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## Income-Driven Repayment and the Public Financing of Higher Education

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# ARTICLES

## Income-Driven Repayment and the Public Financing of Higher Education

JOHN R. BROOKS\*

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#### INTRODUCTION

The cost of higher education has been rising faster than inflation for decades and is likely to continue to do so despite reform efforts.<sup>1</sup> This has negative distributional consequences given that higher education is a quasi-public good that should be consumed widely. As the costs continue to rise, higher education will become increasingly unaffordable to those at the lower end of the income distribution, even though as a matter of justice and economic policy, higher education ought to be available to all. Full public financing of higher education would be an obvious answer to this distributional problem, but the cost renders that close to politically impossible.

But, the federal government has, to a first approximation, *already* created a system of full public financing of higher education paid for with progressive taxation: income-driven repayment student loan programs, such as Income-Based Repayment (IBR) and Pay As You Earn (PAYE). In 2010, the federal government essentially took over the student loan industry,<sup>2</sup> and as of 2012, federal Direct Loan and Grad PLUS Loan<sup>3</sup> borrowers may choose to pay no more than 10% of their discretionary income to service those loans, with forgiveness of any remaining debt after a maximum of twenty years for any new borrower regardless of degree, career, or debt load.<sup>4</sup> Thus, higher-education

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1. See *infra* Part I.B.

2. See *infra* note 124 and accompanying text.

3. These are the primary student loan products offered by the federal government. PAYE, IBR, and the other income-driven repayment programs are opt-in programs available to any new borrower of these loans. See *infra* Part III.A.

4. Graduates in public service careers can have their debt forgiven after ten years. See *infra* note 141. The older Income-Contingent Repayment program provides for forgiveness after twenty-five years, see *infra* note 126 and text accompanying notes 126–27, though that program is obsolete for new

tuition is paid by the government and funded with something that looks much like a 10% tax on income, though this scheme is almost entirely separate from the nominal “spending” and “taxing” categories, respectively.

Should income-driven repayment become widely adopted,<sup>5</sup> higher-education costs will ultimately be paid by former students partly as a function of their income, with any remaining costs borne by taxpayers generally. But the payments from the government would be treated as loans, and payments to the government would be treated as payments of loan principal and interest. Thus, the spending will remain largely off budget.<sup>6</sup> Despite these optics, tuition will be paid out of what is essentially progressively raised tax revenue.<sup>7</sup>

This model for provision of a public or quasi-public good differs from the classic allocative model—simply paying for the good out of general revenue—and may offer a compelling approach for large-scale public good provision in an era of rising costs and tightening budgets. In this model, what is in effect redistributive public spending funded with progressive taxation is structured as individual expenditures to private entities, guided by subsidies, smaller taxes, and regulation. I refer to this as “quasi-public spending,” and I suggest here (and develop more fully in other writing) that quasi-public spending may in some cases be both more economically efficient and more politically palatable than traditional spending.<sup>8</sup>

Leaving aside for a moment the structure of collective spending, why is higher education<sup>9</sup> a worthy subject of government intervention at all? Because higher education is a “quasi-public good”<sup>10</sup> and thus suitable for collective spending. The substantial positive externalities from higher education make widespread provision of the good an issue of public concern. Higher education

borrowers. New rules extend the repayment period to twenty-five years for students with graduate-school debt. *See infra* note 134 and accompanying text.

5. As of this writing, only 17% of federal student loans are in an income-driven repayment program, though enrollments are accelerating. *See* Federal Student Aid, *Direct Loan Portfolio by Repayment Plan*, U.S. DEP’T EDUC., <https://studentaid.ed.gov/sa/sites/default/files/fsawg/datacenter/library/DLPortfoliobyRepaymentPlan.xls> (last visited Sept. 18, 2015).

6. The only budget item is the present value of the amount by which outlays exceed revenues over the lifetime of the loan; thus, the budget reflects only the cost of forgiveness, not the full nominal amount of the loan. *See infra* Part III.B.

7. That some students may opt out by simply paying cash is an important complication to this view, which I address in Part IV.A.2.

