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TEACHERS COLLEGE, COLUMBIA UNIVERSITY

## **Community College Economics for Policymakers: The One Big Fact and the One Big Myth**

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## **Abstract**

This paper reviews broad policy trends in postsecondary education, particularly as they apply to community colleges. The review juxtaposes one big fact and one big myth and shows how rejection of the former and acceptance of the latter have impaired policymaking. The one big fact is that the economic returns to college are very high. Although this fact is broadly acknowledged by many, it is underappreciated in policy discussion. The one big myth is that the college affordability crisis is actually an efficiency crisis caused by wasteful spending by colleges. Although widely accepted, this myth is based primarily on “sticker shock,” not evidence. The result has been reduced state funding and new practices (more adjuncts, larger classes, online courses) that cut spending and lower quality; the hope is that spending falls faster than quality so that efficiency will increase. These practices are especially detrimental for community colleges. Students at community colleges, particularly first-generation and low-income students, have less knowledge about the full set of benefits of college and are likely to be very debt averse; they are also less well prepared to navigate independently through college. The direction of policy should therefore be shifted. Students should be provided with more information about how to maximize their returns to college. Colleges should implement practices that enhance quality; spending will necessarily increase, but with genuine quality enhancements, efficiency should increase as well.

## Table of Contents

<b>1. Introduction.....</b>	<b>1</b>
<b>2. Appreciating the One Big Fact: The Substantial Returns to Community College. 4</b>	
2.1 Income Gains From Community College .....	4
2.2 Monetary and Nonmonetary Benefits: Student, Taxpayer, and Social Perspectives7	
2.3 Implications of Neglecting the One Big Fact: Reduced Funding .....	9
2.4 Concerns About Student Debt.....	10
<b>3. Dismantling the One Big Myth: The “Efficiency Crisis” at Community Colleges13</b>	
3.1 Evidence on the Efficiency of Community Colleges.....	13
3.2 The Difficulty in Making Efficiency Gains: Baumol’s Cost Disease.....	16
3.3 Implications of the Myth: Spending Less to Lower Prices .....	18
3.4 Implications of the Myth: Attempting to Increase Output Without Increased Spending.....	20
3.5 Implications of the Myth: Heightened Expectations for Efficiency Gains .....	22
<b>4. Enhancing Efficiency Across the Community College Sector .....</b>	<b>24</b>
4.1 Accepting the One Big Fact .....	24
4.2 Rejecting the One Big Myth .....	26
<b>5. Conclusion .....</b>	<b>28</b>
<b>References.....</b>	<b>30</b>



## 1. Introduction

Several trends have placed increasing pressure on community colleges and other higher education institutions to improve performance (National Research Council, 2012). Rising tuition prices and low absolute graduation rates across postsecondary institutions have prompted questions about the value of higher education and the extent to which the sector is unproductive.<sup>1</sup> Government agencies have thus set ambitious goals for increased credential attainment, particularly for associate degrees and vocational credentials, which are predominantly awarded by community colleges (Bailey, 2012 Jenkins, 2011). The most recent example of federal intercession is the President’s Plan to Make College More Affordable (The White House, Office of the Press Secretary, 2013). While acknowledging declining state funds, this plan focuses on the problems of rising tuition, increased student debt, and the low rate of four-year degree completion (58 percent within six years). A prevailing sentiment in the plan is that colleges are wasteful—that they are charging too much and not producing enough human capital. The specific policy responses to “combat rising college costs and make college affordable” include: (1) measuring college performance through a new ratings system and ultimately tying federal student aid to performance; (2) removing barriers to competition and encouraging innovation, including the use of new technology; and (3) expanding access to the Pay As You Earn Repayment Plan that caps loan payments at 10 percent of income. While these measures are primarily targeted at four-year colleges, they affect all postsecondary institutions. What is more, the rhetoric of waste that helps justify the plan vaguely implies that most colleges are inefficient: If only a few institutions were unaffordable, the obvious solution would be for students to switch to affordable ones. The notion that higher education institutions are squandering resources, which is now commonplace both in public discourse and in the policy arena, influences decisions about funding allocations across the sector (by making it easier to reduce public subsidies under the rationale that colleges are inefficient). It also influences students’ views about whether to attend

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<sup>1</sup> The Spellings Commission Report (U.S. Department of Education, 2006, p. xii) cautions that “history is littered with examples of industries that, at their peril, failed to respond to—or even to notice—changes in the world around them. ... Without serious self-examination and reform, *institutions of higher education* [emphasis added] risk falling into the same trap, seeing their market share substantially reduced and their services increasingly characterized by obsolescence.”

college, particularly among students who are debt-averse or who have no family experience of college-going.

In response to the widespread perception that colleges are wasteful, we offer in this paper a broad overview of economic evidence, mostly from the community college segment of higher education. Our overview emphasizes one big fact and one big myth in the economics of postsecondary education. We argue that the failure to appreciate the one big fact and the unwitting acceptance of the one big myth distort the policy debate in general but are especially damaging in terms of the direction of recent reforms for community colleges, which have emphasized the reduction of costs by spending less. We argue for a different approach—albeit one with a similar emphasis on the importance of efficiency—both for understanding the economics of community colleges and for improving the performance of these critical postsecondary education institutions.

The one big fact is that investments in community college (and other forms of public and nonprofit postsecondary education) yield high economic returns. Expressed in this way, this big fact is well known and broadly, although not unanimously, accepted (Schneider & Klor de Alva, 2013). However, we believe that this fact is underappreciated. First, there is limited recognition of just how high and pervasive the returns to postsecondary education are. Second, as we show below, policy debate appears to proceed as if there were some question as to whether it is worthwhile to invest further resources in our nation's colleges (in terms of whether current and future college students would reap benefits that exceed the costs of such investment). Finally, more focus appears to be placed on student debt loads than on the return on investment.

The one big myth is that the higher education affordability crisis is actually an efficiency crisis—that college is so expensive because colleges are wasteful or inefficient. As summarized—but not accepted—by Barrow, Brock, and Rouse (2013, p. 4): “Many critics argue that much of the increased cost of postsecondary education is unnecessary and the result of institutions becoming ‘inefficient’ in the sense that they could provide ... the same quality education at a lower cost if they simply reorganized” (see also footnote 1 above). According to this reasoning, the way to improve postsecondary education is to make colleges more productive by cost-cutting (“spending less”). This is a myth in several senses: It provides no explanation beyond a sense of

sticker shock, it has no evidentiary support, and it proceeds from a failure to understand a key element in the economics of labor-intensive services (the “cost disease,” to which we will return). Below, we show the faulty thinking necessary to sustain this myth, and we provide evidence that it is most likely incorrect for community colleges. We then show how reliance on this myth distorts policy debate. It is worth noting that while community colleges are often understood as providing students with a much more affordable option for the first two years of college, they are nonetheless subject to the same broad critique of inefficiency and waste as the rest of the higher education sector. The above quotations refer to “higher” or “postsecondary” education, not just four-year colleges. Perhaps implicit in this reference is that the completion rates of community colleges—which enroll a disproportionately high concentration of low-income and academically underprepared students—are lower than those of four-year colleges. As such, community colleges are not considered acceptable substitutes and so not considered to be more efficient (even for introductory courses or credits leading to a four-year degree).

