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The Growing Gap: Public Higher Education's Declining Affordability for Low- Income Students

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Introduction

Affordability looms large as the hurdle most likely to turn away those who could benefit most from pursuing and obtaining a postsecondary degree or credential. Individuals and society at large benefit when educational attainment rises. Professional advancement and financial and intellectual enrichment benefit individuals, while communities, states, and our nation benefit in turn from increased tax revenues, consumer spending, civic engagement, improved health outcomes, and decreased crime. To reap these benefits, higher education must be accessible to those seeking to pursue it, including those traditionally underrepresented in postsecondary education, like low-income students, first-generation students, and students of color.

Last year, the National College Access Network started with a simple idea from our members, as we so often do. We heard clearly that college is not affordable for the students served by members in the college access and success field, even if these students do everything right. In our 2018 report, “Shutting Low-Income Students Out of Public Four-Year Higher Education,” we endeavored to quantify that lack of affordability.¹ We proposed a model in which we would assess four-year institutions’ affordability for the average Pell Grant recipient who receives the average financial aid package and works part time. Could such a student cover a year’s costs?

What we found startled us and confirmed our members’ feedback. Fully 75% of residential four-year institutions – including 90% of flagships – failed our affordability test. Just 139 institutions out of 551 in our sample met our affordability benchmark. Taking the contribution of full-time summer wages out of the equation, the picture was even grimmer: Just 3% of four-year public institutions were affordable for those students.



“OUR FINDINGS POINT TO RISING AFFORDABILITY GAPS AND DECLINING NUMBERS OF AFFORDABLE FOUR-YEAR INSTITUTIONS.”

In this year’s report, we return to the question of affordability but zoom out to provide a more longitudinal perspective while also considering two-year public institutions. Our findings point to rising affordability gaps and declining numbers of affordable four-year institutions. The data also paint a picture of a nationwide community college ecosystem in which only about half of institutions are affordable even under exceedingly generous parameters.

¹ Warick, C., DeBaun, B., and Ciaramella, A. (2018). Shutting Low-Income Students Out of Public Four-Year Higher Education. National College Access Network. <http://www.collegeaccess.org/images/documents/ShuttingLowIncomeStudentsOutOfPublic.pdf>

We intend our analysis to raise a red flag for decision-makers. Policymakers should consider solutions to address the public policy that is failing both institutions and students in light of the personal and public good represented by higher education. Institutional leaders should consider if they are doing everything they can to serve first their state’s low-income students, even within tight budgetary parameters. With the reauthorization of the Higher Education Act on the horizon, Congress ignores the question of affordability at the peril of students, schools, and society at large.

Approach and Model

There are many ways to evaluate institutional affordability. Total price, student living situations, financial aid packages, and contributing wages represent moving parts that can change affordability for any given student. Making macro-level assessments to inform policy and the public requires us to be concrete about our affordability model. NCAN proposes that a given two- or four-year public institution’s total price plus \$300 for emergency expenses should not exceed the combined total of that institution’s average federal, state, and institutional grant award; average federal loan disbursement; the expected family contribution of the average Pell Grant recipient; an average Federal Work-Study award; and the contribution of summer wages. Put more clearly, an institution is affordable if:

$$\text{Total Price} + \$300 \leq \text{Grant Aid} + \text{Loans} + \text{Federal Work-Study} + \text{Expected Family Contribution} + \text{Summer Wages}$$

When an institution’s total price plus \$300 exceeds the sum of financial aid, family contributions, and student wages, we refer to the difference between these two amounts as an affordability gap.

We draw these data from a number of sources. The Integrated Postsecondary Education Data System (IPEDS) provides the total price for in-state students, average amount of federal, state, and institutional grants, and average disbursement of federal loans. The Department of Education provides longitudinal data on campus-based programs, including Federal Work-Study (FWS), as well as Pell Grant awards for calculating expected family contribution (EFC) of the average grant recipient. The Department of Labor provides longitudinal data on minimum wage by state. We combine these data together for academic years 2012-13 through 2016-17 for all of the two- and four-year public institutions included in IPEDS, greater than 99% of which participate in Title IV financial aid programs.

When examining four-year public institutions’ total price, we use data for in-state students living on campus. In our previous effort in this area, “Shutting Low-Income Students Out of Public Four-Year Higher Education,” we examined in-state students living on campus or off-campus not with family. We did not observe meaningful differences in the affordability outcomes among these two groups, and we restrict this

paper's analysis only to on-campus students. We decided to do this for three reasons: 1) Ease of analysis and presentation of an already complicated topic, 2) students matriculating directly to college from high school are those most often served by NCAN members, and 3) not every student can commute to a four-year campus, and so the cost of living on campus needs to be part of the affordability discussion. For two-year public institutions, we use data for in-state students living off campus not with family. Students living off campus with family can experience significant savings by not paying for room and board, but this is not an option available to all students. Also notable is that many students who live at home are expected to contribute to the family budget, which is not credited in the analysis of their financial need.

