an emphasis on a percentage of our people to have degrees. There's somewhat of a disconnect between that goal and the goal of what the degrees should mean.

Reducing degree requirements. Across all three states, 14 individuals discussed that performance funding could lead or was leading institutions to reduce barriers to graduation and to focus on awarding credentials, typically by reducing the number of credits required to complete a degree.¹⁴ Of these 14 respondents, the majority—11 interviewees—discussed observed cases of reduced degree requirements; the remaining three individuals discussed the potential effect of performance funding. Several respondents noted that their respective institutions recently had changed degree requirements in order to ensure that students receive their degrees as soon as possible. While this may often be a good change, removing unnecessary barriers to graduation, the focus on credentials can also negatively affect learning. A faculty dean in at an Indiana university noted this danger of focusing on attaining credentials at the expense of learning:

[It] seems like we were encouraged to get students out the door with their degree, and at times that may mean truncating their education. We have students, as I mentioned earlier, who really want to continue and want to take their time and develop their own research and ideas and have a full and rich academic experience. We all have a little bit of pressure to get them to the classes they are supposed to take and get them out the door. As if it was some kind of ticket to a job rather than an education.

¹⁴ Author's interviews IN CO #6, 7, 8; IN CC1 #2, 13; IN Uni2 #6, 10, 11; OH CC1 #7; OH Uni2 #16; OH Uni3 #4; TN CC1 #7; TN CC3 #4; TN Uni1 #2.

The concern about excessive credentialing was also present in at an Ohio university. A senior administrator discussed how maintaining degree quality is complicated when the focus is on increasing graduation numbers:

Part of the discussion that has been increasing of late, and we are clearly in this, is quality. Where does quality fit in here? ... All of the discussion is about increasing numbers. And as you know from your viewpoint, the discussion of quality in higher education is kind of a “third rail” because nobody knows quite how to measure that.

In Indiana community colleges, interviewees discussed the recent initiative to ensure that once students obtain 60 credits they are awarded an associate degree, regardless of whether or how many times they switched majors or concentrations. Moreover, the Indiana community college system has taken steps to remove courses from degree programs requiring more than 60 credits. Interviewees at the central office of the Indiana community college system were quite clear that this policy change was in direct response to performance funding pressure to increase the number of college graduates. As a senior-level administrator explained:

We’ve pounded on advisors that when they hit the 60 mark, they’re done. We award the degree and they are out of here, right. Certainly they can stay with us longer and take more classes, but they are going to be degreed. We were keeping them here too long.

Reducing time in developmental education. Four of our interviews also revealed concern that performance funding might lead colleges to move students too quickly through developmental education (Authors’ interview OH CC2 #11; OH CC3 #1, 5; TN CC2 #7). On the whole, more rapid movement through developmental education would be a good thing. Scholars and policy groups have argued that reducing time in remediation is important in order to increase graduation numbers because too many students get stranded in developmental education (Bailey, 2009; Complete College America, 2013). However, some of our respondents raised the concern that time in remediation may be shortened too much to allow for adequately preparing students for college-level courses. In Ohio community colleges, the 2013 formula revision had one

college official concerned that the new funding formula would encourage faculty to pass students too quickly through developmental education courses:

[M]y concern is that in developmental courses, in particular, that it's going to become so important that students get through that in some way. I can't define what I mean by pressure because I don't mean the administration would pressure us into this, but there's going to be some sort of pressure to pass people along or to lower standards or to lower expectations in some ways so we can say a student completed the course. And I don't think that's in their best interest, and that worries me.

Meanwhile, in Tennessee, an academic dean cited existing pressure from administrators to shorten the amount of time that students spend in developmental math, which this respondent believed ignores students' individual learning needs.

In all three states, state-level advocates of performance funding anticipated that performance funding might result in a weakening of academic standards, with institutions reducing degree requirements and with faculty demanding less in class in order keep up course and degree completions (Dougherty, Jones, et al., 2014). To combat the danger of weakening of academic standards, Tennessee policymakers decided to rely on its existing PF 1.0 program, which would continue as a quality assurance adjunct to its new PF 2.0 funding formula (Authors' interview TN PF2 #13). Ohio, meanwhile, decided that faculty professionalism would be its main counter to the danger of weakening of academic standards (Fingerhut, 2012). However, Ohio also has other means at its disposal to determine if academic standards are weakening, including examining data to see if there is evidence of unexplained spikes in completion or grades (Authors' interview OH PF2 #1e). We have no evidence that Indiana took any steps to address the possibility of a weakening of academic standards (Authors' interview IN PF2 #3).

4.3 Compliance Costs

Costs of complying with the demands of performance funding elicited mentions from 20 of our respondents (see Table 7).¹⁵ These compliance costs involved building up institutional research capacity, extra work resulting from the need to more closely track

¹⁵ Authors' interview IN CO #2; IN CC2 #18; IN Uni3 #3, 12; OH CC1 #7, 9; OH CC3 #3; OH Uni1 #4, 14; OH Uni2 #3; OH Uni3 #14; TN CC1 #3, 4, 7, 9; TNCC3 #8, 12; TN Uni1 #1, 3, 7, 8.

student progress, and loss of attention to instruction. Note that, with the exception of one respondent, these impacts have already taken effect.

Table 7
Reports of Compliance Costs
(Number of Individuals Reporting)

Types	Indiana	Ohio	Tennessee	Potential	Observed	Total
Cost of increasing student tracking capacity (IR, registrar)	2	1	2	0	5	5
Increased workload	2	0	3	0	5	5
Less attention to instruction	0	2	1	1	2	3
Cost of increasing learning support	0	0	1	0	1	1
Other	0	4	2	0	6	6
Total “duplicated” individuals reporting	4	7	9	1	19	20
Total “unduplicated” individuals reporting	4	7	9	1	19	20

Note. The total number of “duplicated” and “unduplicated” individuals reporting are the same because none of our respondents mentioned more than one form of compliance costs.

Cost of increasing student tracking capacity. Several respondents pointed out that performance funding increased their institution’s need to expand its capacity to track student outcomes but that the college was not compensated for its spending to build that capacity (Authors’ interview IN CO #2; IN CC2 #18; OH CC3 #3; TN CC1 #3, 4). In Ohio, a senior administrator noted: “They [the state] put into place initiatives and metrics that we have to follow [without] giving any funding to help us get there. Our funding is tied to this, but if you need additional research or things like that, [they should] give us a little money to help us get the information.”

Meanwhile, in Indiana, a senior administrator noted that, as a result of performance funding, the central office of the state community college system has had to increase staff levels in the institutional research office:

I think the compliance costs have been pretty burdensome on all of the institutions. I mean that’s a whole new dataset that we have to collect and we only have six people in our [central office] IR department right now. So you know, just probably the 100 man-hours that we’ve had to spend just to do this, just to get the baseline data for them [the state higher education commission].

In Tennessee, interviewees reported that the state's 2010 program has resulted in additional costs associated with tracking students and implementing new software to comply with the data requirement of the program. The new program has resulted in a proliferation of new certificate programs, which students often complete in less than a year; therefore, an additional and uncompensated cost has resulted from the need to track, process, and award these credentials. A mid-level administrator said:

It takes a lot of time and effort for the records office to do that and award those certificates, and like I said it's really just something for the student to feel like they've accomplished something, in my opinion.

Increased workload. Five additional respondents discussed the increased workload that performance funding has required, including the need for more assessment (Authors' interviews IN Uni3 #3, 12; TN CC3 #8; TN Uni1 # 7, 12). As an Indiana faculty dean explained, the demands of performance funding have placed an additional assessment burden on faculty members, without any additional resources:

Well I would say the biggest unintended consequence is the burden of a lot of the work—especially assessment-type work, looking at outcomes—at least from the academic side, has been placed on faculty members, with little to no increase in resource to meet those new demands.

A mid-level non-academic administrator from Tennessee reiterated that compliance with performance funding has led to increased workload:

I think it may have increased the workload of some units ... all of the different things that you may be tracking that you hadn't previously tracked. Or we're going to purchase this system and you're going to implement it. And so that requires so much work to implement a system while you're still doing your other job.

Less attention to instruction. A few respondents at community colleges observed that changing activity to improve results on the performance funding indicators resulted in a loss of time for quality instruction (Authors' interview OH CC1 #7, 9; TN CC1 #7). A Tennessee college dean noted:

In order to implement a lot of that, it's very data driven. You have to spend a lot of time with data and all that reporting. And faculty don't have an interest in that, and so it's very discouraging for them to have to spend time doing that instead of doing what they want. And they love to teach and they just want to teach. So it's put a bit of an administrative burden on faculty and staff that no one's that thrilled about.

A good part of the compliance costs above stem from the need of institutions to build up their capacity to engage in organizational learning. But our respondents indicate that their institutions have received little help from the states in meeting the costs of doing so. The states—with Ohio being a partial exception—did not carefully envision the organizational learning and other demands colleges would face in responding to performance funding (Dougherty, Jones, et al., 2014). None of the three states provided funding and technical assistance to help colleges to enlarge their institutional research and information technology capacities. In fact, the vast majority of administrators and faculty we interviewed at 18 public colleges and universities in the three states rated the extent of the state effort to build up institutional capacity as low or nonexistent (Reddy et al., 2014). In the Summary and Conclusion we suggest steps that could be taken to address this absence.

4.4 Reduced Institutional Cooperation

Fourteen of our respondents noted how performance funding has reduced or could reduce institutional cooperation and the free flow of best practices across institutional boundaries (Authors' interview IN CO #1, 2, 6, 9; IN Uni1 #4; IN Uni3 #1, 2, 4; TN CC1 #1, 5; TN CC3 #4; TN Uni1 #7, 9; TN Uni3 #6). Of these 14 respondents, 11 described impacts that had already taken effect, while three described a potential effect of performance funding. As explained by this Indiana senior administrator:

Instead of thinking of a higher education system that should work to best serve the students, people are lately ... worried about protecting their assets. ... And I think it kind of pits "them against us."