The one big fact and one big myth need to be emphasized together because they have reinforced each other to drive policy in the wrong direction, toward underinvestment and cost-cutting. If the returns to college are not high, then it may make sense to constrain total investment at current levels and seek ways to improve the internal efficiency of colleges. Or, reversing the analogy, if colleges are very inefficient at producing human capital, then it seems unlikely that the returns to postsecondary education will be high. Failing to acknowledge the high return on investment makes it easier to presume that colleges are inefficient. But we provide evidence that returns to community college in particular are high, suggesting that these institutions are not inefficient. We go on to introduce an approach for promoting further investment in community colleges based on how these institutions actually produce human capital; genuine increases in efficiency should then be possible. We describe this approach below.

## **2. Appreciating the One Big Fact: The Substantial Returns to Community College**

### **2.1 Income Gains From Community College**

The evidence on the high economic returns to community college is compelling. In summarizing the published evidence on labor market gains, Belfield and Bailey (2011) reported strongly positive returns to most awards. The top panel of Table 1 shows the earnings gains for students with associate degrees compared with those of students with high school diplomas. Across 17 studies, the average earnings premium for an associate degree compared with a high school diploma is 13 percent for men and 21 percent for women. Two studies found that vocational certificates are also associated with higher earnings. In addition, studies have found earnings gains from credits or years of study at community college that do not lead to a completed degree; gains are identifiable for as little as a semester's worth of credits (Jacobson, LaLonde, & Sullivan, 2005). Earnings gains do vary across different subjects of study (defined retroactively based on awards); returns are higher for quantitative or technical–vocational courses and particularly for awards related to nursing and other health professions. But by far the majority of student pathways through college—and certainly the policy-relevant average pathway—generate positive returns.

**Table 1**  
**Earnings Gains From Community College**

Community College Education (CCE)	Comparison Group (CG)	Percentage Gain in Earnings (CCE Over CG)	
		Male	Female
Wage data pre-2005			
Associate degree (average across 17 studies) <sup>a</sup>	HS graduate	13%	21%
Vocational certificate (average across 2 studies) <sup>b</sup>	HS graduate	8%	22%
Wage data post-2005			
Associate degree (ACS data) <sup>c</sup>	HS diploma		31%
Associate degree (NC) <sup>e</sup>	CC non-completer	16%	32%
Associate degree (WA) <sup>d</sup>	CC non-completer	4%	9%
Associate degree (KY) <sup>g</sup>	<1 year CC	7%	16%
Certificate (NC) <sup>e</sup>	CC non-completer	7%	3%
Certificate—long (WA) <sup>d</sup>	CC non-completer	2%	15%
Certificate—short (WA) <sup>d</sup>	CC non-completer	0%	-3%
Certificate (KY) <sup>g</sup>	<1 year CC	2%	2%
Diploma (NC) <sup>e</sup>	CC non-completer	8%	27%
Diploma (KY) <sup>g</sup>	<1 year CC	5%	14%

<sup>a</sup> Belfield and Bailey (2011, Table 1). <sup>b</sup> Belfield and Bailey (2011, Table 2). <sup>c</sup> Zaback, Carlson, and Crellin (2012, Table 1, median wage). <sup>d</sup> Dadgar and Weiss (2012, Table 3). <sup>e</sup> Belfield, Liu, and Weiss (2013, Table 7). <sup>f</sup> Andrews et al. (2012). <sup>g</sup> Jepsen et al. (2014 Table 4).

Recent studies using large-scale administrative datasets affirm these conclusions when comparisons are made between community college enrollees and graduates. Evidence from North Carolina, Kentucky, and Washington State shows strong returns to community college awards (Belfield, Liu, & Weiss, 2013; Dadgar & Weiss, 2012; Jepsen, Troske, & Coomes, 2014; for Texas, see Andrews, Li, & Lovenheim, 2012). Returns to associate degrees are very high, and they are only modestly affected by academic ability; returns to credits are also positive.<sup>2</sup> The bottom panel of Table 1 shows the evidence on the returns for students who complete associate degrees, certificates, and diplomas relative to community college students who do not complete these awards. The returns for students who transfer and then complete a bachelor's degree are even larger (and are probably underestimated, given that administrative data follow-up typically only extends a few years after the receipt of a bachelor's degree). Finally, there is evidence for

<sup>2</sup> Marcotte (2010) found that controlling for school quality and academic ability lowered returns to associate degrees by 19 percent for men but raised them by 10 percent for women.

rapid earnings growth in the years following exit from community college (Belfield, Liu, & Weiss, 2013). Thus, students do not have to wait a long time before they reap the returns from college.

From the student perspective, completing an associate degree appears to be a very high-yielding investment. Using data from North Carolina on just the nine-year period after first enrollment, we estimate that the internal rate of return (labor market gains net of tuition costs and forgone income) to an associate degree, compared with some college but no award, is approximately 16 percent for women and 5 percent for men.<sup>3</sup> In other words, completing an associate degree (versus dropping out of community college) pays off only a few years after graduation.

Moreover, the returns to college have been increasing over time, not decreasing. Calculations by Avery and Turner (2012) show the present discounted value of a four-year college degree over high school net of tuition expressed in 2009 constant dollars. In 1965, this difference was \$120,000/\$215,000 (female/male). By 1985, the difference was \$265,000/\$365,000, and by 2009 it was \$375,000/\$580,000. Thus, the relative gain over high school graduation has approximately tripled over the last five decades (see also Oreopoulos & Petronijevic, 2013).

It is also the case that the recent statewide analyses cited above reveal little evidence that the returns to college decreased during the Great Recession.<sup>4</sup> And the general upward trend is also supported by other labor market studies that have identified a general increase in skill-biased technological change (i.e., jobs becoming more cognitively demanding) and in increased demand for workers in occupations and industries that require more education (Carnevale, Smith, & Strohl, 2010; Goldin & Katz, 2008). Indeed, these changes accelerated during the Great Recession. For workers with “some college,” the overall job loss rate in 2007–09 was 4 percent, but this was fully offset by a job gain rate of 4 percent over the following two years (Carnevale, Jayasundera, & Cheah, 2012, Table 3). Employment in the health care sector grew by 3 percent even during the Great Recession. For workers with at least some college

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<sup>3</sup> This internal rate of return calculation assumes tuition costs of \$69 per credit in the North Carolina Community College System (NCCCS). Details are available from the authors.

<sup>4</sup> Although there is a typically a persistent earnings penalty from entering the labor market during a recession, this penalty is large across all levels of education.

education, the net employment effect of the Great Recession and its immediate aftermath was therefore no growth (not job losses). Earnings of college graduates who entered the labor market during the Great Recession will grow more slowly than the earnings of those who entered the labor market before it (Elsby, Hobijn, and Sahin, 2010). But this does not mean there is less reason to seek a college credential. Critically, the employment and wage trends for persons with no college education became even bleaker during and after the Great Recession.