Wherever possible, we aim to have our model err on the side of affordability. Some examples of assumptions that may result in our model overstating affordability:

- It includes gross wages derived from summer work. Gross wages are likely an overestimate of the amount students can contribute to their college education because they will pay taxes and are likely to have other life expenses over the summer.
- It assumes students have the funds to pay their EFC and then put their wages toward the financial aid package gap beyond what the Free Application for Federal Student Aid (FAFSA) expects students or their families to pay.
- It assumes all students receive FWS, even though the program is neither large enough to fund all low-income students nor distributed evenly. For example, in the 2016-17 award year, public two-year institutions received 16% of FWS allocations but enrolled 30% of students. Meanwhile, public four-year institutions enrolled 43% of students but received 38% of FWS allocations.² However, work-study does serve as a proxy for reasonable part-time work while enrolled full time in school.

For more information on approach, methodology, and data selection decisions, see Appendix A.

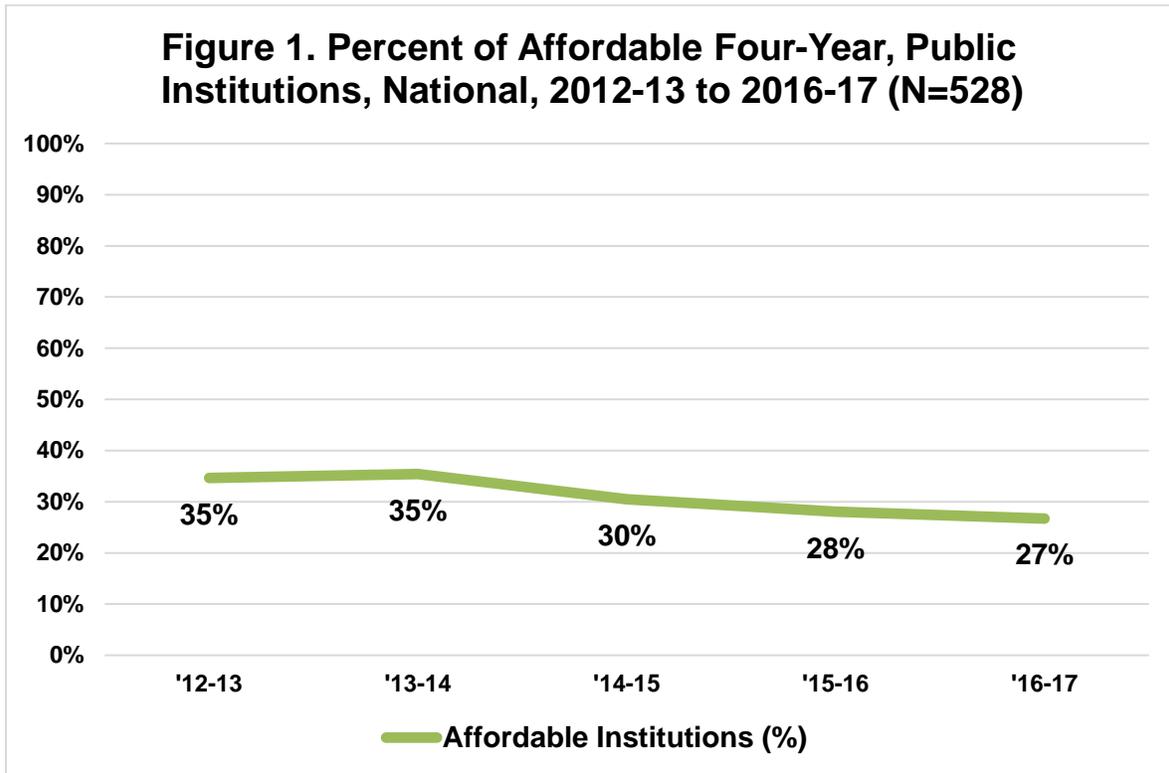
Findings

Four-Year Public Institutions

In 2018's "Shutting Low-Income Students Out of Public Four-Year Higher Education," we examined the landscape of affordability for four-year public institutions within one academic year. In this report, we zoom out for a longitudinal look. Since 2012-13, the highest percentage of affordable institutions was 35% among the 528 in our sample with