In Tennessee, according to a college administrator, a similar competition for funds is taking place, with colleges trying to outdo each other:

If I gain money, that means that [another college] has to lose it because it's a zero sum game. That's been the discussion. ... You know that joke about there's a bear that's chasing us and I don't have to run faster than the bear, all I have to do is run faster than you? ... I don't really have to do that well; all I have to do is do better than you.

This sense of competition could lead easily to a feeling that it is against institutional interests to cooperate with other colleges and share best practices. Since funding is dependent not just on one's own college performance but also on the performance of the other colleges and universities in the state, college officials who find something that works may have little reason to tell their counterparts at other institutions. A Tennessee faculty member mentioned this potential, in recalling a conversation when a state higher educational official visited the college:

And my question directly to him was, "Why would I ever share? If I come up with an idea to help my students succeed and be successful and graduate, which will mean more money in the funding formula for my school, why would I share that with other schools in my system?" Because then, you know we're all fighting for the same pie ... we have the idea that might just level the playing field for us so we get our fair share. But other bigger schools who have already more funding, if they get our good idea that works, we give it to them, they have even more money to make it work even better, which means now they still get more of the pie.

Several senior-level administrators at an Indiana university pointed to a decrease in cooperation between institutions as a result of performance funding. For example, a mid-level administrator reported this case of an observed impact:

Probably an unintended consequence is [that] it ends up creating animus between higher education institutions that should probably be partners. So that probably is an unintended consequence because now we're competing for funds. They're viewing it as a way of getting universities to compete, and that's a healthy thing. And as an economist, I'm not against competition, but the competition's on the wrong dimensions.... There are public-good natures to higher education, and these policies don't recognize that.

So, markets fail in public-goods settings, and this is a public-good setting.

4.5 Lower Faculty and Staff Morale

Another unintended consequence of performance funding has been an observed decrease in faculty and staff morale, as discussed by 11 respondents at community colleges and four-year institutions across all three states (Authors' interview IN CO #8; IN CC2 #10; 14; IN CC3 #1; IN Uni2 #11; OH Uni3 #11; TN CC1 #7; TN CC3 #4, 11; TN Uni1 #5; TN Uni2 #5). All of these responses were observed. An Indiana academic administrator stated that faculty morale has suffered in the wake of an increased emphasis on poor student outcomes within community colleges: "It [performance funding] continually brings the poor results to the attention of our faculty. They've indicated to me that it's demoralizing. ... They're underappreciated" (Authors' interview IN CC2 #14). A Tennessee faculty member described this feeling in more emphatic terms:

Completely demoralizing. Because we work very hard to enable our students to succeed, and our goal is our student success.... The implication from this type of funding is that we're not working hard enough, we're not willing to change, and we're not willing to improve. We're not willing to look at what we do and try and do better.

4.6 Less Faculty Voice in Academic Governance

A few respondents from Ohio and Tennessee institutions perceived that performance funding has resulted in a decrease in faculty voice in academic governance (Authors' interview OH CC3 #9; OH Uni2 #7, 16; TN CC2 #12; TN CC3#14). A faculty member at an Ohio university explained that performance funding had been used to criticize faculty:

I mean I don't know that this has been the case at other universities, but at least at [this university] there's been a strong sense that this discourse has been used to sort of marginalize and excoriate faculty. I mean there's been a discourse not of "we need you as a partner to improve this" but [of] "in case you're noticing how underperforming you are in retaining students, so you need to do better." If your goal is to scold the faculty for not doing a good enough job,

then you aren't going to actually be reaching out to communicate with them or give them tools.

One community college academic dean described a case in which the pressure to respond to performance funding demands had resulted in a process of curricular deliberation and change that weakened faculty's traditional voice:

There was a committee ... working on a redesign for the developmental [education] program. ... We met every couple of weeks or so [on] very detailed deliberations as to how we could improve our system, the structure of the program and everything. ... And then what happened at one point ... we came to the meeting and our coordinator simply told us that the vice president had decided on what needed to be done with developmental [education] and that's what we were going to do. And that was it. And the changes were made. And it was very drastic. ... So it was a circumventing of the process that we had in place for developing change, and she was anxious to improve the success rates right away I think, and she thought that this would do it. In her better judgment she felt that this system would work really well.

Although there were few mentions of marginalizing faculty as an unintended impact, it is still important. In discussing the possibilities of restricted admission and weakening of academic standards, several faculty respondents claimed that they would strongly resist any such attempts. However, this faculty opposition is less likely to be effective if faculty voice in academic governance is reduced.

5. Variation in Unintended Impacts of Performance Funding

This section analyzes how reports of unintended impacts vary along several dimensions. First, we find notable differences in reports of unintended impacts by state, with many more reports in Ohio than in Tennessee or Indiana. Next, we compare the number of reported unintended impacts by earlier and later performance funding programs, by type of institution (two-year vs. four-year), by organizational capacity

within each college sector, and finally, by the position of respondent within the college (e.g., senior administrator vs. faculty).

5.1 Differences by State

The total number of reported unintended impacts varies across our three states, with Ohio respondents reporting more than Indiana and Tennessee (see Table 8). Note that these totals include all mentions of unintended impacts, and not just those highlighted in this report. Across both community colleges and four-year institutions, there were 50 total reports (duplicated) of unintended impacts in Tennessee, 57 reports of unintended impacts in Indiana, and 88 in Ohio.

The higher number of mentions at Ohio community colleges may in part be due to the fact that performance funding in Ohio was revised during our interviews there. Therefore, the program may have weighed heavily on the minds of faculty and administrators, contributing to the overall higher number of unintended impacts reported across the state. Another possible explanation for the higher number of reports of unintended impacts in Ohio stems from the governance structure of the higher education institutions. Ohio's community college system is decentralized, with each institution operating independently from one another, while Indiana's community college system is highly centralized. One might expect fewer mentions of unintended impacts in a centralized system because there is greater oversight and because a centralized system might be more thoughtful in anticipating unintended impacts. However, the lower number of reports from Indiana's community colleges could also be because the share of funding awarded through performance funding (6 percent in Indiana) is far smaller than in the other two states.

A possible explanation for why Tennessee has the lowest number of reports is that it has had the longest history with performance funding of all three states. This may have provided the state with more time to work out the kinks in performance funding and for institutions to become more used to it. In addition, Tennessee has only three respondents reporting restrictions of student admissions, while 39 interviewees in Ohio and 26 in Indiana mentioned restrictions on student admissions as a result of performance funding.

Table 8
Reports of Unintended Impacts by State
(Number of Individuals Reporting)

Impact	Indiana	Ohio	Tennessee	Observed	Potential	Total
Restriction of student admissions	26	39	3	27	41	68
Weakening of academic standards	12	28	15	15	40	55
Compliance costs	3	7	9	18	1	19
Lessening institutional cooperation	4		6	7	3	10
Low morale	4	1	5	10	0	10
Decrease of emphasis on mission not rewarded by PF	1	6	1	3	5	8
Less faculty voice in academic governance	0	5	2	6	1	7
Other	8	2	9	13	6	19
Total “duplicated” individuals reporting	58	88	50	98	97	195

Note. The total number of “duplicated” individuals is higher than the total number of respondents who mentioned any unintended impacts, as it includes individuals who reported more than one unintended impact. The totals are lower than in Table 4 because Indiana totals in this table do not include the central office. Ohio mentions include the 2009 program and its 2013 revision. Tennessee mentions reflect only the 2010 program.

5.2 Differences Between Earlier and Later Performance Funding Programs

We were interested in whether the movement between earlier and later performance funding programs made a difference in the number of and, even more importantly, nature of unintended impacts mentioned by our respondents. One major move came when Tennessee in 2010 moved to a new performance funding program, even as it retained its 1979 program. It involved a major policy change from a PF 1.0 program that provides a bonus to state base funding for higher education institutions to a PF 2.0 program that embeds performance funding indicators in the base state funding itself and ties much more state money to performance indicators (see Appendix B). A second transition is the shift in Ohio from the original 2009 funding formula to a revised formula, enacted in July 2013.¹⁶ The latter sharply increased the proportion of state aid to community colleges based on performance indicators from 10 percent in fiscal year 2013 to 50 percent in fiscal year 2014 and 100 percent in fiscal year 2015 (Ohio Association of

¹⁶ We do not compare the 2009 program in Ohio to the Success Challenge (1997-2008). We found very few of our respondents were able to comment with any familiarity about the impacts of the Success Challenge, which only applied to the public universities and never was a big program.

Community Colleges, 2013; Ohio Board of Regents, 2012a). This section focuses on major shifts in Tennessee and Ohio, since comparisons between programs could not be made in Indiana.¹⁷ Tables 9 and 10 summarize the differences between the earlier and later PF programs in Ohio and Tennessee. Table 9 focuses on differences within the community colleges, while Table 10 focuses on the universities.

Table 9
Reports of Unintended Impacts by Earlier and Later PF Programs: Community Colleges
(Number of Individuals Reporting)

Program	Ohio			Tennessee		
	Potential	Observed	Total	Potential	Observed	Total
Earlier program	13	4	17	0	4	4
Later program	17	0	17	14	15	29
Total “duplicated” individuals reporting	30	4	34	14	19	33

Note. Totals include all unintended impacts mentioned, including all “other” impacts not discussed in detail in this paper. The total number of mentions of impacts for Ohio community colleges excludes five reports of unintended impacts from CC2 in Ohio for which the respondents did not clarify whether the impact was related to the 2009 or 2013 iteration of the program. The total number of “duplicated” individuals reporting is higher than the total number of respondents who mentioned any unintended impacts, as it includes individuals who reported unintended impact for both the earlier and later PF programs.