## **2.2 Monetary and Nonmonetary Benefits: Student, Taxpayer, and Social Perspectives**

The evidence we have reviewed thus far is only part of the case for making increased investments in community college. So far, we have only considered income gains from college, and these gains are often measured without accounting for the added benefit that college educated workers have lower unemployment rates. Moreover, there are also large social and personal benefits that derive from college. As discussed by Belfield and Bailey (2011), there is much less evidence about these other domains that comes directly from examining returns to community college. However, there is considerable research evidence based on attainment, which includes any years of postsecondary schooling. Notably, this evidence shows very large benefits in a key domain: health status. For example, Cutler and Lleras-Muney (2010) identified very large returns to many measures of health status even after controlling for income, health insurance, and family background. They traced these gains in health status to changes in behavior as a result of higher levels of attainment. In 2010, total health expenditures in the U.S. were \$2.6 trillion (or \$8,400 per capita). For individuals, direct consumer expenditures on healthcare are 7 percent of total expenditures (not including expenditures through employer healthcare) (see U.S. Bureau of Labor Statistics, 2013, Table B; National Center for Health Statistics, 2013, Table 111). Even small behavioral changes will therefore generate substantial resource savings both socially and personally. Other benefits from education include less involvement in the criminal justice system and less reliance on welfare.

In the aggregate, these additional nonmonetary benefits are substantial and important. From a social perspective, the labor market gains from community college are

the largest single component of the benefits from college. But these other benefits are not trivial. There is no reliable monetized estimate of all these social returns, but the effects of college on behaviors are meaningful and relate to very costly expenditure items such as health and crime. The effects are also likely to be larger for members of disadvantaged groups (who may lack access to private healthcare, for example). Therefore, by focusing only on the labor market returns, the one big fact is substantially underappreciated and is underappreciated in such a way as to disproportionately undervalue community college.

Policymakers should be motivated to maximize the social benefits of community college, so they should add up and consider the full set of consequences from investment. Doing so yields social benefits that far exceed the costs. Yet it is important to note that public education investment can be justified even if a strict taxpayer perspective is adopted, wherein only taxpayer benefits are compared against taxpayer investment. Table 2 shows the economic value to taxpayers of an associate degree (Trostel, 2010). This economic value is expressed in present values at age 19, when under this model the student begins enrollment in community college. This analysis shows that for each associate degree from the community college sector, the taxpayer gains an additional \$142,010 in revenue compared with that of a high school graduate. Two thirds of the gain comes from higher income tax payments, but there are also substantial savings in government-funded programs (health, welfare, crime, and other transfers). Based on estimates from Belfield (2012, Table 1), the total taxpayer commitment is approximately \$54,770 per associate degree. Therefore, the total taxpayer benefits are over two-and-a-half times greater than the taxpayer investment.<sup>5</sup> Also of note are the large benefits to state governments, both in revenues and expenditure savings. This total gain is significantly above the taxpayer subsidy for the required community college courses (even after accounting for very high non-completion rates).

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<sup>5</sup> As large as this estimate appears, its calculation includes the cost but not the benefit from any human capital that is not reflected in an award (e.g., if a student accumulates 30 credits but does not graduate).

**Table 2**  
**The Value of an Associate Degree to Taxpayers**

Source of Gain	Associate Degree: Present Value Lifetime Fiscal Gain Over a High School Graduate	
	Value	Percentage of Total Gain
Additional tax contributions		
Federal income tax	\$42,590	30%
Social security payroll tax	\$29,010	20%
State/local tax revenues	\$27,210	19%
Total	\$95,010	
Savings in government expenditure		
Health	\$20,620	15%
Welfare	\$10,990	8%
Crime	\$8,500	6%
Other transfers	\$3,100	2%
Total	\$43,210	
Total taxpayer gain per associate degree	\$142,010	100%

*Source:* Trostel (2010, Tables 1-4). State/local tax revenues include property, income, and sales taxes. Health-related savings include Medicare, Medicaid, and public healthcare. Welfare savings include social security benefits, food stamps, cash assistance, energy, housing, and school lunch. Other transfers include supplemental security income, workers compensation, and unemployment compensation.

*Note.* Present value at age 19 using 3% discount rate, 2013 dollars (rounded to nearest \$10).

Taking all this evidence into account, appropriate appreciation of the one big fact leads to the policy conclusion that investments in postsecondary human capital are too low from a student, taxpayer, and social perspective. That is, if more students were in college (or more of those who were in college completed it), these students would have higher economic well-being, taxpayers would have a lower net tax bill, and society would be better off.

### **2.3 Implications of Neglecting the One Big Fact: Reduced Funding**

The most obvious implication of the failure to appreciate the high returns to college is evidenced by the decline in state funding for higher education. In 1980, state appropriations for public postsecondary institutions were 44 percent of total revenue; by 2009, these state appropriations had fallen to only 22 percent. State appropriations have not only declined as a share of total revenues; they have declined in absolute terms. Measured in constant dollars, state appropriations per full-time equivalent (FTE) college

student were 25 percent lower in 2009 than in 1999 (Snyder & Dillow, 2012). Thus, at the state level, policymakers have actually behaved as if investments in higher education do not yield high returns.

While the federal government has expanded its role in higher education, this expansion has taken the form of loans (not grants) and has not been sufficient to offset the absolute declines at the state level. Looking at higher education funding across the decade, the community college segment has experienced the most severe drop in revenues.<sup>6</sup> States may find it easier to cut discretionary higher education budgets than those of healthcare, prisons, or pensions, but this ease presumably reflects political preferences for these sectors. Alternatively, policymakers might believe that individuals should pay a greater share of their higher education expenses because the returns are high for them; if so, these policymakers' complaints about affordability are duplicitous. Given the upward trend in the returns to college, even if investments in higher education were kept constant, policy would still be tending in the wrong direction in the sense that investments are too low relative to the returns.

#### **2.4 Concerns About Student Debt**

Failure to grasp the high economic value of college is also revealed in public discourse on how student debt is “unsustainable.”<sup>7</sup> On student debt as a “widespread concern,” see Barrow et al. (2013, p.4) and President Obama's policy proposal cited above. Straightforwardly, if the returns to college are higher than alternative investments, then total investments in college—from government and private spending—should be increased. If governments do not make these investments, private individuals will have to spend more, and this will inevitably lead to higher debt loads. From a social perspective, extra borrowing makes more sense than reductions in borrowing. Indeed, any growth in private debt should be viewed as the rationality of private individuals offsetting the irrationality of policymakers.

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<sup>6</sup> In their review, Kirshstein and Hurlburt (2010, p. 1) report that “community colleges are ... the only public institutions where total operating revenues per student were lower than they were a decade earlier.”

<sup>7</sup> Yet another illustration is the focus on graduation rates based on time to completion. The returns to college are so high that time to completion is less salient than actual completion in whatever time frame is possible.