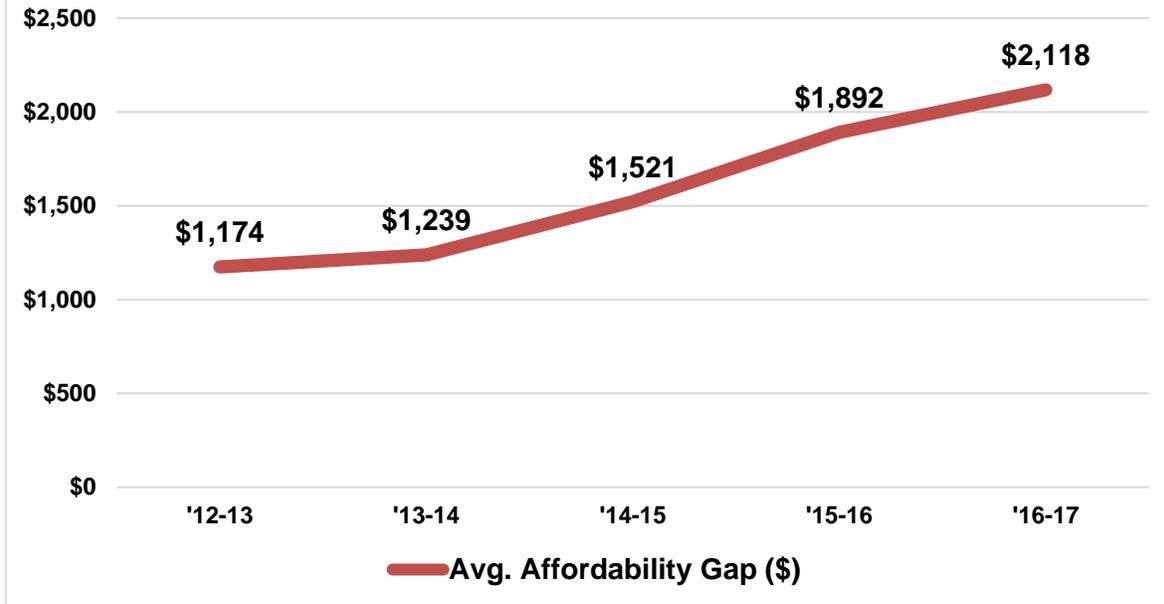
² NCAN calculations based on the federal campus-based programs annual data book. <https://www2.ed.gov/finaid/prof/resources/data/cb-data.html>

complete data. That figure declined to 27% in 2016-17, the academic year for which we have most recent data. At the same time, the average affordability gap for students has grown over this same period from a national average of \$1,174 to a national average of \$2,118, even after considering grant aid, loans, Federal Work-Study, expected family contribution, and contributing summer wages.³ Figures 1 and 2 show the direction of these two trends. The impact on the students our model focuses on is clear: Affordability is decreasing.



³ These two trends, an increasing affordability gap and a decreasing percentage of affordable institutions, hold whether we examine affordability according to which data are missing within each academic year and whether or not we trim outliers (either very affordable or very unaffordable institutions according to our model) from the data set. Those tables are available upon request.

Figure 2. Average Affordability Gap at Four-Year, Public Institutions, National, 2012-13 to 2016-17 (N=528)