Table 10
Reports of Unintended Impacts by Earlier and Later PF Programs: Universities
(Number of Individuals Reporting)

Program	Ohio			Tennessee		
	Potential	Observed	Total	Potential	Observed	Total
Earlier program	17	19	36	0	2	2
Later program	7	6	13	4	17	21
Total “duplicated” individuals reporting	24	25	49	4	19	23

Note. Totals include all unintended impacts mentioned, including all “other” impacts not discussed in detail in this paper. The total number of “duplicated” individuals reporting is higher than the total number of respondents who mentioned any unintended impacts, as it includes individuals who reported unintended impact for both the earlier and later PF programs.

¹⁷ Indiana’s first statewide performance funding program was adopted in 2007 and operated as a PF 1.0 bonus funding program. However, before this program was ever fully implemented, the state transitioned in 2009 to a PF 2.0 base-funding program.

In the case of Tennessee, reports of unintended impacts were considerably more frequent for the 2010 program than for the 1979 program. At the community colleges, 29 individuals discussed unintended impacts for the 2010 program, compared with four reporting unintended impacts for the 1979 program. Similarly, our university data reveal only two individuals who discussed unintended impacts resulting from the 1979 performance funding program, and 21 reporting unintended impacts from the 2010 program. However, we believe that our data overestimate the degree of change from the earlier to the later PF programs. The unintended impacts stemming from the 1979 program would have been most apparent in its early years, but the bulk of our respondents were not working at their institutions in the late 1970s and early 1980s, and could therefore not speak to any unintended impacts that arose in the early years of the funding formula. Moreover, two dissertation case studies of the impact of the 1979 performance funding program on community colleges also found evidence that the unintended impacts of the program were not negligible (Freeman, 2000; Shaw, 2000). The dissertations cite reports of compliance costs at one college (Shaw, 2000, p. 76–77) and, at another college, grade inflation and diminished faculty voice in academic governance (Freeman, 2000, pp. 84, 90).

Ohio provides clearer evidence of the impact of programmatic change. For the community colleges, the number of reported unintended impacts rose from 17 for the 2009 formula to 28 for the 2013 revision, while it declined for the universities. We attribute this difference to the fact that the 2013 formula represented a much greater change in the funding formula for community colleges than for universities. The 2009 formula allocated only 10 percent of state funding for community colleges in FY 2012–2013 on the basis of performance indicators, while the 2013 formula revision started a shift toward 100 percent of funding based on performance indicators (50 percent in FY 2014 and 100 percent in FY 2015). The 2013 formula revision did not have the same consequences for the Ohio universities. Even in 2009, 80 percent of their state funding was allocated on the basis of performance indicators (course completions and degree completions). The main impact of the 2013 formula revision on universities was that it

accelerated the shift from focusing on course completions to concentrating on degree completions.

5.3 Differences by Type of Institution: Community Colleges Versus Universities

Table 11 compares the number of reports of unintended impacts by community colleges and four-year institutions, including the number of reports that were coded as potential and observed.

Table 11
Reports of Unintended Impacts by Type of Institution
(Number of Individuals Reporting)

Impact	Community College			University			Total
	Observed	Potential	Total	Observed	Potential	Total	
Restriction of student admissions	1	23	24	26	18	44	68
Weakening of academic standards	7	25	32	11	16	27	59
Compliance costs	10	1	11	9	1	9	20
Lessening institutional cooperation	4	3	7	7	0	7	14
Low morale	7	0	7	4	0	4	11
Narrowing of institutional mission	1	3	4	2	2	4	8
Less faculty voice in academic governance	2	1	3	4	0	4	7
Other	6	5	11	8	1	9	20
Total “duplicated” individuals reporting	38	61	99	71	37	108	207

Note. The total number of “duplicated” individuals reporting is higher than the total number of respondents who mentioned any unintended impacts, as it includes individuals who reported more than one unintended impact.

Overall, there were a similar number of individuals mentioning unintended impact from the community colleges and four-year institutions. However, notable differences emerged when comparing the reports of specific impacts and the number of potential and observed impacts, especially in reports of restrictions of student admissions. We had 44 university respondents reporting restricted admissions (26 were observed impacts and 18 were potential impacts), but at the community colleges we had 24 respondents

mentioning restricted admission (1 observed, 23 potential). We wonder whether the university respondents were more likely to discuss restricted admission practices overall and to point to steps that had already taken place because it is less taboo to discuss restricting access at a four-year institution than it is at an open-access community college.

The bulk of mentions of unintended impacts at community colleges were coded as “potential” impacts. That is, they were impacts that were discussed as a possibility, but had not yet occurred or the institution had not yet taken steps to implement. In contrast, at the four-year institutions, the bulk of the reports were coded as “observed.” This difference has several possible explanations. First, it is possible that because our interviews at community colleges occurred between 12 and 18 months before our interviews at the universities, and because the performance funding programs are still developing, particularly in Ohio, the impacts were further away from being potentially realized at the community colleges. Moreover, by the time we were conducting the university interviews, because more time had elapsed, there was more time for the impacts to become realized. Second, returning to restriction of student admission, universities perhaps were more likely to report that this impact had already taken place because they do not feel as constrained by a historical mission as open-access institutions, as is the case with community colleges.

5.4 Differences by Organizational Capacity Within Each Sector

We chose community colleges in the top, middle, and bottom third in their states in expected capacity to perform well on the performance funding indicators, based on college resources, data-analytic capacity, and number of at-risk students (percentage of students receiving Pell grants and percentage of minority students). We also chose three universities in each state, selecting two that were high and low in their expected capacity, using the same metrics as at the community colleges. In addition, we chose one high capacity, research-intensive institution in each state.

Differences among community colleges. Table 12 presents a breakdown of reports of most frequently mentioned unintended impact by college capacity. Note that the totals in Table 12 do not include the central office of the Indiana community college system, which makes these totals slightly different from the total reported unintended

impacts in Table 4. Our findings reveal that the number of reports of unintended impacts varied little between the high-capacity colleges (33 reports) and low-capacity colleges (36 mentions) but was lower at medium-capacity colleges (18 reports). Respondents at high-capacity and low-capacity colleges were more likely than those at medium-capacity colleges to report the possibility or actuality of restriction of student admission and weakening of academic standards. This may stem from low-capacity colleges facing greater obstacles to improving student outcomes and having fewer resources.¹⁸ Therefore, they more often may have to resort to or at least consider unwelcome expedients such as restricting admission or weakening academic standards. However, this does not explain why there are nearly as many reports of these two unintended impacts from high-capacity community colleges.

Table 12
Reports of Unintended Impacts by Community College Capacity
(Number of Individuals Reporting)

Impact	High Capacity Colleges			Med. Capacity Colleges			Low Capacity Colleges		
	Pot.	Obs.	Total	Pot.	Obs.	Total	Pot.	Obs.	Total
Restricted student admissions	8	0	10	5	0	5	10	0	10
Weakening of academic standards	9	2	11	4	2	6	11	0	11
Compliance costs	0	4	4	1	1	2	0	4	4
Low morale	0	1	1	0	1	1	0	4	4
Decrease in faculty voice	0	0	0	1	0	1	0	2	2
Lessening of institutional cooperation	2	0	2	0	0	0	1	0	1
Narrowing of institutional mission	2	1	3	1	0	1	0	0	0
Other unintended impacts	2	2	4	1	1	2	2	2	4
Total “duplicated” individuals reporting	23	10	33	13	5	18	24	12	36

Note. Totals here are slightly different than the totals in Table 4 (summary table) because they do not include data from the central office of the Indiana community college system. The total number of “duplicated” individuals reporting is higher than the total number of respondents who mentioned any unintended impacts, as it includes individuals who reported more than one unintended impact.

Differences among universities. Several important findings emerge from a comparison of the reports of unintended impacts by expected capacity to respond to performance funding within the nine universities in our sample. First, the overall number

¹⁸ Similarly, an analysis of nine community colleges in Indiana, Ohio, and Tennessee found that interviewees at the low-capacity and high-capacity colleges more frequently reported obstacles to responding to the demands of the state performance funding programs than did those at medium-capacity community colleges (Pheatt et al., 2014).

of reports varies by type of institution, with the number of respondents mentioning unintended impacts rising as one moves from high-capacity to low-capacity universities. This is consistent with our hypothesis that higher capacity institutions have more resources to be able to effectively respond to performance funding demands and less need or temptation to engage in actions unintended by the designers of performance funding programs. However, there is an interesting anomaly. Respondents at high-capacity, less-research-intensive (High 2) universities are just as likely as those at low-capacity institutions to report the possibility or actuality of restriction of student admissions. One possible explanation is that high-capacity, less-research-intensive institutions tend to be less selective than research-intensive institutions but aspire to their status, and therefore might be quite tempted to emulate them in becoming more selective. Moreover, they have a greater capacity to pull this off than do low-capacity institutions. Another important distinction between the low-capacity and High 2 universities concerns their attitudes toward increasing selectivity and restricting admission practices. At the High 2 universities respondents generally viewed increasing selectivity as a positive step for the institution. However, interviewees at the low-capacity institutions in Ohio and Indiana expressed reservations about restricting admission and moving away from their history as mass-access, regional-serving universities.

When comparing these reports of unintended impacts, it is important to note that the Tennessee low-capacity university reported only one instance of restricted admission. This is surprising given the number of reports at the low-capacity universities in Indiana and Ohio. Table 13 summarizes the differences in reports of unintended impacts by organizational capacity of the four-year institutions.