Yet the increase in student loan debt is now sometimes compared to the debt run-up in the housing market, along with the implication that the higher education market is in a similar “bubble” heading for collapse. We believe this notion—see Kamenetz (2013) for an example—is false. First, whereas much of the housing market bubble was based on consumption spending (for more living space), postsecondary education is an investment in which expenditures yield a stream of future benefits.<sup>8</sup> Second, educational investments are highly flexible. A student who completes a business degree (for example) can seek work in almost any sector of the economy across any region. By comparison, a house cannot be moved to alternative markets where returns are higher. (Housing, unlike goods produced by workers, is not internationally tradable either.) Third, as noted above, the long-run trend in the benefits of community college is upward, and the benefits are greater where there are greater concentrations of educated workers (i.e., skilled workers are more productive when they work with other skilled workers).<sup>9</sup> By contrast, house-price indices are much flatter over the long run, and the value of a house in one area is reduced when there are other houses available for purchase in the same neighborhood. Fourth, student loans are a relatively small debt incurred by large numbers of students who have many working years to repay (in contrast to the concentrated housing debt). It is worth noting that community college students have the lowest loan amounts across all postsecondary students; their loan amounts are especially low in comparison with expected lifetime earnings, which easily exceed \$500,000. Finally, the adverse consequences of the housing market bubble were exacerbated by two particular features of mortgage lending. One was predatory business practices (facilitated by inadequate review of lenders and encouragement to overborrow). Although there has been some evidence of predatory practices by for-profit higher education colleges (Kutz, 2010), there is no evidence of similar practices within the community college system or public institutions generally. The second feature was the weak contracting procedures leading both to high default rates and to protracted uncertainty over asset values. By contrast, from the government perspective, student loan default (rather than delayed repayment) is

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<sup>8</sup> College upgrades of facilities to offer deluxe dormitories and generous lifestyle amenities, insofar as they constitute a substantial phenomenon, are not salient for community colleges.

<sup>9</sup> If the supply of educated workers increases, then their wages might be expected to decline. But this decline does not occur for two reasons. First, workers work together and need complementary skills. Second, the demand for educated workers is going up faster than the supply.

extremely low because of strong contract enforcement processes (such as wage garnishment). There is little reason for thinking that higher education borrowing is overleveraged. Instead, in light of the one big fact and the decline in government funding, it would be reasonable if student borrowing to invest in higher education were higher than it is.

While private borrowing is lower than might be expected, it is nonetheless true that federally reported student loan repayment rates at community colleges are relatively low (Belfield, 2013, Table 6). This is the case across all two-year colleges (public and for-profit institutions as well as the small group of two-year nonprofits). Students from these colleges have lower repayment rates than students at either one-year or four-year institutions even after adjusting for student and college characteristics, although the repayment rates at four-year colleges are also low (the rate is 45 percent at community colleges, compared with 54 percent at four-year public colleges). Yet, low repayment rates are not precise indicators of an unsuccessful investment. Given how student loan contracts work, failure to repay is usually only a temporary status; ultimately, most borrowers resume payment. Failure to repay reflects in part an inability to manage the student debt contract (e.g., by securing deferments). This inability is probably an important explanation for the low repayment rate of community college students because these students have not borrowed that much. Adjusting for student and college characteristics, community college students have by far the lowest loan balances of students in any college type. In 2009, the average balance per FTE community college student was \$3,120; this balance is less than half the size of the average balance at other colleges and one quarter the size of the average balance at two-year for-profit colleges (\$12,447). Given the very high wage gains from college cited above, loans of \$3,120 payable over a lifetime (or of higher amounts at four-year colleges) are unlikely to be onerous. Instead of focusing on the need to limit student debt, policy should be directed at ensuring that students properly manage their loans—securing deferments as necessary to avoid repayment penalties and default status.

### 3. Dismantling the One Big Myth: The “Efficiency Crisis” at Community Colleges

#### 3.1 Evidence on the Efficiency of Community Colleges

The college affordability crisis refers to the rising rates of college tuition, especially at four-year colleges, which have outpaced inflation and median family income for more than a decade. Critics have interpreted the affordability crisis as though it stems from a broad “efficiency crisis,” wherein colleges are failing to provide a quality education with the resources they have (Barrow et al., 2013). Polling data show that public perception to some extent matches that of the critics: People believe that higher education is unaffordable because colleges are wasteful, either because of how they allocate resources or because they have low completion rates given how much they spend (Gallup, 2011). If colleges were more efficient, the thinking goes, they could reduce their prices and more students would be able to afford to attend and complete college.<sup>10</sup>

By this logic, colleges are held to be inefficient because the “cost/price seems high.” Fundamentally, of course, the price of a good does not convey any meaningful information about the level of efficiency in the market. Traditionally, economists have argued that the main reason for inefficiency is weak market forces.<sup>11</sup> Market forces are weak when: there are large monopoly providers; or when there is a lack of choice of providers, perhaps because new providers cannot enter the market; or when little information is known about the providers; or when providers offer dissimilar products.<sup>12</sup> But this is not the case at higher education institutions. And in particular, the community college market, which is often subject to the same criticism regarding waste and inefficiency, does not generally exhibit these weaknesses.

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<sup>10</sup> Some policy initiatives offer a confused explanation of the affordability crisis. President Obama’s January 2012 Blueprint for Keeping College Affordable refers to “federal support to tackle college costs,” when in fact the support is intended to reduce tuition (The White House, Office of the Press Secretary, 2012). College personnel also give confusing signals about efficiency.

<sup>11</sup> An alternative hypothesis with respect to rising college tuition is that increases in loan subsidies simply result in higher prices charged by colleges. Of course, any subsidy given to demanders will increase the market price of the good, that is, the sticker price of college. But it will also increase output, that is, the number of students going to college, and this is the reason why the subsidy is given. Only if the supply of college places were perfectly inelastic would output stay the same, and even then the price paid by students would not increase. Given the number of colleges and the reasonably competitive forces in the higher education market, it is very unlikely that supply is perfectly inelastic.

<sup>12</sup> Weak market forces are also implausible because economists have long juxtaposed bureaucratic public schools with the competitive higher education market; and because public colleges have “controlled” costs more effectively than most private colleges (see Martin, 2013).

With respect to community colleges, most of them are small compared to the size of the postsecondary education market. Many community colleges and departments within the colleges compete for students almost on a course-by-course basis (as indicated by the very substantial transfer rates across colleges). Although there are barriers to opening a new public community college, there is robust competition from for-profit institutions (some of which are clustered in urban areas, while others offer online programs available nationally). Students may lack information about their own preparation or preferences for college work, but there is plenty of information about college programs and some “product standardization” (both in the sense that a similar credit system is used across colleges and in the sense that an economics course at one college is similar to that at another college). Thus, a lack of competition is not a strong justification for claiming that community colleges are inefficient.