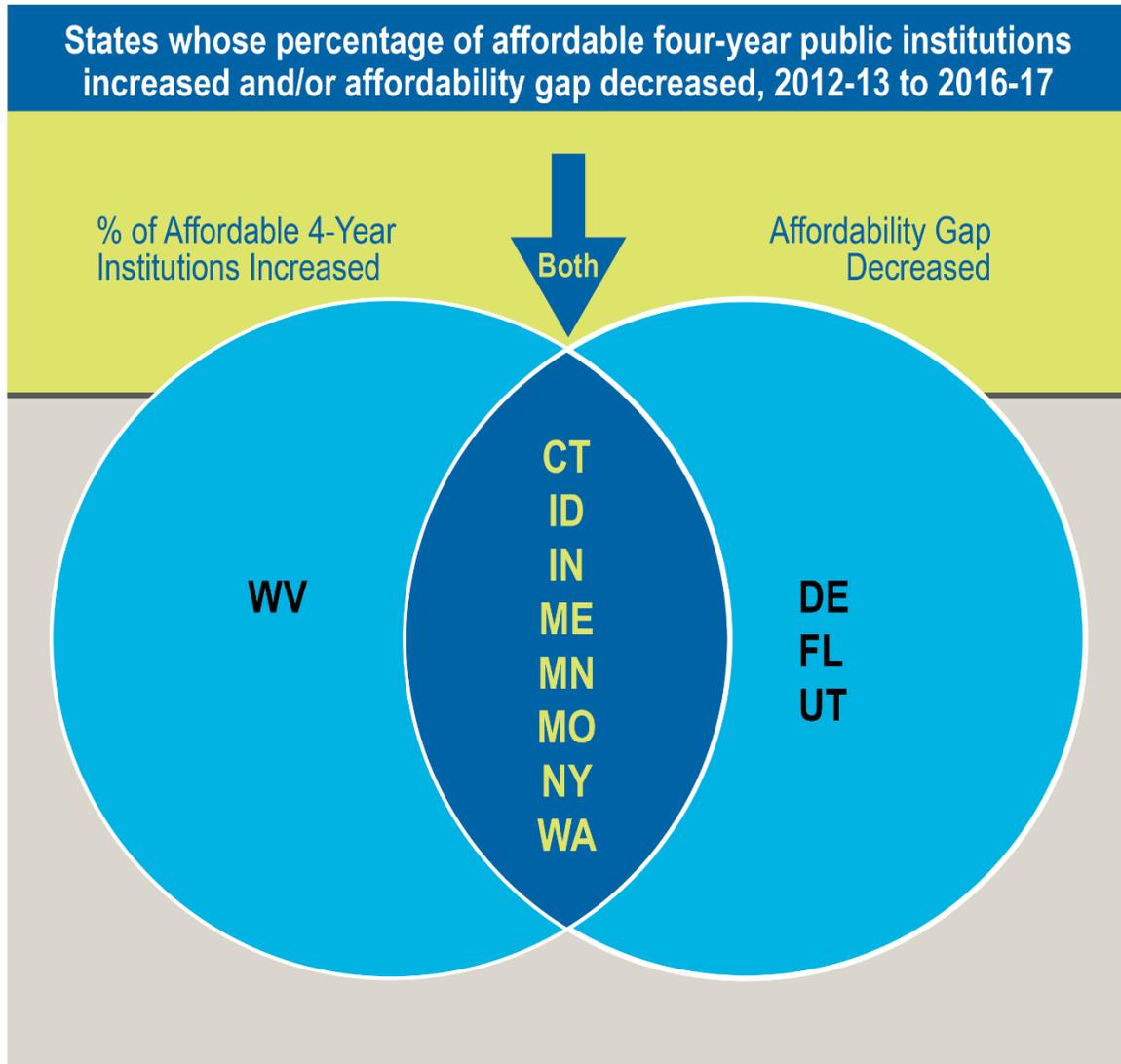
Examining the data at the state level, we can consider either counts of affordable institutions or percentages of affordable institutions. Both have their drawbacks. Large states may inevitably have higher counts of affordable institutions because they have more institutions overall. Small states can have higher percentages of affordable institutions by virtue of each affordable institution ticking the state's percentage up more than in larger states. We consider both angles.

By count of affordable institutions, 36 states had five or fewer affordable four-year public institutions from 2012-13 to 2016-17, according to our model. Eight of these, Arizona, Massachusetts, New Hampshire, New Jersey, Rhode Island, South Dakota, Vermont, and Wisconsin, had no affordable four-year public institutions in any of the five academic years we examined. California, New York, Pennsylvania, and Texas had the highest counts of affordable institutions, largely due to the number of campuses in these more sizable states.

Twenty-three states saw their percentage of affordable institutions decrease between 2012-13 and 2016-17, and in 40 states the affordability gap increased over the same time period. Among these 40 states, the average increase was \$1,385. These states became relatively less affordable according to our model. By 2016-17, the average affordability gap among these 40 states had grown to \$2,243.

By contrast, nine states' percentage of affordable institutions increased between 2012-13 and 2016-17, and 11 states' average affordability gaps decreased over the same period by an average of \$528. These states became relatively more affordable according to our model (see Figure 3), but were still not absolutely affordable for students. Consider that the average affordability gap among these states in 2016-17 was still \$1,039. Declining affordability gaps are positive, but students can still be left in a lurch to pay for school.

Figure 3.



These assessments paint with a broad brush, admittedly, because intrastate contexts can vary tremendously (for example, within the five-year period for a given state, the percentage of affordable institutions or the size and direction of the affordability gaps may not have trended consistently in the same direction, though in many cases they

did). However, considering the percentage of states' affordable institutions and the size of states' affordability gaps at the five-year period's start and end points offers big pictures of the direction of affordability that coincide with our national findings.

Two-Year Public Institutions

Two-year public institutions, more commonly referred to as community colleges, are a significant entry point into the postsecondary system. Approximately one-third of students who started their postsecondary careers in fall 2011 did so at a community college, and in fall 2016, about 30% of all postsecondary students were enrolled in a community college.⁴ These institutions' open access mission lets students build or retool skill sets, work toward an associate degree, and in some cases transfer for a bachelor's and beyond. In most cases, they have lower tuition than four-year public institutions. However, cheaper does not mean more affordable in absolute terms, and our analysis shows that just roughly half of community colleges are affordable according to our proposed model.