Table 13
Reports of Unintended Impacts by University Capacity
(Number of individuals Reporting)

Impact	High Capacity 1 Univ.			High Capacity 2 Univ.			Low Capacity Univ.		
	Pot.	Obs.	Total	Pot.	Obs.	Total	Pot.	Obs.	Total
Restricted student admissions	4	7	11	2	14	16	12	5	17
Weakening of academic standards	4	2	6	5	3	8	7	6	13
Compliance costs	0	1	1	0	7	7	0	1	1
Low morale	0	1	1	0	2	2	0	1	1
Decrease in faculty voice	0	0	0	0	1	1	0	3	3
Lessening of institutional cooperation	0	1	1	0	5	5	0	1	1
Narrowing of institutional mission	0	1	1	1	1	2	1	0	1
Other unintended impacts	0	3	3	1	4	5	0	1	1
Total “duplicated” individuals reporting	8	16	24	9	37	46	20	18	38

Note. The total number of “duplicated” individuals reporting is higher than the total number of respondents who mentioned any unintended impacts, as it includes individuals who reported more than one unintended impact.

5.5 Differences by Position of Interviewees

In our analyses, we found differences in patterns of reporting unintended impacts by individuals’ position within the college (see Table 14). We classified our interviewees as belonging to one of four categories: senior-level administrators (presidents, provosts, and vice-president/vice-provosts), mid-level non-academic administrators (e.g., directors of admissions or institutional research), mid-level academic administrators (deans), and faculty (represented by chairs of department or programs and chairs of faculty senates or faculty unions).

Our analyses found some intriguing results. Overall, senior administrators comprised the largest number of those mentioning unintended impacts (40 percent or 85 out of 210), and nearly half of their mentions concerned restrictions to student admissions, that is, narrowing the open-door of community colleges or raising the admission requirements at four-year institutions.¹⁹ Many of the mechanisms by which the institutions discussed restricting admission (e.g., redirecting financial aid or changing

¹⁹ We should note that many state institutions are still heavily dependent on tuition dollars as a major source of funding. As such, senior administrators would also be concerned about maintaining enrollment and might be hesitant to overly restrict admission in order to improve on the performance funding formula. However, as we describe in the section on restricting admissions, at community colleges this would not typically take the form of denying enrollment; rather, schools might take steps to attract better-prepared students to their campus.

student recruitment) were school policy decisions likely made by senior administrators. A study of organizational learning in response to performance funding found that many of these colleges engage in top-down decision-making processes, with limited faculty involvement (Jones, Dougherty, Lahr, Natow, Pheatt, & Reddy, 2014). These findings could help explain why mid-level academic administrators and faculty less often discussed restrictions of student admissions.

Table 14
Reports of Unintended Impacts by Position within Institutions
(Number of Individuals Reporting)

Impact	Senior Administrators			Mid-level Non-academic Adminis.			Mid-level Academic Administrators			Faculty		
	Pot.	Obs.	Total	Pot.	Obs.	Total	Pot.	Obs.	Total	Pot.	Obs.	Total
Restriction of student admissions	22	8	30	4	5	9	8	1	9	7	13	20
Weakening of academic standards	14	6	20	4	1	5	10	5	15	13	6	19
Compliance costs	0	9	9	0	2	2	0	3	3	1	5	6
Lessening institutional cooperation	1	7	8	1	3	4	0	0	0	1	1	2
Low morale	0	4	4	0	2	2	0	1	1	0	4	4
Narrowing of institutional mission	2	1	3	0	0	0	2	1	3	1	1	2
Decrease in faculty voice	1	1	2	0	0	0	0	1	1	0	4	4
Other	4	5	9	1	2	3	1	3	4	0	4	4
Total “duplicated” individuals reporting	44	41	85	10	15	25	21	15	36	23	38	61

Note: The total number of “duplicated” individuals reporting is higher than the total number of respondents who mentioned any unintended impacts, as it includes individuals who reported more than one unintended impact.

With regard to the weakening of academic standards, of the 59 individuals who mentioned this unintended impact, the majority (58 percent) hold positions on the *academic* side of the college, stretching from senior-level academic administrators (e.g., provost or vice president for academic affairs) and mid-level academic administrators (deans) to faculty. This strength of concern on the academic side of colleges may be heartening to the state actors advocating for performance funding. Many state policy designers across our three states stated that they hoped that the faculty’s sense of professionalism would prevent weakening of academic standards from materializing

(Dougherty, Jones et al., 2014). The question remains, however, whether this preponderance of sentiment will be strong enough to hold the line.

Unfortunately, our interviews did not include adjunct faculty members, who teach a very large number of courses at both community colleges and four-year institutions. Because adjunct faculty members have little to no job security, it is possible that they feel more pressure—either overt or less forthright—to pass more students, either through inflating grades or reducing course requirements. Whether or not adjunct instructors are hired back the following semester is heavily dependent on course evaluations, and there is evidence that higher grades translate into more favorable course evaluations (Charfauros & Tierney, 1999; Gappa, Austin, & Trice, 2007).

6. Summary and Conclusion

Our analyses of nine community colleges and nine universities in three states reveal numerous reports of unintended impacts of performance funding. The most commonly mentioned unintended impacts are restrictions in admissions to college and weakening of academic standards, with unreimbursed costs of compliance with performance funding demands, and weakening of institutional cooperation coming in well after that. These negative unintended impacts are similar to those that have been reported by Dougherty & Reddy (2013) in their review of the literature on performance funding in higher education and by studies of performance management in government (Grizzle, 2002; Heinrich & Marschke, 2010; Moynihan, 2008; Rothstein, 2008).

Admissions are or could be restricted for less-prepared students who are less likely to finish college by such means as higher admission requirements, selective recruitment, and focusing institutional financial aid on better-prepared students. Colleges can restrict admission of less-prepared students by requiring higher standardized test scores and grade point averages or by decreasing the number of conditionally admitted students that are accepted. Selective recruitment can occur by deemphasizing outreach efforts to high schools with many students who are not well-prepared academically. Admissions can also be affected by shifting the focus of the college's own financial aid

funds from assisting needy students to attracting better prepared students through so-called merit aid.

Academic standards are or could be weakened by reducing academic demands in class (grade inflation) or reducing degree requirements. Calling attention to low course or degree completion rates can lead faculty to decrease their academic demands (and therefore to grade more easily) in order to produce higher rates of course completion. Degree requirements can be weakened by reducing the number of credits required to complete a degree and by recommending that students take easier courses.

We should underscore that many of our reports of unintended impacts involved *potential* impacts, that is, forecasts of what might happen, particularly if performance funding demands get more intense. These reports of potential impacts could be testimony more to our respondents' fears than to their understanding of processes actually unfolding. Still, it should be noted that half of the impacts mentioned were ones that we classified as *observed* in that they were reports not of possible impacts but of ones that respondents described as having occurred. Furthermore, we have to keep in mind that our interviews occurred before Tennessee and, especially, Ohio had fully phased in their performance funding programs. Hence, we have to wonder how many of the potential impacts mentioned might in time become actual. Finally, even if we still conclude that the potential unintended impacts will mostly remain only potential, they still testify to a widespread disquiet about performance funding among higher education administrators and faculty that needs to be sensitively addressed by the advocates of performance funding.

Within this general pattern we also found some important variations. We received many more reports of unintended impacts in Ohio than in Indiana and, especially, Tennessee. We believe that this is in part due to the fact that performance funding in Ohio was revised during our interviews there. Therefore, the program may have weighed heavily on the minds of faculty and administrators, contributing to the overall higher number of unintended impacts reported across the state.

We also found evidence that the later, more intense forms of performance funding in Tennessee and Ohio were associated with more reports of unintended outcomes than in the case of the earlier performance funding programs. Our comparison data are too rough

to allow definitive conclusions, but the data do raise some cause for concern, given the strong shift across the country toward basing very large portions of state funding for higher education on performance indicators.

We had few differences in reports from our community college versus our university respondents, except for the fact that the latter were substantially more likely to report actual or potential restrictions in admissions. This seems to testify to the continued impact of community college's traditional commitment to the ideal of the open-door college. Our data reveal little difference in the number of reports of unintended impacts from respondents at high- versus low-capacity community colleges. However, in the case of the universities, the number of respondents mentioning unintended impacts steadily rises as one moves from high-capacity to low-capacity institutions.

Finally, we found differences in patterns of reporting unintended impacts by individual's position within the college. Senior administrators contributed two-fifths of those mentioning unintended impacts, and nearly half of these mentions concerned restrictions to student admissions. Meanwhile, the majority of those mentioning weakening academic standards hold positions on the *academic* side of the college, stretching from academic administrators to faculty. Unfortunately, our interviews did not include adjunct faculty members, who may feel more pressure—either overt or less forthright—to pass more students in order to get good student evaluations and keep their jobs.

The policy implementation literature and principal-agent theory provide a lens through which we can understand how unintended outcomes can arise from performance funding policies. The top-down perspective in the policy implementation and organizational change literatures suggests that unintended impacts may arise from the inability of local implementers to meet the goals of higher-level policy designers. The challenge to meet the state goals for performance funding may be even more pronounced given the high incidence of obstacles, as reported by college administrators and faculty (Pheatt et al., 2014). The obstacles that respondents cite as interfering with their institution's ability to respond to performance funding include enrolling many students who are not well-prepared for college, lack of institutional capacity for institutional

research, and performance indicators that may not fit well with institutional missions, particularly for community college (Pheatt et al., 2014).

Facing these challenges, institutional actors may feel compelled to resort to actions that are potentially harmful but allow them to meet the demands placed on their organizations. If states demand higher levels of degree completion but disregard the need of colleges for more resources to cope with higher performance demands, then institutions may move toward becoming more restrictive in the admission of less prepared (and less advantaged) students who are less likely to graduate. Similarly, if state officials and college senior administrators demand higher course completion rates but disregard the need to provide faculty with the resources to increase rates legitimately, administrators and faculty may feel pushed to increase completion by reducing academic standards and giving out fewer failing grades.