8. *See infra* Part IV.A.3; John R. Brooks, *Quasi-Public Spending*, 104 GEO. L.J. (forthcoming June 2016) (on file with author).

9. As used in this Article, “higher education” refers not just to traditional four-year college and university programs but also to any sort of post-secondary education, including community colleges, associate degree programs, and vocational and professional training.

10. *See, e.g.*, CAMPBELL R. MCCONNELL & STANLEY L. BRUE, *ECONOMICS: PRINCIPLES, PROBLEMS, AND POLICIES* 73 (17th ed. 2008) (“[Q]uasi-public goods . . . could all be priced and provided by private firms through the market system. But . . . because they all have substantial positive externalities, they would be underproduced by the market system. Therefore, government often provides them to avoid the underallocation of resources that would otherwise occur.”). Quasi-public goods are distinguishable from true public goods because they are not strictly nonexcludable and nonrivalrous, which is the classic definition of a public good. *See* HAL R. VARIAN, *MICROECONOMIC ANALYSIS* 414 (3d ed. 1992).

is increasingly necessary to generate the requisite skills for our technology- and creativity-driven economy and ought also to be a tool of social mobility. Relying only on a private market would likely lead to a suboptimal amount of education because individuals may not internalize those positive externalities when making the decision to purchase, and they are often liquidity constrained. There are good reasons to think that the United States is currently underproducing high-skilled workers, and that this is one (though certainly not the only) cause of growing income inequality.<sup>11</sup>

At the same time, the cost structure of higher education affects our ability to expand access. Higher-education costs have been rising faster than inflation for as long as anyone can remember.<sup>12</sup> Reformers have suggested a number of ways to try to rein in costs. Although some of these reforms may succeed in “bending the cost curve,” as it were, there are good reasons to believe that we cannot easily stop or reverse the growth in costs entirely. This is in part because of Baumol’s cost disease, an economic phenomenon in which industries with relatively low labor productivity—like education, health care, and services in general—see prices rise faster than inflation, potentially putting a strain on household budgets.<sup>13</sup> Thus, without distributional reforms, we are likely to be faced with the disturbing case of higher education being rationed only to those with the highest ability or from the richest families, even while the demand for skills grows. As a matter of justice and economic policy, this is precisely the sort of situation that calls for government intervention. The costs of higher education and the associated student-loan-debt burdens carried by former students are large drags on economic growth, social mobility, skills generation, and simply the well-being of vast numbers of past, current, and future students.

The current approach to this issue has been to provide upfront need-based aid, such as Pell Grants, tax credits, and institutional financial aid, but these have not kept up with cost growth.<sup>14</sup> More importantly, need-based grants are a poorly targeted way to subsidize higher education.<sup>15</sup> They address only access problems due to parental income and wealth, without regard for the programmatic and distributional goals of supporting graduates entering low-wage careers. A child of schoolteachers may go on to be a schoolteacher too or a hedge fund manager, and only one of these ought to be subsidized. Moreover, students with high debt face a higher risk of destitution if things go badly when it is too late for Pell Grants to help.

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11. See *infra* Part I.A.

12. See, e.g., ROBERT B. ARCHIBALD & DAVID H. FELDMAN, WHY DOES COLLEGE COST SO MUCH? 19–32 (2011); *infra* Part I.B.

13. WILLIAM J. BAUMOL, THE COST DISEASE: WHY COMPUTERS GET CHEAPER AND HEALTH CARE DOESN'T (2012); see also THOMAS PIKETTY, CAPITAL IN THE TWENTY-FIRST CENTURY 88 (Arthur Goldhammer trans., 2014); W. J. Baumol & W. G. Bowen, *On the Performing Arts: The Anatomy of Their Economic Problems*, 55 AM. ECON. REV. 495, 500 (1965); *infra* text accompanying notes 52–55.