More important, the notion that community colleges are inefficient is not empirically verified. There is very little evidence or systemic inquiry at the community college level into productivity and efficiency (see Belfield, Crosta, & Jenkins, 2013).<sup>13</sup> However, the limited evidence that does exist suggests that community colleges are getting somewhat more efficient over time. Belfield (2012) calculated that the average cost of a unit of output (measured as associate-degree equivalents) did not rise over the period between 1987 and 2008. In fact, as shown in Figure 1, after a period of stability, the social and fiscal unit cost of college awards has fallen since the late 1990s.<sup>14</sup> In 2008, the fiscal (taxpayer) cost per degree for academic community colleges offering a broad range of academic programs was 11 percent lower than it had been in 1987. For community colleges that offer primarily vocational programs, the decline has been even greater; the unit social cost was 7 percent lower by 2008, and the unit fiscal cost was 19

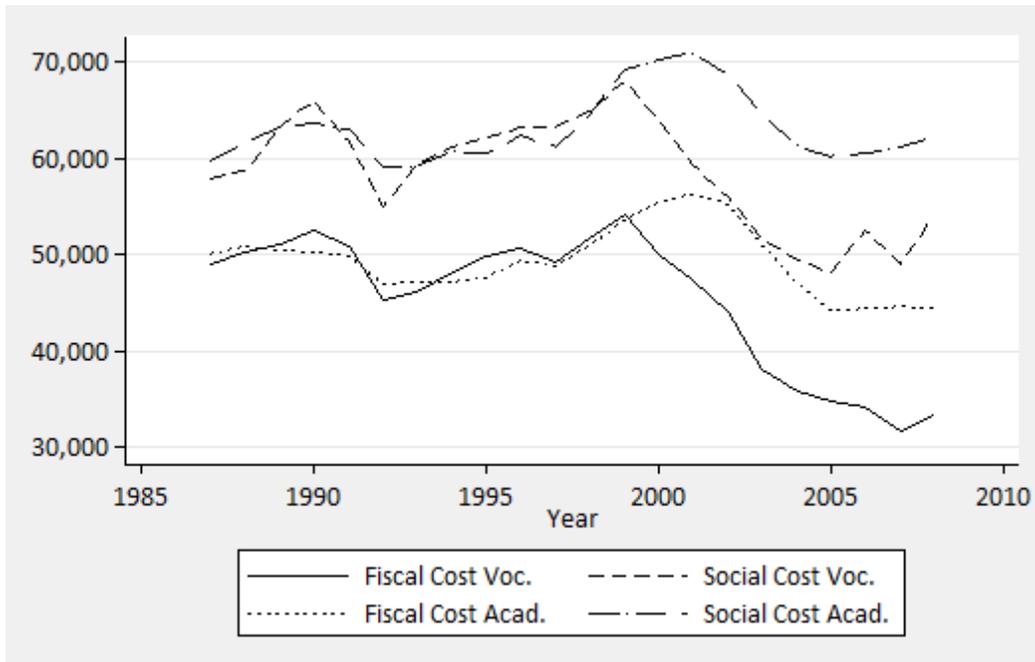
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<sup>13</sup> Most research in this area has examined four-year institutions and has not included certificates, which account for more than 40 percent of all awards conferred by public two-year colleges (Bailey & Belfield, 2012, Table 6.2). For community college students, Bound, Lovenheim, and Turner (2010) found no link between completion rates and student–faculty ratios, and Stange (2012) found no relation between bachelor’s degree attainment and instructional expenditures per student, faculty salaries, or the proportion of faculty who were full-time. These studies imply that some colleges are inefficient but not that the average college is inefficient.

<sup>14</sup> Although community colleges are now awarding more certificates than in prior decades, this does not explain the fall in unit cost. Adjusted for durations, associate degrees accounted for 71 percent of all awards conferred by community colleges in 1997; by 2007, this figure had declined by two percentage points to 69 percent (Horn & Li, 2009, Table 1).

percent lower. (Using median instead of average values, the decline in unit costs is even sharper.) Thus, community colleges appear to have become more efficient in producing associate degrees.

**Figure 1**  
**Community College Unit Costs: Medians by College Type**



*Note.* 2008\$, unbalanced panel.

Alternative methods yield a similar conclusion on increases in technical efficiency over time. Using stochastic frontier analysis, Agasisti and Belfield (2013) found modest efficiency gains across community colleges between 2003 and 2010. Between 2003 and 2010, the average community college became approximately 5 percent more efficient at producing awards. This study used the same IPEDS data as the Belfield (2012) study but adopted different modeling techniques to estimate efficiency. Both studies suggest modest gains in efficiency. They provide no support for the claim that community colleges have become dramatically less efficient over time. Of course, Figure 1 shows that proportionately the biggest efficiency gain has been for the taxpayer; by shifting the burden of payment for college to the student, it is almost guaranteed that the fiscal unit cost will fall.

This general finding is particularly noteworthy in light of the fact that community colleges might have been expected to become less efficient at generating human capital. There is some evidence that the students themselves—one of the key “inputs”—have become less well-prepared than in previous generations. The high school graduation rate has not improved in the last three decades. The high rate of students in remediation is also indicative of students’ lack of preparedness. Over 70 percent of students take at least one remedial course, and many never progress to take college-level courses (Bailey, Jeong, & Cho, 2010). This need for remediation does not reflect low college productivity; instead, much of it is “closely tied to the student’s high school curriculum” (Bettinger, Boatman, & Long, 2013, p. 95), although broad social and demographic changes are likely to have been influential too. Over the prior two decades, Bound et al. (2010) calculated that more than two thirds of the decline in community college completion rates for male students is attributable to their weaker initial math skills. Diminished student effort—measured as reduced time spent on learning—might also be expected to reduce the efficiency at which human capital is produced in college (Babcock & Marks, 2011).

### **3.2 The Difficulty in Making Efficiency Gains: Baumol’s Cost Disease**

In arguing that community colleges have not become less efficient, it should be acknowledged that measured college productivity may not have grown as quickly as productivity in other sectors of the economy. But it is important to understand the economics of higher education provision. Higher education instruction is a labor-intensive service with tasks that are cognitively challenging and interactive. These types of tasks cannot easily be routinized and made more efficient by reducing the amount of labor time allocated to them. Thus, the nature of higher education provision makes it very difficult to generate the same amount of human capital with fewer resources or by substituting machines instead of labor. Much college instruction cannot be delivered more rapidly without a substantial deterioration in quality. It is hard to improve educational efficiency by having lecturers present material at twice the speed or by making students read or absorb material faster, for example. As discussed below, efficiency gains or quality improvements are possible (especially in the delivery of noninstructional services that do not require personal interactions). But the critical factor is that technological constraints are relatively greater in higher education than in

manufacturing or services where personal interaction is minimal (e.g., accounting). Compared with other sectors where human interaction and labor input can be replaced by machines, the extent of labor-by-capital substitution is limited in education and particularly in instruction where the quality of student–faculty interaction is critical.

This phenomenon—known as the “cost disease” or “Baumol’s cost disease”—was expounded over 50 years ago and has been empirically validated in the intervening decades (Baumol, 2012). Critically, the cost disease is a *relative* affliction. Sectors only suffer a cost disease because of *relatively* low productivity growth, not because of *absolutely* low productivity growth. Logically, it is impossible for all sectors to have relatively high productivity growth. In terms of the higher education sector, staff within the sector can switch occupations (administrative staff and managerial staff can find similar jobs in the private sector; faculty teaching vocational courses can find occupationally relevant jobs). This switching means that, in order for colleges to hire staff at a given level of productivity, they must pay them what that level of productivity would earn them in the private sector. If colleges pay less than the private sector, colleges will only be able to hire workers with lower productivity. For example, when computerization makes accountants more productive, this has an impact on a college’s ability to hire accounting professors. Thus, as productivity grows in the private sector, wages must also increase in the higher education sector. This ratchet effect is compounded by the extent to which teaching requires nonroutine cognitive skills, and the demand for these skills has been growing over time (indeed, the one big fact provides evidence of this).