Meanwhile, the bottom-up perspective and principal-agent theory illuminate how unintended outcomes may arise from the divergent orientations, beliefs, and interests of state officials and institutional actors. State officials may not want institutions to cut back on their enrollment of less-prepared students, but institutional officials—particularly at universities—may see that as one way to cope with state demands for better student outcomes but without weakening academic standards, a particular concern of institutional actors. Similarly, performance funding can lead to less inter-institutional cooperation, something unwelcome to state officials but consonant with institutional actors' focus on the interests of their own particular institutions.

We should take the reports coming from our interviewees seriously and ponder how to ensure that performance funding does not produce sizable and painful unintended outcomes. It is clear that the states have tried to anticipate and prevent these unintended impacts. However, more needs to be done. Policymakers must make sure that any positive effect of performance funding programs on student outcomes does not come with sizable unintended negative impacts. We offer policy recommendations to address several unintended impacts.

Because restricting admissions of less-prepared students remains a tempting approach for colleges that want to improve performance on state metrics, states need to take even more steps than they have to reduce this temptation. Certainly, the step taken

by Indiana, Ohio, and Tennessee to provide institutions with a premium for graduating students who are low-income and otherwise at risk of not graduating is important (Indiana Commission for Higher Education, 2011a; Ohio Board of Regents, 2011b, 2011c; Tennessee Higher Education Commission, 2012a). However, as noted, it is not clear if this premium is big enough to obviate the temptation. The premium might have to be even bigger. In addition, states should consider additional steps as well. One is avoiding simple comparisons between institutions that are quite different in their student composition and therefore in their ability to produce high retention and graduation rates. States can compare colleges to peer institutions with similar student compositions. Another option would be to compare a college's performance now to its performance in the past, as is done by the Student Achievement Initiative in Washington State (Bailey, 2012).

Policymakers also need to do much more to protect academic standards. States have a number of policy tools available to ensure that academic standards are not lowered. Faculty members can be surveyed anonymously to identify pressures to weaken academic standards. Statewide data on degree requirements and course grade distributions can be compared over time to determine if these have changed greatly since the adoption of performance funding. Moreover, assessments of general student learning also can be used—as in Tennessee—to indirectly assess if curricular requirements and grading standards are being weakened. However, any such assessments of student learning should be developed or chosen in cooperation with faculty, in order to ensure that the assessments are viewed as instructionally valid and institutionally legitimate. Otherwise, as Tennessee found, a state performance funding system may encounter widespread criticism directed at the exams used to assess general learning (Dougherty & Reddy, 2013).

In terms of the burden of compliance costs, states can help colleges by providing dedicated funding to underwrite the costs of enhanced information technology and institutional research capacity and of developing new academic and student-service programs. Also, states need to try to minimize their data demands on colleges, relying as much as possible on data that the colleges are already collecting for other purposes. State efforts to reduce compliance costs will likely work better if they are guided by rigorous

research on the costs to institutions of developing effective organizational learning capacity, of mounting initiatives to improve student outcomes, and of evaluating the results of those initiatives.

To counter tendencies toward a reduction of institutional cooperation, states may wish to temper the degree to which they measure institutional performance relative to other institutions. If institutions are compared primarily to their own past performance, this may make them more willing to help each other. In any case, states can still act to create institutional cooperation by creating venues and rewards for the sharing of best practices. Regular conferences on best practices and awards to institutions that disseminate particularly useful practices may help foster high levels of inter-institutional cooperation.

The sociological literature tells us that when institutions cannot use legitimate methods, they may resort to illegitimate means to realize socially expected goals (see Merton, 1968; Mica et al., 2012). In the case of performance funding, our findings show that the use of outcomes-based metrics can have unintended effects on how higher education institutions respond to performance demands. Specifically, our interviews highlight several worrying patterns, including at least the possibility of a reduction in academic standards and decrease in access, outcomes that run counter to the goals of higher education. However, the use of meaningful metrics need not come at the expense of quality and access; as more states turn to performance funding as a means of increasing the efficiency and effectiveness of public higher education institutions, we urge policymakers to consider the concerns of higher education personnel as described in this paper, and to take steps to guard against unintended outcomes.

References

- Alstadt, D., Fingerhut, E., & Kazis, R. (2012). *Tying funding to community college outcomes: Models, tools, and recommendations for states*. Boston, MA: Jobs for the Future.
- Anderson, J. (2011). *Public policymaking*. White Plains, NY: Longman.
- Bailey, T. (2009). Challenge and opportunity: Rethinking the role and function of developmental education in community college. *New Directions for Community Colleges*, 145, 11-30.
- Bailey, T. (2012). *Developing input adjusted metrics for community college performance*. Paper presented at the Context for Success Conference. Retrieved from HCM Strategists website:
http://www.hcmstrategists.com/contextforsuccess/papers/BAILEY_PAPER.pdf
- Baldrige, J. V., Curtis, D. V., Ecker, G. P., & Riley, G. L. (1978). Alternative models of governance in higher education. In G. L. Riley & J. V. Baldrige (Eds.), *Governing academic organizations* (pp. 2–25). Berkeley, CA: McCutchan.
- Banta, T. W. (Ed.). (1986). *Performance funding in higher education: A critical analysis of Tennessee's experience*. Boulder, CO: National Center for Higher Education Management Systems.
- Berry, F. S., & Berry, W. D. (2007). Innovation and diffusion models in policy research. In P. A. Sabatier (Ed.), *Theories of the policy process* (2nd ed., pp. 223–260). Boulder, CO: Westview Press.
- Bess, J. L., & Dee, J. R. (2008). *Understanding college and university organization*. Sterling, VA: Stylus.
- Bogue, E. G., & Johnson, B. D. (2010). Performance incentives and public college accountability in the United States: A quarter century policy audit. *Higher Education Management and Policy*, 22(2), 1–22.
- Brint, S., & Karabel, J. (1989). *The diverted dream*. New York: Oxford University Press.
- Burke, J. C. (Ed.). (2002). *Funding public colleges and universities: Popularity, problems, and prospects*. Albany, NY: SUNY Press.
- Burke, J. C. (Ed.). (2005). *Achieving accountability in higher education*. San Francisco, CA: Jossey-Bass.
- Cameron, K. S. (1984). Organizational adaptation and higher education. *Journal of Higher Education*, 55, 122–144.

- Charfauros, K. H., & Tierney, W. G. (1999). Part-time faculty in colleges and universities: trends and challenges in a turbulent environment. *Journal of Personnel Evaluation in Education*, 13(2), 141-151.
- Coburn, C., & Stein, M. K. (2006). Communities of practice theory and the role of teacher professional community in policy implementation. In M. Honig (Ed.), *New directions in education policy implementation* (pp. 25–46). Albany, NY: SUNY Press.
- Cohen, A. M., Brawer, F. B., Kisker, C. B. (2013). *The American community college* (6th ed.). San Francisco, CA: Jossey-Bass.
- Complete College America. (2013, October). *The game changers: Are states implementing the best reforms to get more college graduates?* Washington, DC: Author.
- Dougherty, K. J. (1994). *The contradictory college*. Albany, NY: State University of New York Press.
- Dougherty, K. J., Jones, S. M., Lahr, H., Natow, R., Pheatt, L., & Reddy, V. (2014). *Envisioning performance funding impacts: The espoused theories of action for state higher education performance funding in three states* (CCRC Working Paper No. 63). New York, NY: Columbia University, Teachers College, Community College Research Center. Retrieved from <http://ccrc.tc.columbia.edu/publications/envisioning-performance-funding-impacts.html>
- Dougherty, K. J., & Natow, R. S. (2010). *Continuity and change in long-lasting state performance funding systems for higher education: The cases of Tennessee and Florida*. (CCRC Working Paper No. 18). New York, NY: Columbia University, Teachers College, Community College Research Center. Retrieved from <http://ccrc.tc.columbia.edu>
- Dougherty, K. J., Natow, R. S., Hare, R. J., Jones, S., & Vega, B. E. (2013). Accounting for higher education accountability: Political origins of state performance funding for higher education. *Teachers College Record*, 115(1). Retrieved from <http://www.tcrecord.org>
- Dougherty, K. J., & Natow, R. S. (in press). *The politics of state performance funding for higher education: Origins, discontinuations, and transformation*. Baltimore, MD: Johns Hopkins University Press.

- Dougherty, K. J., Natow, R. S., Jones, S. M., Lahr, H., Pheatt, L., & Reddy, V. (2014). *The political origins of "Performance Funding 2.0" in Indiana, Ohio, and Tennessee: Theoretical perspectives and comparisons to performance funding 1.0* (CCRC Working Paper No. 68). New York, NY: Columbia University, Teachers College, Community College Research Center. Retrieved from <http://ccrc.tc.columbia.edu/publications/political-origins-performance-funding-2.html>
- Dougherty, K. J., & Reddy, V. (2013). *Performance funding for higher education: What are the mechanisms? What are the impacts?* [ASHE Higher Education Report]. San Francisco, CA: Jossey-Bass. Retrieved from <http://ccrc.tc.columbia.edu/publications/performance-funding-mechanisms-impacts.html>
- Dunlop-Loach, B. J. (2000). *Ohio's two-year campus response to performance funding: A grounded theory approach*. (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses: Full Text. (Publication No. AAT 9980368)
- Erikson, R. S., Wright, G. C., & McIver, J. P. (2005). *Public opinion in the states: A quarter century of change and stability*. New York, NY: Columbia University, Department of Government.
- Ferguson, M. (2012). Governors and the executive branch. In V. Gray, R. L. Hanson, & T. Kousser (Eds.), *Politics in the American states* (10th ed., pp. 208–250). Washington, DC: CQ Press.
- Fingerhut, E. (2012). Reflections on Ohio's new performance-based funding system. In D. Alstadt (Ed.), *Tying funding to community college outcomes: Models, tools, and recommendations for states* (pp. 8–15). Retrieved from Jobs for the Future website: <http://www.jff.org/sites/default/files/publications/TyingFunding2CommColleges-042312.pdf>
- Forsythe, D. W. (Ed.). (2001). *Quicker, better, cheaper? Managing performance in American government*. Albany, NY: Rockefeller Institute Press.
- Freeman, M. S. (2000). *The experience of performance funding on higher education at the campus level in the past 20 years* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (UMI No. AAT 9996350)
- Gappa, J. M., Austin, A. E., & Trice, A. G. (2007). *Rethinking faculty work*. San Francisco: Jossey-Bass.
- Gray, V., Hanson, R. L., & Kousser, T. (Eds.). (2012). *Politics in the American states: A comparative analysis* (10th ed.). Washington, DC: CQ Press.
- Grizzle, G. A. (2002). Performance measurement and dysfunction: The dark side of quantifying work. *Public Performance and Management Review*, 25(4).