Our affordability formula is the same for community colleges as it is for four-year public institutions, except for one change to total price. Whereas with four-year public institutions we considered total price for in-state students living on campus, for two-year public institutions we consider total price for in-state students living off campus not with family. In 2012-13, 54% of the 605 community colleges for which we have complete data were affordable according to our model. Figures 4 and 5 show that since then and through 2016-17, that percentage has decreased to 48 percent. At the same time, the average affordability gap has risen from \$87 to \$453.



“JUST ROUGHLY HALF OF
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PROPOSED MODEL.”

⁴ National Student Clearinghouse Research Center. (2016). Current Term Enrollment – Fall 2016. Retrieved from: <https://nscresearchcenter.org/currenttermenrollmentestimate-fall2016/>

Figure 4. Percent of Affordable Two-Year Public Institutions, National, 2012-13 to 2016-17 (N=605)

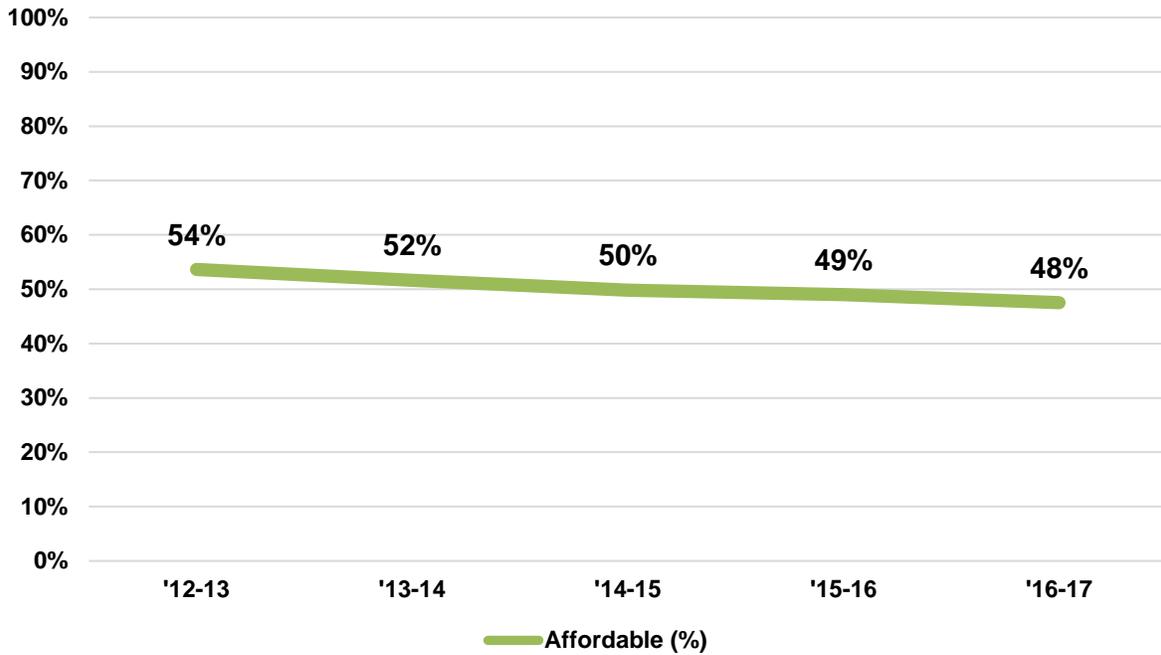
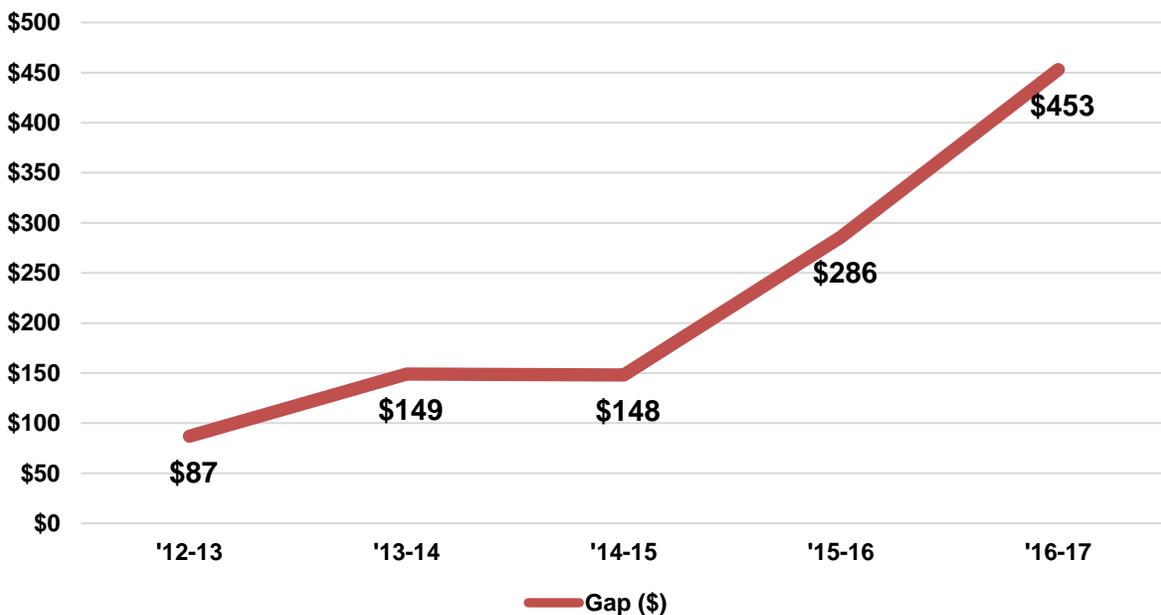