Overall, there is no straightforward justification for the claim that the higher education affordability crisis—applied mostly to four-year colleges but implied for community colleges as well—is an efficiency crisis. Also, there is no evidence that efficiency has deteriorated at community colleges (even with exogenous adverse changes in student preparedness). The charge of relatively low efficiency—even as at least one economic sector must have relatively low efficiency—is reasonable. But this charge reflects technological gaps between the many industries in which basic routine tasks can be easily computerized and the higher education sector, in which nonroutine, cognitively demanding duties cannot. Moreover, as discussed below, there are no obvious

technological breakthroughs that would make higher education substantially—and relatively—more productive.

### **3.3 Implications of the Myth: Spending Less to Lower Prices**

Belief in the efficiency crisis suggests that the way to improve college affordability is to cut spending so that prices (or costs to taxpayers) can be lower. As described by Jenkins and Rodriguez (2013), community colleges and less-selective public universities appear to have followed this logic and have adopted several “spend less” strategies. Critically, a “spend less” strategy is not the same as a “cost-cutting” strategy. The former need not increase efficiency; the latter by definition will increase efficiency.

The two main ways that colleges have spent less are through greater reliance on part-time instructors and through increases in student–faculty ratios. By 2010, the share of community college faculty that was part-time was 70 percent, up from 46 percent in 1992 (Knapp, Kelly-Reid, & Grinder, 2011; Snyder & Hoffman, 1995). As of 2009, the number of FTE students per community college faculty member was 21.7, up from 18.4 in 1999 (Snyder & Hoffman, 2000; Snyder & Dillow, 2011). Colleges, and community colleges in particular, have thus sought to make efficiency gains by paring down instructional interactions between students and faculty. Neither approach is supported by compelling evidence that it will increase efficiency. Yet both are likely to reduce the quality of instruction, and this reduction is likely to be very hard to observe. Although two recent studies have found positive effects of nontenured faculty for occupational fields and introductory courses (see, respectively, Bettinger & Long, 2010, and Figlio, Schapiro, & Soter, 2013), several studies have found that having more adjunct faculty reduces student completion and transfer rates in two- and four-year institutions (Eagan & Jaeger, 2009; Ehrenberg & Zhang, 2005; Jacoby, 2006). Moreover, adjunct faculty are often isolated from college management and governance and rarely undertake managerial or supervisory tasks—so even when adjuncts are more efficient in the classroom, these other tasks are displaced to other staff. Finally, this “spend less” measure is close to its maximum point of exploitation; it is unlikely that colleges can operate effectively when all instructors are contingent faculty.

A similar logic applies to increases in student–faculty (SF) ratios. Increasing the number of students per faculty member may adversely affect outcomes, again in hard-to-

observe ways. The only rigorous study available on this matter estimates that increasing the student–faculty ratio by 1 percentage point decreases community college degree completion rates by 0.5 percentage points (Bound et al., 2010). Moreover, this “spend less” measure is likely to save resources only in the short term. Faculty do not like high SF ratios: over time, large SF ratios will lead to more quits and will lower the quality of the applicant pool for new positions. With the tenure system, these effects will play out over the longer term and initial efficiency gains will be offset.

Another way colleges might be spending less, which has also been motivated by the desire to make college more convenient, is by increasing the availability of online instruction. Most evidence shows adverse effects of online instruction, although some evidence on the relative benefits is mixed, in part because the effects vary across student subgroups (Bell & Federman, 2013). However, two recent statewide studies of community college students found that all types of students considered performed worse in online courses (Xu & Jaggars, 2013). Again, any efficiency gains from switching to online courses remain unsubstantiated: Not only does the quality of instruction likely decline, but there has been no rigorous calculation of the resources required to implement this innovation. This calculation is much needed because online learning requires high set-up spending; if online learning turns out to be ineffective, this spending cannot be recouped. The ITHAKA study on the economics of online learning suggests that online learning is efficient. However, by its own admission, the study “hazard[s] ... rough guesses (speculations)” about the actual costs, i.e., spending per outcome (Bowen, 2012, p. 29; see also original study, Bowen, Chingos, Lack, & Nygren, 2012, Appendix B). Citing this study to establish lower costs for online learning is therefore highly dubious. The danger here is even greater than for the other two strategies. For online learning, colleges might have even spent *more* and reduced educational quality.

Other novel changes are also being developed at some colleges with the expectation that they will radically improve efficiency. These changes involve a general “unbundling” of the services provided by a college—that is, dividing up the services colleges provide and having different units provide each service. In practice, this unbundling emphasizes online materials with coaching (rather than instruction) and competency-based programs. As yet, there is very little evidence to support this move.

Critically, these changes are driving policy in the wrong direction. Even if these changes do increase efficiency, they do so by reducing output (albeit by less than the reduction in costs). Community colleges therefore begin to switch from high-cost, high-quality provision to low-cost, low-quality provision. This switch runs directly contrary to the one big fact, which substantiates the need for additional investments in postsecondary education. The consequence of introducing cost-cutting reforms is that the amount or quality of human capital produced by colleges will be lower when it should be higher.

Moreover, these attempts at efficiency improvements are likely to disproportionately affect underprepared students, who need the most learning support and help in navigating through college. Adjunct faculty are typically not knowledgeable about, or expected to provide, learning support services. And in larger classes, students' individual needs are more often overlooked, and struggling students fall further behind. The evidence on online learning suggests that online courses are least effective for students who are struggling to understand the material. Lastly, if services are unbundled, such that more pressure is placed on the students themselves to meet the demands of college learning, then this too will disproportionately affect students who have little knowledge about college, such as many first-generation and low-income students.

### **3.4 Implications of the Myth: Attempting to Increase Output Without Increased Spending**

A second distortion induced by the myth of an efficiency crisis is the presumption that colleges can significantly increase their output without increasing their spending. The central problem with this idea is that reforms to improve community college efficiency must take full account of the economic conditions that the colleges face. For example, adopting an e-learning delivery platform (even if it is more effective) is not likely to yield substantial efficiency gains unless it is accompanied by extra resources to implement the platform. Otherwise, any efficiency gains come at the expense of other programs which now receive less funding. The college only becomes more efficient to the extent of the differential between the new platform with greater resources and the old platform with fewer resources. To generate substantial efficiency gains, it is necessary to make new investments across cohorts of students rather than redeploy existing resources. Unfortunately, evidence on the costs of implementing specific reforms is lacking. Very

few reforms have any reliable cost data; in a thorough and comprehensive review of reforms to improve completion rates, Tinto (2012) included no discussion of how much such reforms would cost.

Efficiency-inducing reforms must also take account of the financial implications for colleges when provision is changed. Colleges face financing constraints and cannot implement reforms—regardless of their efficiency—if the reforms reduce college net revenues. It is not sufficient that a college knows how to increase completion rates; it must also balance its budget. This constraint is almost never incorporated in research inquiry and rarely considered in policy discussions of reforms to improve efficiency. Reforms are expensive not just because they require resources in order to be implemented. Reforms are also expensive in that—if they are successful at helping students stay in college and complete their awards—then college spending will increase because new courses will have to be provided. Revenues should increase with these expenditures, but it is unlikely that revenue increases will perfectly match these increases. Additional revenues are likely to fall short of new expenditures when colleges are funded based on historical funding formulae. Another reason revenue will not likely keep up with increases in spending is that students who persist are more likely to take more expensive upper-level courses, which often involve more experienced full-time faculty (as opposed to low-cost adjuncts, who commonly teach remedial and many introductory courses) and, in some cases, expensive equipment. Therefore, a successful reform might lead a college to go into deficit.