- Hamm, K. E., & Moncrief, G. F. (2012). Legislative politics in the states. In V. Gray, R. L. Hanson, & T. Kousser (Eds.), *Politics in the American states* (10th ed., pp. 163–207). Washington, DC: CQ Press.
- Harnisch, T. L. (2011). *Performance-based funding: A re-emerging strategy in public higher education financing* [Higher Education Policy Brief]. Washington, DC: American Association of State Colleges and Universities.
- HCM Strategists. (2011). *Performance funding in Indiana: An analysis of lessons from the research and other states models*. Retrieved from HCM Strategists website: http://hcmstrategists.com/wp-content/themes/hcmstrategists/docs/Indiana_Report_12.pdf
- Heinrich, C. J., & Marschke, G. (2010). Incentives and their dynamics in public sector performance management systems. *Journal of Public Policy and Management*, 29(1), 183–208.
- Holbrook, T. M., & La Raja, R. J. (2012). Parties and elections. In V. Gray, R. L. Hanson, & T. Kousser (Eds.), *Politics in the American states* (10th ed., pp. 63–104). Washington, DC: CQ Press.
- Honig, M. (2006). Complexity and policy implementation. In M. Honig (Ed.), *New directions in education policy implementation* (pp. 1–23). Albany, NY: SUNY Press.
- Horn, L. (2010, December). *Tracking students to 200 percent of normal time: Effect on institutional graduation rates* (Issue Brief 2011-221). Washington, DC: U.S. Department of Education. Retrieved from: <http://nces.ed.gov/pubs2011/2011221.pdf>
- Indiana Commission for Higher Education. (2011a). *2011–13 CHE higher education budget recommendation* [PowerPoint presentation]. Indianapolis, IN: Author.
- Indiana Commission for Higher Education. (2013). *History of performance funding*. Indianapolis, IN: Author.
- Jenkins, D., & Rodriguez, O. (2013). Access and success with less: Improving productivity in broad-access postsecondary institutions. *Future of Children*, 23(1), 187-209.
- Jones, D. P. (2013). *Outcomes-based funding: The wave of implementation*. Washington, DC: Complete College America. Retrieved from <http://www.completecollege.org/pdfs/Outcomes-Based-Funding-Report-Final.pdf>
- Jones, S. M., Dougherty, K. J., Lahr, H., Natow, R. S., Pheatt, L., & Reddy, V. (2014). *Organizational learning for improved student outcomes in community colleges: Structures and processes*. New York, NY: Columbia University, Teachers College, Community College Research Center.

- Kezar, A. (2012). Organizational change in a global, postmodern world. In M. Bastedo (Ed.), *The organization of higher education: Managing colleges for a new era* (pp. 181–224). Baltimore, MD: Johns Hopkins University Press.
- Lane, J. E. (2007). Spider web of oversight: An analysis of external oversight of higher education. *Journal of Higher Education*, 78(6), 615–644.
- Lane, J. E., & Kivisto, J. A. (2008). Interests, information, and incentives in higher education: Principal-agent theory and its potential applications to the study of higher education governance. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (vol. 23, pp. 141–179). Dordrecht, The Netherlands: Springer.
- Loeb, S., & McEwan, P. (2006). An economic approach to education policy implementation. In M. Honig (Ed.), *New directions in education policy implementation* (pp. 169–186). Albany, NY: SUNY Press.
- Longanecker, D. (2012a). *Performance funding 2.0: From ideas to action*. Denver, CO: Western Interstate Compact on Higher Education. Retrieved from <http://www.wiche.edu/info/lac/2012/longanecker.pdf>
- Longanecker, D. (2012b). *State efforts to assure affordability in the new normal*. Testimony before the U. S. Senate Committee on Health, Education, Labor, and Pensions. Denver, CO: Western Interstate Compact on Higher Education. Retrieved from <http://www.wiche.edu/PPT/LonganeckerTestimonyBeforeCongress9-13-2012.pdf>
- Lumina Foundation. (2009). *College productivity: Four steps to finishing first*. Indianapolis, IN: Author. Retrieved from http://www.luminafoundation.org/publications/Four_Steps_to_Finishing_First_in_Higher_Education.pdf
- Matland, R. (1995). Synthesizing the implementation literature: The ambiguity-conflict model of implementation. *Journal of Public Administration Research and Theory*, 5(2), 145–174.
- Mazmanian, D., & Sabatier, P. (1989). *Implementation and public policy* (Rev. ed.). Latham, MD.: University Press of America.
- McGuinness, A. C. (2003). *Models of postsecondary education coordination and governance in the States*. Denver, CO: Education Commission of the States.
- McLaughlin, M. (2006). Implementation research in education. In M. Honig (Ed.), *New directions in education policy implementation* (pp. 209–228). Albany, NY: SUNY Press.

- McLendon, M. K., Hearn, J. C., & Deaton, R. (2006). Called to account: Analyzing the origins and spread of state performance-accountability policies for higher education. *Educational Evaluation and Policy Analysis*, 28(1), 1–24.
- Merton, R. K. (1968). *Social theory and social structure* (Revised and enlarged edition). New York, NY: Free Press.
- Mica, A., Peisert, A., & Winczorek, J. (Eds.). (2012). *Sociology and the unintended*. New York, NY: Peter Lang.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: A sourcebook of new methods* (2nd ed.). Thousand Oaks, CA: Sage.
- Miller, G. J. (2005). The political evolution of principal-agent models. *Annual Review of Political Science*, 8, 203–225.
- Moden, G. O., & Williford, A. M. (2002). Ohio's challenge: A clash of performance funding and base budgeting. In J. C. Burke (Ed.), *Funding public colleges and universities for performance: Popularity, problems, and prospects* (pp. 169–194). Albany, NY: Rockefeller Institute Press.
- Moe, T. M. (1984). The new economics of organization. *American Journal of Political Science*, 28(4), 739–777.
- Moynihan, D. P. (2008). *The dynamics of performance management: Constructing information and reform*. Washington, DC: Georgetown University Press.
- National Conference of State Legislatures. (2014). *Performance funding for higher education*. Denver, CO: Author. Retrieved from: <http://www.ncsl.org/issues-research/educ/performance-funding.aspx>
- Natow, R. S., Pheatt, L., Dougherty, K. J., Jones, S., Lahr, H., & Reddy, V. (2014). *Institutional changes to organizational policies, practices, and programs following the adoption of state-level performance funding policies* (CCRC Working Paper No. 76). New York, NY: Columbia University, Teachers College, Community College Research Center.
- Ohio Association of Community Colleges (2013). *SSI allocation recommendations*. Columbus, OH: Author.
- Ohio Board of Regents. (1996). *Higher Education Funding Commission: Final report and recommendations*. Columbus, OH: Author.
- Ohio Board of Regents. (2008). *An assessment of the four Challenge line items*. Columbus, OH: Author.

- Ohio Board of Regents. (2009a). *State share of instruction handbook: Providing the methodology for allocating state share of instruction funds for fiscal year 2010 and fiscal year 2011 for use by: Community and technical colleges*. Columbus, OH: Author.
- Ohio Board of Regents. (2009b). *Adult concurrent enrollment opportunities*. Columbus, OH: Author. Retrieved from https://www.ohiohighered.org/files/uploads/able/reference/policies/AdultConcurrentEnrollmentOpptsfinal_9-27-11.pdf
- Ohio Board of Regents. (2010, May 25). *Plan to integrate workforce development financing*. Columbus, OH: Author.
- Ohio Board of Regents. (2011a). *State share of instruction handbook: Providing the methodology for allocating state share of instruction funds for fiscal year 2012 and fiscal year 2013 for use by: Community and technical colleges*. Columbus, OH: Author. Retrieved from <http://www.ohiohighered.org/files/uploads/financial/ssi/HANDBOOK%20CC.pdf>
- Ohio Board of Regents. (2011b). *State share of instruction handbook: Providing the methodology for allocating state share of instruction funds for fiscal year 2012 and fiscal year 2013 for use by: University main campuses*. Columbus, OH: Author. Retrieved from <http://www.ohiohighered.org/files/uploads/financial/ssi/HANDBOOK%20UM.pdf>
- Ohio Board of Regents. (2011c). *State share of instruction handbook: Providing the methodology for allocating state share of instruction funds for fiscal year 2012 and fiscal year 2013 for use by: University regional campuses*. Columbus, OH: Author. Retrieved from <http://www.ohiohighered.org/files/uploads/financial/ssi/HANDBOOK%20UB.pdf>
- Ohio Board of Regents. (2012a). *Recommendations of the Ohio Higher Education Funding Commission*. Columbus, OH: Author.
- Ohio Board of Regents. (2012b). *Working together for student success: Lessons from Ohio's College-ABLE Partnership Project*. Columbus, OH: Author.
- Ohio Board of Regents. (2013a). *State share of instruction handbook: Providing the methodology for allocating state share of instruction funds for fiscal year 2012 and fiscal year 2014 for use by: Community and technical colleges*. Columbus, OH: Author. Retrieved from <https://www.ohiohighered.org/node/2519>
- Ohio Board of Regents. (2013b). *State share of instruction handbook: Providing the methodology for allocating state share of instruction funds for fiscal year 2012 and fiscal year 2014 for use by: University regional and main campuses*. Columbus, OH: Author. Retrieved from <https://www.ohiohighered.org/node/2519>