Figure 5. Average Affordability Gap at Two-Year Public Institutions, National, 2012-13 to 2016-17 (N=605)



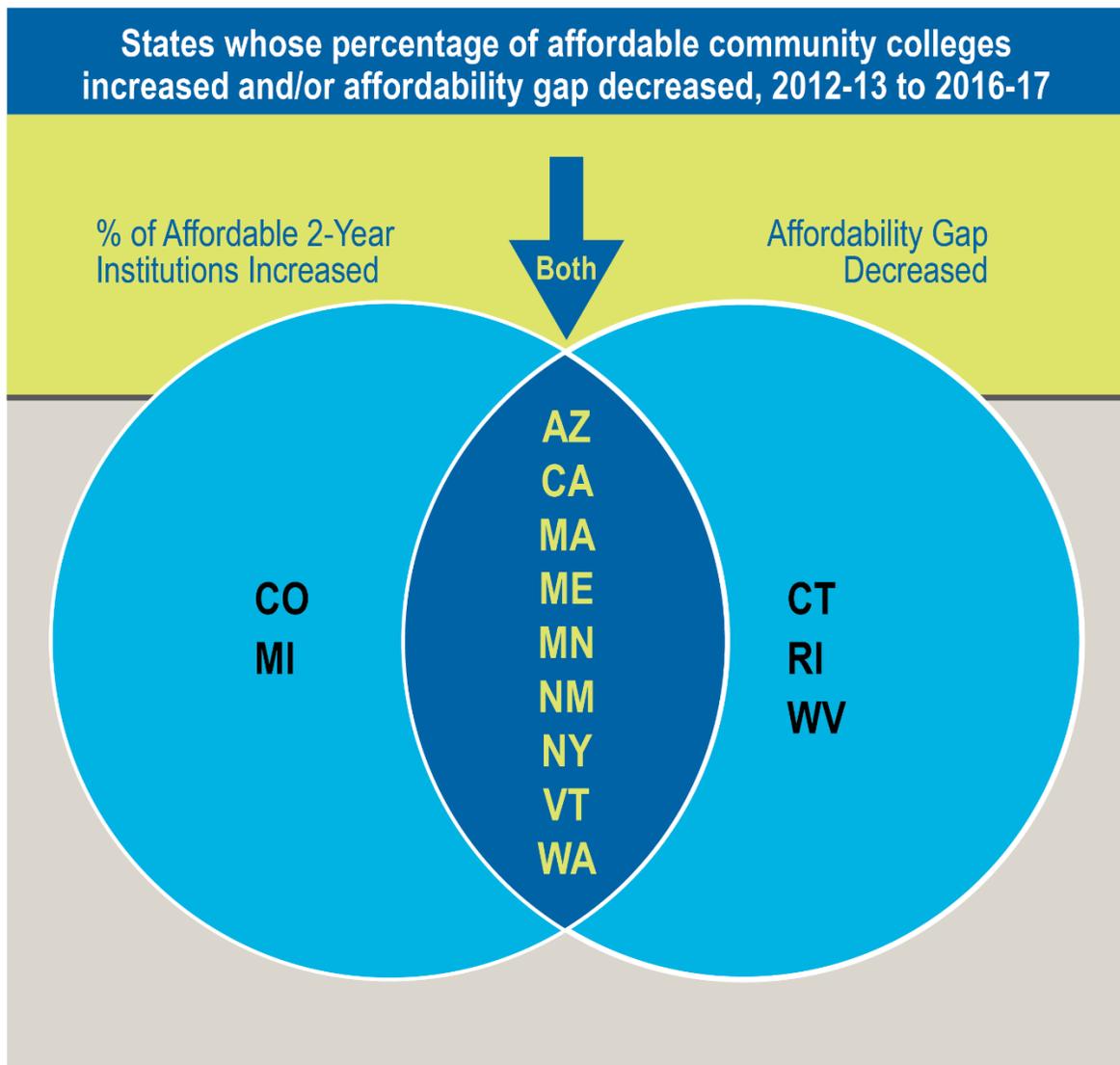
Considering community college affordability by state, a few states appear across multiple academic years as having no affordable options for students. These include New Hampshire and Rhode Island (no affordable community colleges in all five years); Maryland (four years); Hawaii, Utah, and Vermont (three years); and Nevada (two years). Thirteen states had at least one year in which one or none of its community colleges were affordable. Given that students who attend these institutions tend to live nearby⁵, the finding that students in these 13 states had at least one year in the past five in which they had access to, at best, a single affordable community college according to our model is deeply troubling.