We suspect that this is one reason why many reforms are short-lived—colleges simply cannot afford to implement them for long at scale, or they are ineffectual such that their expense is offset by deteriorations in the quality of provision elsewhere in the college. Changes in completion, expenditures, and revenues must all be derived simultaneously to ensure that reforms can be implemented within budgets and that they do not simply displace resources from other college operations.

Belfield, Crosta, and Jenkins (2013) carried out simulations to trace the full economic implications of a series of reforms designed to increase completion rates in community colleges. Instead of looking at spending per FTE, which is not an accurate measure either of output or what a college spends on each individual student, they looked

at “longitudinal cost per student,” i.e., how much each college spends over the student’s time in college adjusted for the probability the student will complete his or her program. They used detailed expenditure data from a single community college and evaluated ten possible reforms that are (logically) expected to improve completion rates. For each reform, the direction of the results is the same: Higher completion rates increase expenditures and revenues; efficiency also increases. However, the increase in expenditures typically exceeds the increase in revenues such that the college faces operating losses. A college that is expected to report a balanced budget would therefore not be able to undertake these reforms (or if it did, it would have to take resources away from other programs and so diminish any efficiency gains).

### **3.5 Implications of the Myth: Heightened Expectations for Efficiency Gains**

A final distortion of the myth of an efficiency crisis is that it creates an expectation that substantial efficiency gains would be possible if only the practices of the most efficient colleges could be replicated or if new (untested) innovations were adopted. Such an expectation is unreasonable, not least because there is very little evidence on the specific practices or innovations that would increase efficiency. In their analysis of reforms that should improve completion rates, Belfield, Crosta, and Jenkins (2013) found, unsurprisingly, that they would lead to efficiency gains. Yet, across the ten reforms—most of which would be quite ambitious in scope—the projected gains are typically modest when evaluated in terms of awards completed. For example, a 20 percentage point increase in the proportion of students who enter college college-ready (rather than requiring developmental education) would increase efficiency by only 3.6 percent. Many students drop out of college having accumulated only a few credits. Getting these students to complete an award requires significant resources and a long-term commitment. This commitment is not inexpensive.

Historical evidence also suggests that college-level efficiency gains are likely to be quite modest. Table 3 shows how output and costs per degree have changed over time in the community college sector (for details on calculations, see Belfield, 2012). Importantly, these are fiscal unit costs, i.e., they do not include changes in the cost-sharing burden between taxpayers and students. Changes are reported in four-year time intervals for the average college and for the best-performing colleges during that time

interval. There is significant volatility over the period 1989–2008. Four-year growth rates at academic colleges ranged between –9 percent and +12 percent, with the average increase in output between 2005 and 2008 at 1 percent. Vocational colleges exhibited even greater volatility in four-year output growth; four-year output actually fell by 5 percent between 2005 and 2008 (after rising by 9 percent in the previous four-year period). The performance of the best quartile of colleges was of course much higher than the average. But critically, the best quartile of colleges does not include the same set of colleges in each time interval, and overall growth over the entire period was much lower than that of the highest performing colleges within a four-year period.

**Table 3**  
**Trends in Output and Unit Fiscal Cost of Community Colleges Over Four-Year Periods**

Periods	Output % Growth Over 4 Years		Average Cost % Growth Over 4 Years	
	Academic Colleges	Vocational Colleges	Academic Colleges	Vocational Colleges
Average for all colleges				
1989–1992	0.1	0.7	–15.6	–14.1
1993–1996	1.7	–1.6	–2.0	–2.2
1997–2000	–8.8	–15.1	–2.2	6.4
2001–2004	11.5	8.6	–30.4	–58.3
2005–2008	1.2	–4.8	–15.8	–9.5
Best quartile				
1989–1992	30.4	30.7	–32.6	–32.1
1993–1996	17.1	28.6	–11.9	–7.7
1997–2000	10.1	16.7	–1.1	–5.4
2001–2004	26.5	30.3	–45.5	–55.6
2005–2008	14.8	14.3	–15.2	–12.8

*Note.* Four-year growth rate is calculated as  $(X_{t+4} - X_t)/X_t$ . Sample sizes vary across time periods. Best quartile refers to fastest growth in output and lowest growth in costs. All costs in 2010 dollars. Vocational colleges includes technical colleges.

The data on average costs per degree show a similar volatility. Generally, average fiscal cost fell over the two decades, but the rate of change varied dramatically. The distribution of the growth rates also changed, such that the median and average growth rates varied in sign in some periods. There is some possibility of a substantial change in average cost over time, but this arises because the taxpayer has shifted the burden toward

student fees. Looking at the quartile of colleges that reduced costs the fastest, these colleges managed to reduce unit cost by between 1 percent and 56 percent over a four-year period. Again, however, these are not the same colleges. That is, colleges with big efficiency gains in one period are not the same as those with big efficiency gains in other periods. Even if there are modest improvements in college efficiency over time, these improvements appear to be spread across the sector rather than concentrated in a subset of consistently high-performing colleges.

The implications for efficiency can be seen by changing the mix of colleges, substituting out those colleges with relatively high average costs. An example of such change would be if the bottom quartile of colleges in terms of average cost replicated the performance of the median college. Output would increase slightly (the association between college output and performance is positive), but expenditures would decrease by only 4 percent. Thus, even a very large, possibly infeasible change in performance would have only a moderate effect on expenditures and efficiency.

#### **4. Enhancing Efficiency Across the Community College Sector**

##### **4.1 Accepting the One Big Fact**

To enhance efficiency across the community college sector, it is first necessary to accept the one big fact. With high returns, students should be encouraged to make greater investments in postsecondary education and not be dissuaded by fears of unsustainable debt. Of course, this does not imply that community college programs are always a good investment; some students over-invest in postsecondary education. Given the millions of students in higher education, some will have invested in programs that do not pay off, at least in terms earnings gains. But these students are included in the calculation of the policy-relevant average returns to postsecondary education. Moreover, even for this small subset of students for whom there is no monetary payoff, it may still be the case that they reap nonmonetary benefits that exceed the costs. Given the evidence on the heterogeneity of returns to community college, there is need for further inquiry into how and why students choose their educational pathways. However, this inquiry should start with the

assumption that students face constraints in making optimal investments in human capital and that policy should generally be directed at encouraging further enrollment rather than simply shifting students from low-yield to high-yield programs or colleges.

In addition, acceptance of the one big fact encourages a different interpretation of the student loan “crisis.” Without recognition of fact that the returns to college are very high, the idea of unsustainable debt may imply that states’ reduction of funding for higher education is an optimal decision, because some students would be better off forgoing college. Accepting the one big fact suggests that state spending on higher education should certainly not be reduced. (Heavy or increased student indebtedness also raises an important concern about equity over time. Is it fair that current generations should receive lower public investments than prior generations did, thus bearing a larger risk from their investment?) Yet, faced with the reality of state funding cuts, student borrowing should not fall; it should probably increase. Also, casting the loan crisis as profligate behavior—perhaps encouraged by colleges’ loose enrollment practices—is unhelpful to students who might be deterred from investing in college. This deterrent effect is likely to be especially strong for low-income students who are reluctant to take on debt.