14. See *infra* text accompanying notes 93–107.

15. See *infra* Part IV.A.

Income-driven repayment programs such as PAYE,<sup>16</sup> by contrast, make the judgment of need *ex post*, once a graduate is using the benefits of higher education to earn income. Graduates with higher incomes pay back the full cost of their educations (and possibly more), whereas those with lower income—whether by choice or luck—do not. In this way, income-driven repayment is not so different from our main tax system; we all receive benefits of government, but the costs are paid for in a progressive way.

Of course, as this Article will discuss, the actual PAYE program differs from that simple approximation in important ways. But framing income-driven repayment as, in part, a tax on income to pay for higher education forces us to ask whether higher education ought to be publicly and progressively financed, whether PAYE is the way to do it, and whether there are potential reforms to PAYE to make it operate better. Based on that analysis, this Article makes several policy recommendations designed to increase the effectiveness and equity of PAYE, including requiring a discount on tuition paid with PAYE-eligible Direct Loans, lifting the limits on undergraduate borrowing, raising the statutory loan interest rate, and shifting funding from Pell Grants toward PAYE.

These last two recommendations are perhaps counterintuitive and deserve a bit more of a preview. First, under PAYE, the only borrowers who actually pay the full interest amount are those with relatively high incomes; all others pay only 10% of discretionary income,<sup>17</sup> with limited interest accrual and capitalization. Thus, a higher interest payment can act as a tool of redistribution, and we need not worry about struggling graduates with high interest payments. Second, by focusing on postgraduation income, rather than prematriculation parental income and wealth,<sup>18</sup> PAYE is more targeted to both the programmatic and distributional goals of the program. The availability of federal loans removes *ex ante* financial barriers to attendance, and graduates who earn high incomes have no need *ex post*.

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16. Terminology is a challenge with this Article because there are several different programs available, and they continue to evolve. Because “Pay As You Earn” is the latest version, and the version that the administration is proposing extending to more borrowers, I typically use “PAYE” to refer to the current program, though the administration has recently instituted a Revised Pay As You Earn plan (REPAYE). *See infra* note 134. When relevant, I will distinguish PAYE from the earlier “Income-Based Repayment” and “Income-Contingent Repayment” programs. Following the U.S. Department of Education’s terminology, I also use “income-driven repayment” as a general term to describe the category of loan in which payments are a function of income.

17. “Discretionary income” is Adjusted Gross Income minus 150% of the relevant poverty line. *See infra* note 136 and accompanying text. Thus, a borrower must be earning at least 150% of the poverty line before any payment is owed on a loan.

18. Pell Grants are calculated based in part on student and parental income and assets. *See infra* note 94.

Although this Article concludes that income-driven repayment is both theoretically supported and an improvement over our current system, its success is not free from doubt—far from it. Adverse selection problems—particularly from students from wealthy families and those entering high-income fields—and moral hazard problems—particularly from the schools themselves—have the potential to undermine the program. Thus, regulation and monitoring must play an important role.

This Article makes two main contributions to the literature. First, it is, to my knowledge, the first article in the legal literature to systematically analyze this huge new entitlement benefit that will affect millions of people and hundreds of billions of dollars. Second, in framing income-driven repayment as a tax instrument, this Article shows that PAYE should be viewed as an integrated part of the public finance system, not merely as a loan program. This framework then provides the basis for a novel analysis of the effectiveness, equity, and economic efficiency of the program, and for several new policy recommendations to make PAYE more effective and equitable.

This Article proceeds as follows. Part I presents an argument for why public, collective spending on higher education is necessary and likely unavoidable. Part II briefly reviews the evolution of higher-education finance, focusing on the shift from government and charitable funding toward tuition- and loan-based funding. Part III explains the operation of the PAYE program and then frames it not as a loan-forgiveness program, but rather as a tax-and-transfer program. Part IV presents an argument for why income-driven repayment may be an appropriate method for public funding of higher education by focusing on the goals of increasing higher education while distributing the costs equitably and efficiently. Based on these insights, Part IV also recommends specific changes to improve the PAYE program and better manage its risks.