In 25 states, the percentage of affordable community colleges decreased between 2012-13 and 2016-17. In 36 states, the average community college affordability gap grew between 2012-13 and 2016-17; the average increase in the affordability gap in those states was \$1,176, and the average affordability gap in 2016-17 for these states was \$733. This means that on average, these states went from affordable in 2012-13 to unaffordable five years later.

Meanwhile, 11 states saw their percentage of affordable community colleges increase from 2012-13 to 2016-17, and 12 states saw their affordability gaps decrease. Among those 12 states, the average decrease was \$1,048, and the average community college in these states these states was affordable by \$888 in 2016-17. These states (see Figure 6) became both relatively and absolutely more affordable, on average, in the five-year period.

⁵ Hillman N. and Weichman T. (2016). Education Deserts: The Continued Significance of “Place” in the Twenty-First Century. American Council on Education. Retrieved from <https://www.acenet.edu/news-room/Documents/Education-Deserts-The-Continued-Significance-of-Place-in-the-Twenty-First-Century.pdf>

Figure 6.



That roughly half of the nation's community colleges are affordable for the recipient of an average financial aid package who contributes full-time summer wages and part-time work the rest of the year to their education is a clear glass-half-full or half-empty scenario. But given the generosity of our model, this finding is troubling. As a point of first access to the postsecondary system, students should not face the choice of taking on above-average student loans or working more hours to cover the total price of their community college education. Additionally, concerns about students' proximity to an affordable two-year school compound the access issues here. Not only are students unlikely to attend community colleges far away from where they live, those who choose to do so often pay higher tuition if they are out of that community college's county or district zone. Students must be able to both pay for a postsecondary education and get to a postsecondary institution. For far too many students, this may not currently be the case.

Discussion and Conclusion

Our analysis both reinforces and broadens the findings of our previous effort in the area of postsecondary affordability. Unfortunately, our findings are discouraging for many students nationwide seeking postsecondary opportunities. The “traditional” students modeled by our formula will struggle to find affordable two- and four-year institutions, and, depending on where they reside, they may find no affordable options at all.

As we have reiterated, our approach errs on the side of affordability wherever possible. Where that affordability is found wanting for “traditional” students who can contribute their expected family contribution and gross wages, it will be even more elusive for students who do not have these resources. We noted in 2018’s “Shutting Low-Income Students Out of Public Four-Year Higher Education” that “there are no available data to measure affordability for post-traditional students, who often put earnings toward other areas of their life, attend part-time, or take longer to graduate.” That remains true today, and we will never have a full picture of postsecondary affordability without considering these students, who may face challenges like child care, medical bills, and familial obligations on top of the demands of pursuing a degree or credential. Surely no broadly applicable model of affordability will ever be able to account for the idiosyncrasies of each student’s daily life, but what we have advanced as a best-case scenario in many ways will fall short for the 25% of college students with their own dependents, for example, or those without the ability to live with family while enrolled.

It brings us no pleasure to beat the drum of college affordability concerns. These findings are discouraging for students and families, the public, and the institutions that do the best they can with what probably few would say is sufficient support from their states. But if our work here makes one group feel pressure, let it be the policymakers whose decisions can affect the affordability landscape. The members of Congress working to reauthorize the Higher Education Act can ill-afford to nibble on the edges of this issue and must take decisive action to increase college access and affordability for students, especially now that we also show that community colleges are hardly a universally affordable release valve.

A recent analysis showed that increasing college graduation rates from 57% to 84% for a single class of students entering two- and four-year institutions could have massive economic impacts.⁶ From increasing the average annual salary of more than 1.2 million degree-

“IF OUR WORK HERE MAKES ONE GROUP FEEL PRESSURE, LET IT BE THE POLICYMAKERS WHOSE DECISIONS CAN AFFECT THE AFFORDABILITY LANDSCAPE.”