Given the shift in the burden of payment, policy should be directed toward more accurate information about higher education options, requirements, prices, and financing. Students need to be more certain about the likely returns they will reap from investments in college. It is vital to give students more information so they can make good choices and so they can understand how best to take on and manage debt. This is particularly important given the heterogeneity of returns to colleges and programs and the fact that most community college students come from families that are limited in their experience of higher education.

Critically, providing more information is not only a matter of knowing which colleges to apply to or what programs may make a good fit. Part of the current information deficiency is that students do not understand what behaviors and competencies are required to complete college (and that colleges do not adequately convey this). Many students exhibit behavior indicating a lack of understanding of what is expected for a successful college experience. Many arrive at college academically underprepared and require remediation. Many fail to declare a major until after an

extended time in college. One third of all students at two- and four-year colleges transfer, typically without obtaining a credential at their college of first enrollment, and many students enroll in community college after beginning their studies at a four-year institution (Hossler et al., 2012). Many students take credits that are not required, either because they are unsure of the program requirements or because they cannot access the necessary courses. The majority of students at community colleges do not complete any program. Across all two-year institutions, only 30 percent of the cohort that entered college in 2007 completed an award within 150 percent of normal time (Snyder & Dillow, 2012, Table 345). These choices and outcomes suggest that community college students in particular do not have accurate expectations of what is needed for success in college. More information about the experience of college and a better understanding of students' own skills and competencies will help ensure more optimal investments. Community colleges should thus play an important role in providing structure and guidance to enrolled and prospective students.

#### **4.2 Rejecting the One Big Myth**

To enhance efficiency across the community college sector, it is also necessary to reject the one big myth. College is relatively expensive because it is a labor-intensive service, not because colleges are grossly inefficient. Of course, this does not imply that community colleges in particular cannot become more efficient over time. Some colleges apply superior practices and so are more efficient than others. However, there is no “silver bullet” for increasing efficiency or for identifying how less efficient colleges might become substantially more efficient.<sup>15</sup> The failure to reject the myth that higher education suffers from an efficiency crisis has led to reforms that attempt to make college prices lower by reducing costs and quality. There is very little supporting evidence for such reforms, so the first step in improving efficiency is to implement only those reforms for which there is evidence not only of effectiveness but also of cost-effectiveness.

Instead of attempting to cut expenditures more than quality, colleges should be attempting to increase quality more than expenditures. As noted above, policymakers

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<sup>15</sup> Clotfelter, Ladd, Muschkin, and Vigdor (2013) examined community colleges in North Carolina. They found that only a few colleges could be identified as high- or low-performing, with most being statistically indistinguishable; they also found that performance levels appear to be uncorrelated even with basic college characteristics such as size or expenditure.

should be skeptical that substantial enhancements in quality can be gained through resource reallocation, and they should understand that improvements in quality will necessitate additional resources.

Such an approach begins with the recognition that attending college through completion is a process. Students need to progress through a series of steps throughout the college experience, and they need instruction and guidance that help them take these steps wisely. Failure to complete college—as well as lengthened time-to-degree—reflects students’ inability to progress through the necessary steps required by colleges. In the most basic sense, colleges are more efficient if more students complete their programs in a timely fashion.

While colleges can become more efficient, the capacity to do so is very much constrained by students’ competencies upon entry. Simulations show that serving students who are underprepared to succeed in college—and who thus need substantial support to enter and progress through programs—is more costly than serving those who are “college-ready” (Belfield, Crosta, & Jenkins, 2013). The latter progress through college more quickly and complete their programs at higher rates. Reforms to remediation, which likely require more (not less) resources, are therefore essential, as are reforms that provide a better articulation between high school and college. Much of the potential efficiency gain would come from improvements at the high school level.

When students are already in college, other strategies are needed. Jenkins and Cho (2013) have tracked students’ pathways and have identified numerous barriers to student learning and student progression within college. These barriers include large numbers of remedial courses that do not count toward degrees, college-level courses within community college programs that do not fulfill degree requirements of related majors at destination transfer schools, and the earning of extraneous credits outside a program area that slows down credential completion. These barriers create inefficiencies; colleges should implement reforms that will alleviate them and thus increase completion rates and shorten time-to-degree. Reforms should include creating more educationally coherent program pathways that lead to student end goals, building on-ramps to help students get into a program of study quickly, and tracking student progress and providing feedback using information technology and reorganized advising. Although there is little proof that

such measures improve outcomes, these approaches are nevertheless based on principles of practice that are supported by research in behavioral economics, effective teaching and learning in higher education, and organizational effectiveness. Fundamentally, college reforms should focus on whatever practices will help students to progress more quickly to complete their program of study.

## **5. Conclusion**

Critics argue that college is becoming unaffordable because of wasteful practices, leading to higher tuition prices and a student loan crisis. Meanwhile, the high returns to college for both students and society are not widely acknowledged. In response, states have reduced funding to colleges, and colleges have begun spending less, often in ways that lead to deteriorating outcomes. Yet, as we have argued in this paper, the returns to postsecondary education are substantial, colleges are not demonstrably inefficient, and student loan balances are not generally unmanageable, especially among community college students. The policy focus for states and community colleges should therefore be on increased spending and improved outcomes rather than on lower spending. And potential students should generally be encouraged to pursue their higher education goals, not dissuaded because of the price. This conclusion does not imply that community college programs are always a good investment for students or that efficiency gains are impossible. Rather, it suggests that policy discussion should proceed from acceptance of the fact that returns to college are high and from rejection of the myth that colleges are wasteful.

There are many reasons why students do not enroll in college or why they drop out without completing an award. But these reasons should not include the sense that college programs are too expensive or that the debt incurred will never be paid off. The short-term and long-term substantial returns to postsecondary education need to be better recognized. This is especially the case among low-income and first-generation students, who disproportionately enroll in community colleges. These populations often have little direct knowledge of the returns to college and have high debt aversion.

In terms of college reforms, there is undoubtedly scope for community colleges to be more efficient—as there almost certainly is for every sector and possibly every enterprise—and policy should be directed toward ensuring greater efficiency where possible. However, to do this, it is necessary to understand the economics of higher education and exactly how efficiency gains might be made. Presently, there is very little evidence policymakers can use to identify efficiency savings. Hence, the charge that colleges are inefficient is not justifiable and does not improve policy. Recent reforms rely heavily on cost-cutting, which is likely to have the strongest impact on community college students, who are often underprepared for college. Reliance on adjunct faculty, larger classes, and online learning puts greater responsibility on students to direct their own learning and navigate college independently. Community college students, particularly those needing remediation, are not well prepared for this; instead, they need more structure and guidance.

Absent any specific or targeted reforms that might improve efficiency, it is essential that broad policy initiatives go in the right direction—toward greater financial support for colleges and efficiency reforms that improve quality. Our reading of the current policy discussion is that this is not happening, which has serious ramifications for community colleges and the higher education sector generally.

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