- O'Neal, L. M. (2007). *Performance funding in Ohio's four-year institutions of higher education: A case study*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (UMI No. AAT 3272928)
- Petrick, R. (2010, February 9). *Funding based on course completions: The Ohio model (v. 1.0)*. Presentation to the Texas Higher Education Coordinating Board, Austin, TX.
- Petrick, R. (2012). The Ohio experience with outcomes-based funding. In A. P. Kelly & M. Schneider (Eds.), *Getting to graduation* (pp. 269–292). Baltimore, MD: Johns Hopkins University Press.
- Pheatt, L., Lahr, H., Dougherty, K. J., Jones, S. M., Natow, R. S., & Reddy, V. (2014). *Obstacles to the effective implementation of performance funding in community colleges in three states* (CCRC Working Paper No. 77). New York, NY: Columbia University, Teachers College, Community College Research Center.
- Pressman, J., & Wildavsky, A. (1973). *Implementation*. Berkeley, CA: University of California Press.
- Radin, B. A. (2006). *Challenging the performance movement: Accountability, complexity, and democratic values*. Washington, DC: Georgetown University Press.
- Reindl, T., & Jones, D. P. (2012, December 5). *Raising the bar: Strategies for increasing postsecondary educational attainment with limited resources*. NGA National Summit on State Government Redesign. Washington, DC: National Governors Association. Retrieved from <http://www.nga.org/files/live/sites/NGA/files/pdf/1206RedesignJonesReindl.pdf>
- Reindl, T., & Reyna, R. (2011). *From information to action: Revamping higher education accountability systems*. Washington, DC: National Governors Association. Retrieved from <http://www.nga.org/files/live/sites/NGA/files/pdf/1107C2CACTIONGUIDE.pdf>
- Rothstein, R. (2008). *Holding accountability to account: How scholarship and experience in other fields inform exploration of performance incentives in education* (Working Paper 2008-04). Nashville, TN: Vanderbilt University. Retrieved from <http://eric.ed.gov/>
- Scheid, K., Glandon, A., & Moore, M. (2012). *Working together for student success: Lessons from Ohio's College-ABLE Partnership Project*. Columbus, OH: Ohio Board of Regents. Retrieved from <http://www.ohioable.org/files/DEI%20report.pdf>
- Shaw, T. A. (2000). *An evaluation of Tennessee's performance funding policy at Walters State Community College*. (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. AAT 9996386)

- Simsek, H., & Louis, K. S. (1994). Organizational change as paradigm shift: Analysis of the change process in a large public university. *Journal of Higher Education*, 65(6), 670–695.
- Smith, K. B., & Larimer, C. W. (2009). *The public policy primer*. Boulder, CO: Westview Press.
- Spillane, J., Reiser, B. J., & Gomez, L. M. (2006). Policy implementation and cognition. In M. Honig (Ed.), *New directions in education policy implementation* (pp. 47–63). Albany, NY: SUNY Press.
- Sunderman, G. L., & Kim, J. S. (2007). The expansion of federal power and the politics of implementing the No Child Left Behind Act. *Teachers College Record*, 109(5), 1057–1085.
- Tennessee Higher Education Commission [THEC]. (2011). *Outcomes based formula explanation*. Nashville, TN: Author. Retrieved from http://www.state.tn.us/thec/complete_college_tn/ccta_files/outcomes
- Tennessee Higher Education Commission [THEC]. (2012a). *2012-13 outcomes formula model*. Nashville, TN: Author. Retrieved from http://www.tn.gov/thec/Divisions/Fiscal/funding_formula/dynamic_model/2012-13%20Outcomes%20Formula%20email.xls
- Tennessee Higher Education Commission [THEC]. (2012b). *Outcomes based formula model data definitions* (Rev. 6-27-2012). Nashville, TN: Author. Retrieved from http://www.state.tn.us/thec/Divisions/Fiscal/funding_formula/Detailed%20Outcomes%20Formula%20Definitions%206-27-12.pdf
- Tennessee Higher Education Commission [THEC]. (2014). *2014-2015 Outcomes formula spreadsheet*. Nashville, TN: Author. Retrieved from http://www.state.tn.us/thec/Divisions/Fiscal/funding_formula/dynamic_model/2014-15%20Outcomes%20Formula%20-%20EMAIL.xlsx
- U.S. Bureau of the Census. (2012). *Statistical abstract of the United States, 2012*. Washington, DC: Government Printing Office.
- Zumeta, W. (2001). Public policy and accountability in higher education: Lessons from the past and present for the new millennium. In D. E. Heller (Ed.), *The states and public higher education policy: Affordability, access, and accountability* (pp. 155–197). Baltimore, MD: Johns Hopkins University Press.

Appendix A

Characteristics of the Three States Studied

Table A.1
The States Studied: Program, Political, and Socioeconomic Characteristics

Characteristic	Indiana	Ohio	Tennessee
1. Year PF adopted			
• PF 1.0 program	2007	1995	1979
• PF 2.0 program	2009	2009	2010
2. Public higher education sectors covered by PF 2.0 program	2 and 4 years	2 and 4 years	2 and 4 years
3. PF 2.0 (outcome indicators) share of state public higher education funding	6% of state higher education funding in FY 2013-2014.	80% of university funding and 50% of community college funding in FY 2013-2014	About 85–90% of state appropriations for higher education, with the rest accounted for by utilities, major equipment, etc.
4. State higher education governance structure at the time of enactment of PF 2.0 program			
• State coordinating board for all public higher education in the state	X	X	X
• Public universities: Governing boards for <i>each</i> public university or university system in state	X	X	X (U of Tennessee 5 campuses)
• Public 2-year colleges: Governing board for <i>all</i> public 2-year colleges	X		X (all public 2-year colleges & non-UT universities)
• Public 2-year colleges: Governing board for <i>each</i> public 2-year college		X	
5. Population (2010)	6,484,000	11,537,000	6,346,000
6. Personal income per capita (2010)	\$34,943	\$36,395	\$35,307
7. Persons 25 years and over with bachelor's degree or more (2009) ^a	22.5%	24.1%	23.0%

Sources:

- 1, 2. Dougherty & Reddy (2013).
3. Authors' interviews.
4. McGuinness (2003) and authors' interviews.
5. U.S. Bureau of the Census (2012).
6. U.S. Bureau of the Census (2012). Figures are in current dollars. U.S. average is \$40,584.
7. U.S. Bureau of the Census (2012). Average for the United States is 27.9 percent.

Appendix B

Performance Funding Programs in Indiana, Ohio, and Tennessee

The performance funding (PF) programs in Indiana, Ohio, and Tennessee all involve embedding performance funding indicators in the base state funding for higher education. However, the three states differ considerably in the amount of state funding based on performance indicators and in the precise way they embed the indicators. Tennessee and Ohio use a formula to determine state funding for higher education operations, with about four fifths of the funding of those operating appropriations based on performance indicators. In Indiana, performance funding involves a much smaller amount (6 percent of state operational funding), and that funding involves both bonus funding and withheld funding that is paid back based on performance.

Indiana

Indiana first adopted performance funding in 2007 in the form of a bonus on top of the base state funding for higher education (HCM Strategists, 2011). However, this program was quickly replaced in 2009 by a new program in which 5 percent of each institution's base allocation would be withheld and then all or some of it would be awarded based on performance on certain metrics. In the 2011–2013 biennium, this 5 percent withholding amounted to roughly \$61 million dollars (Indiana Commission for Higher Education, 2013, p. 8). In 2013, the state general assembly decided to hold PF at 6 percent for both fiscal years 2014 and 2015 but changed the allocation method. The 6 percent devoted to performance funding was split between 3.8 percent in “new money” and 2.2 percent from withholding funds from institutional appropriations. The portion withheld is put into a funding pool and institutions can then earn back some or all of that withheld funding depending on how well they perform during the year and how well other institutions perform (Authors' IN interviews).

The PF indicators are designed to measure change over time, based on comparing two- three-year averages of institutional performance. For each metric, the PF formula takes average performance across three years and compares it to the three-year average for the preceding three years (e.g., for determining funding withheld in 2012, average number of completions each year between 2009–2011 compared to average number of

degree completions each year between 2006–2008). If an institution’s performance does not improve, the funding formula simply counts their improvement as “zero.” An institution’s allocation through the PF formula is based on how well its performance compares with all other comparable institutions. For the 2013–2015 biennium, it is possible for the overall effect of PF to be a loss if an institution (1) wins only a small portion of the new money bonus and (2) is not able to earn back all of the 2.2 percent that is withheld to help fund the PF formula. Moreover, an institution is not funded for its performance if its overall rate of completion drops between the two three-year averages (even if the overall number of completions increased). In total, a school’s eventual state appropriation includes base funding (which can fluctuate year to year based on enrollment), new money that is earned on the basis of the performance indicators, and the portion of the funds withheld the year before that the institution was able to win back based on its performance in the previous year.

The PF indicators Indiana has used have changed each biennium. However, certain indicators have persisted (Indiana Commission for Higher Education, 2013):

- Change in number of degrees awarded (2009–2011, 2011–2013, 2013–2015 biennia).
- Change in number (or rate) of resident, undergraduate, first-time, full-time students graduating on-time (2009–2011, 2011–2013, 2013–2015).
- Change in degree completion by low-income students (2009–2011, 2011–2013, 2013–2015).
- Change in number of successfully completed credit hours (2009–2011, 2011–2013).