⁶ Whistle, W. (2019). What Is The Ripple Effect of Graduating More College Students? Third Way. Retrieved from <https://www.thirdway.org/infographic/what-is-the-ripple-effect-of-graduating-more-college-students>.

holders by nearly \$11,000 to producing more than \$90 billion in lifetime local, state, and tax revenue, the potential is huge. This is in addition to improvements in personal health and public safety. But these benefits will only be realized at the personal, community, and national levels if individuals earn a degree or credential, and they cannot even begin to realize that goal without having access to institutions they can afford to attend.

Appendix A: Data and Methodology

In “Shutting Low-Income Students Out of Public Four-Year Higher Education,” NCAN introduced its formula for assessing institutional affordability. An institution is affordable according to this formula if:

$$\text{Total Price} + \$300 \leq \text{Grant Aid} + \text{Loans} + \text{Federal Work-Study} + \text{Expected Family Contribution} + \text{Summer Wages}$$

We carry this formula through to this brief and merge data from a number of sources to create our data set:

- Data on cost of attendance (total price for in-state students living on campus for four-year institutions and total price for in-state students living off campus [not with family] for two-year institutions), grant aid (average amount of federal, state, local, or institutional grant aid awarded to full-time, first-time undergraduate students), and federal loans (average amount of federal loans awarded to full-time, first-time undergraduate students) come from the Integrated Postsecondary Education Data System (IPEDS) for academic years 2012-13, 2013-14, 2014-15, 2015-16, and 2016-17. These variables were restricted to two- and four-year public institutions participating in Title IV financial aid programs.
- Data on Federal Work-Study (FWS) disbursements come from Federal Student Aid’s campus-based program volume report. To calculate average institutional disbursements, we divided the total amount of FWS disbursements by the number of FWS recipients for each of the five academic years under consideration. We connected that data to institutions based on OPE IDs obtained from IPEDS. Satellite campuses of public universities often do not appear as their own listing in this volume report. Where this occurred, we imputed the main campus’s average FWS disbursement to these institutions’ records. It is unclear whether this results in an overestimate or an underestimate.
- Data on expected family contribution comes from the Federal Pell Grant Program Annual Data Report 2016-17. For each academic year (2012-13, 2013-14, 2014-15, 2015-16, 2016-17), we subtract the average Pell Grant amount from the maximum Pell Grant amount and use that value in our formula.
- To calculate estimated summer wages, for each of the five academic years we multiply a state’s minimum wage by 40 hours per week by 12 weeks. Data on minimum wage by year come from the Department of Labor. Where a state’s listed minimum wage rate for a given year was lower than the federal minimum wage, we imputed the federal minimum wage. Where a range was given for a state’s minimum wage, we set the

minimum wage to be the high end of that range.

- The \$300 in our affordability formula comes from a belief that incidental expenses, even small ones, can be enough to derail a student’s postsecondary enrollment. Consequently, we build in a \$300 emergency “cushion” for students on top of their cost of attendance.⁷

“Shutting Low-Income Students Out of Public Four-Year Higher Education” primarily focused on questions of affordability for in-state, full-time, first-time students living on campus at four-year public institutions who could contribute summer wages to paying for their postsecondary education. That brief also considered scenarios for full-time, first-time students living on campus who were unable to contribute summer wages as well as students living off campus (not with family) who could and could not contribute summer wages to their education.

This brief concentrates on the scenario of in-state, full-time, first-time students at two-year institutions living off campus (not with family) and four-year public institutions living on campus who can contribute summer wages to paying for their postsecondary education.

Because this brief considers affordability from a longitudinal standpoint, we establish a set of two- and four-year public institutions for which we have all of the relevant data. We perform listwise deletion and drop any institution missing any of the data points in our formula in any of the five academic years. Of 766 four-year public institutions participating in Title IV financial aid programs, 528 remained after this data cleaning. Of 981 two-year public institutions participating in Title IV financial aid programs, 605 remained after this data cleaning. We then used the affordability formula above to ask two questions of each institution in each academic year:

- For four-year institutions, was the institution affordable for an in-state, full-time, first-time student living on campus in that academic year? For two-year institutions, was the institution affordable for an in-state, full-time, first-time student living off campus (not with family) in that academic year?
- What was the affordability gap for the average student with this profile at that institution in that academic year?

Data and tables that include pairwise deletion and results based on the sample’s interquartile range available upon request.

⁷ Kruger, K., Parnell, A., and Wesaw, A. (2016). Landscape Analysis of Emergency Aid Programs. Student Affairs Administrators in Higher Education (NASPA). Retrieved from https://www.naspa.org/images/uploads/main/Emergency_Aid_Report.pdf