Over the years, these four indicators have accounted for 70 percent to 84 percent of the performance funding allocation. The Commission added two new metrics added in the 2013–2015 biennium: institutional defined productivity metric and high-impact degree completion.

Ohio

Ohio established two performance funding programs in the 1990s and then replaced them with a new program established in 2009.

In 1995, Ohio adopted the Performance Challenge. It rewarded colleges on the basis of nine different “service expectations” but only one focused on outcomes versus process variables, such as amount of vocational education programming.²⁰ This single outcome-oriented service expectation rewarded community colleges, technical colleges, and branch campuses based on the number of students who transferred or relocated after completing at least 15 quarter hours or 10 semester hours of coursework and on the number of transfer or relocated students who completed baccalaureate degrees (Dunlop-Loach, 2000, Appendix B; Ohio Board of Regents, 1996). The Performance Challenge was abandoned in 2000 (Moden & Williford, 2002, pp. 174, 176).

In 1997, Ohio established the Success Challenge via a funding proviso in the budget bill for the 1997-1999 biennium (HB 215, passed in 1997). Until it ended in fiscal year 2010, the Success Challenge provided a bonus to universities based on the number of students who earned a baccalaureate degree. Two thirds was based on numbers of in-state at-risk students graduating in any year; one third was based on numbers of any in-state students who earned a baccalaureate degree “in a timely manner” (generally in four years, but extended for majors that required more than four years). The metric was the number who graduated, and not the graduation rate (percentage graduating), within four years (Moden & Williford, 2002, pp. 173–178). The Success Challenge began small, with \$2 million in fiscal year 1997-98, but funding rose rapidly in subsequent years, peaking at \$53.7 million in fiscal year 2008-2009 (Petrick, 2012, p 277). The money was unrestricted: it could be included in the institutions’ overall budget and used in any way the institution so elected (O’Neal, 2007, pp. 49, 179–189). Success Challenge appropriations ceased after fiscal year 2009.

²⁰ The other eight service expectations under the Performance Challenge involved additional state support for providing broad job training, offering effective developmental education, providing noncredit continuing education opportunities, fostering business partnerships, developing high school linkages, providing accessible learning environment and effective instructional delivery strategies, keeping tuition and fees low, and creating high community involvement (Burke & Serban, 1998, pp. 40–41; Dunlop-Loach, 2000, Appendix B; Moden & Williford, 2002, pp. 173–177).

In 2009, Ohio passed a budget bill embedding performance indicators in the state's formula for funding higher education operations (the State Share of Instruction). For the public universities, 80 percent of state operational funding would now be based on course and degree completions, with the remainder being set aside for doctoral and medical education. The degree completion share rose from 15 percent in fiscal year 2011-12 to 50 percent in fiscal year 2013-14 (Alstadt, Fingerhut, & Kazis, 2012; Ohio Board of Regents, 2011b, 2012, 2013b). Meanwhile, the proportion based on course completions dropped from 65 percent in fiscal year 2012 to 30 percent in fiscal year 2014. (The remaining 20 percent represents the set-aside for doctoral and medical education.) For the 24 regional campuses of the state universities, funding initially was based solely on course completions. They will become subject to the same formula as the university main campuses in fiscal year 2015 (Ohio Board of Regents, 2011c, 2013b). The course and degree completions for the university main and regional campuses are weighted by the cost of programs and whether students are at risk, defined initially in terms of being eligible for state need-based aid (Ohio Board of Regents, 2011c, 2013b; Petrick, 2010, 2012).

For community colleges, the proportion of the state formula allocated on the basis of performance indicators started at 5 percent in fiscal year 2011, jumped to 50 percent in fiscal year 2014, and will rise to 100 percent in fiscal year 2015 (Ohio Association of Community Colleges, 2013; Ohio Board of Regents, 2011a, 2012, 2013a). For fiscal year 2011 through 2013, the performance indicators took the form of "success points": (1) number of students completing developmental English and math and subsequently enrolling in a college-level course in those subjects; (2) number attaining certain credit thresholds in a given year; (3) number who earn at least an associate degree, from that institution, in a given year; and (4) number who transfer (that is, enroll for the first time at university having completed at least certain number of semester credit hours of college level course work at a community college). Degree completions are weighted by program costs. There has not been any weighting for whether students are at risk. In fiscal year 2014, course completions drive 25 percent of the state funding formula for community colleges, along with 25 percent for the success points, and the enrollment-based share has dropped to 50 percent (Ohio Board of Regents, 2013a). For FY2015, a Community

College Funding Consultation led by the Ohio Association of Community Colleges has recommended that success points continue to account for 25 percent, course completions rise to 50 percent, and degree completions (previously part of the success points) account for 25 percent. Enrollments would cease to be part of the formula (Ohio Association of Community Colleges, 2013).

The universities and community colleges have been cushioned against losses by a “stop-loss” provision ensuring they get at least a certain proportion of their state funding. For fiscal year 2010 the stop loss was 99 percent for the universities (the community colleges were still not subject to the new formula). For fiscal year 2011, the stop loss was 98 percent for universities and for community colleges. For fiscal year 2012, the figures were 82.5 percent for universities and 88 percent for community colleges (these figures reflected the end of federal stimulus funding). For fiscal year 2013, the stop loss figure was 96 percent for both kinds of institutions (Ohio Board of Regents, 2009a, p. 6, 2011a, p. 6; 2011b, p. 11). The stop-loss was ended for universities in fiscal year 2014 and apparently will be ended for community colleges in fiscal year 2015 (Ohio Board of Regents, 2013a, 2013b; Ohio Association of Community Colleges, 2013). However, the state formula for universities has retained something called a “bridge” allocation, which is very similar to a stop loss, for fiscal year 2014.

Tennessee

Tennessee has established two performance funding programs: a PF 1.0 bonus program that was adopted in 1979 and still operates today, and a PF 2.0 outcomes-based formula funding program that was adopted in 2010 (Dougherty & Reddy, 2013). The older program is intended to serve as a “quality assurance” bulwark for the new program (Authors’ TN interviews).

The Tennessee Higher Education Commission adopted performance funding for the state’s public two- and four-year higher education institutions in 1979 (Dougherty, Natow, Hare, Jones, & Vega, 2013; Dougherty & Natow, in press). Funds were first allocated to institutions using performance funding in fiscal year 1980–81. Under that system, higher education institutions could earn a bonus of 2 percent over and above their annual state appropriations for achieving certain goals based on five performance

indicators: program accreditation (proportion of eligible programs in the institution's inventory that are accredited), student major field performance (student performance as assessed by in major fields examinations), student general education performance, evaluation of instructional programs (based on surveys of current students, recent alumni, or employers), and evaluation of academic programs (by peer review teams of scholars from institutions outside the state and/or practicing professionals in a field) (Banta, 1986, pp. 123–128; Bogue & Johnson, 2010). Tennessee added eight performance funding indicators and dropped four between 1979-1980 and 2009-2010. In addition, the percentage of additional funding that institutions could earn based on performance rose from 2 percent to 5.45 percent of the base state appropriation (Bogue & Johnson, 2010; Dougherty & Natow, in press).

In 2010, the Tennessee legislature passed the Complete College Tennessee Act, part of which provided for a dramatic redesign of the basic higher education funding formula in which performance indicators were now embedded in that formula (Dougherty, Natow, Jones, Lahr, Pheatt, & Reddy, 2014; Dougherty & Natow, in press). During the first year of the new system's operation in fiscal year 2011–12, university funding was based on the following indicators: numbers of students reaching 24, 48, and 72 hours of credit, research and service expenditures,; number of degrees awarded (bachelor's and associate, master's and education specialist, and doctoral and law degrees), number of degrees per full-time equivalent (FTE) student, number of transfers out with at least 12 credit hours; and six-year graduation rate (Tennessee Higher Education Commission, THEC, 2011, p. 1). Community colleges were funded based on somewhat different criteria: number of students reaching 12, 24, and 36 hours of credit, workforce training contact hours, number of dual enrollment students, number of associate degrees and certificates granted, number of awards per full-time-equivalent enrollments, job placements, number of transfers out with 12 credit hours, and remedial and developmental success. In addition, an institution is eligible for a 40 percent premium for credit and degree completion for low-income and adult students. To protect institutions, the new program has been gradually phased in over a three-year period, with the phase-in stopping at the end of FY 2014 (Dougherty & Natow, 2010; Dougherty & Natow, in press; Tennessee Higher Education Commission, 2011, 2012a, 2012b).

The Tennessee formula and allocation process is quite complex. Each indicator is weighted, but each institution has different weights assigned to each indicator by THEC based on a variety of factors including, but not limited to, the institution's preferences and Carnegie classification. Three-year rolling averages are first scaled, then multiplied by institution-specific weights, and finally totaled for institutional weighted outcomes totals. These totals include extra weighting for adult learners and low-income students on indicators for credit accumulation and degree production (THEC, 2011, 2012a, 2012b). The institution's total weighted outcomes value is then multiplied by the average faculty salary, as determined by Carnegie classification and Southern Regional Education Board. Fixed costs and equipment costs are added to create a formula subtotal. At this point, the institution's performance funding allocation is calculated by multiplying the institution's percentage on the program indicators by 5.45 percent of the institution's subtotal. This is added to the subtotal to give the institution's total. The formula then assumes a 55/45 subsidy/fee policy, so the total is then multiplied by 55 percent, out-of-state tuition is deducted, and there is finally a budget recommendation by the Tennessee Higher Education Commission. For the 2014–2015 appropriation, the legislature funded 62.8 percent of THEC's recommendation (THEC, 2014). It is not expected that the program will produce big year to year variations in funding for two reasons: the metrics are not ones that should change much from year to year; moreover, they are calculated in terms of three-year moving averages (Authors' TN interviews; THEC, 2011, 2012a, 2012b).