#### I. THE INCREASING NECESSITY—AND COST—OF HIGHER EDUCATION

As this Article will discuss, PAYE is, in essence, a public financing program for higher-education tuition with a somewhat progressive form of cost-sharing. But a prior question is *whether* such an intervention is justified. In this Part, I review the economics literature to explain briefly why higher education is both necessary (in section A) and expensive (in section B), thus making the distribution of its costs a particular issue of public importance. There are, of course, many arguments for the general importance of higher education;<sup>19</sup> here I focus particularly on economic and distributional issues that are relevant to the

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19. For example, higher education can increase democratic and community participation, egalitarian attitudes, mental and physical health, and parenting and family-planning choices. *See, e.g.*, JOHN BYNNER & MURIEL EGERTON, INST. EDUC., UNIV. LONDON, *THE WIDER BENEFITS OF HIGHER EDUCATION* (2001), available at [http://webarchive.nationalarchives.gov.uk/20100202100434/http://www.hefce.ac.uk/pubs/hefce/2001/01\\_46.htm](http://webarchive.nationalarchives.gov.uk/20100202100434/http://www.hefce.ac.uk/pubs/hefce/2001/01_46.htm).



question of public financing. In section C, I turn to the question of whether technological and other changes could bring down higher-education costs.

#### A. THE NEED FOR KNOWLEDGE AND SKILLS

Although arguments for higher education abound, here I focus on three: the ever-rising quantity of knowledge and skills, the demand for that knowledge and those skills in the economy, and the connection between higher education and social mobility.

First, the volume of knowledge is constantly increasing; thus, we should expect the volume of schooling to also increase.<sup>20</sup> Each year there is more scientific knowledge to teach, more history, more technology, more literature, more ways of doing business, more trades, and more law. The content mix can shift to reflect changes in knowledge, of course. For example, when Harvard was founded, the curriculum was largely theology, Latin, and Greek,<sup>21</sup> and calculus had not yet been invented.<sup>22</sup> But to a significant degree, knowledge and skills are cumulative. Today's nurse needs to understand not only basic anatomy but also how to operate diagnostic technology, how to manage insurance coding, and how to dispense an ever-increasing number of drugs. A primary school teacher is responsible not only for reading, writing, and arithmetic, but also pedagogical theory, problem solving, technological literacy, and management of psychological and behavioral disorders, as well as navigating complex regulations, like No Child Left Behind. A marketer has to understand the technology behind online advertising and analyze huge databases of market research and usage data. An automobile mechanic must understand increasingly complex technology, including both diagnostic tools and the cars themselves. And so on. The world is only getting more complex and technologically sophisticated, and educational requirements must grow along with that.

The public has a stake in expanding higher education because of the social benefits from an educated workforce and population, whether measured in terms

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20. See William F. Massy & Andrea K. Wilger, *Productivity in Postsecondary Education: A New Approach*, 14 EDUC. EVALUATION & POL'Y ANALYSIS 361, 366 (1992) (discussing the "growth force" as a companion to the cost disease, whereby "[n]ew knowledge leads to the need for greater technology, new classes, and even new disciplines. Yet old knowledge remains relevant"); see also ARCHIBALD & FELDMAN, *supra* note 12, at 80–81 (discussing Massy & Wilger's "growth force").

21. See J. Anthony Lukas, *80 Years of Curriculum Changes Produces Extensive Study Areas*, HARV. CRIMSON (Jan. 8, 1953), <http://www.thecrimson.com/article/1953/1/8/80-years-of-curriculum-changes-produces>.

22. Although elements of what came to be known as calculus go back to ancient times, the cocreators of calculus are generally agreed to be Isaac Newton, who published his *Principia Mathematica* in 1687, and Gottfried Wilhelm Leibniz, who developed his theories beginning in the 1670s and published in 1684. See A. RUPERT HALL, *PHILOSOPHERS AT WAR: THE QUARREL BETWEEN NEWTON AND LEIBNIZ* (1980). Harvard University was founded in 1636. *History*, HARVARD, <http://www.harvard.edu/about-harvard/harvard-glance/history> (last visited Sept. 18, 2015).



of wages for all workers,<sup>23</sup> economic growth,<sup>24</sup> or just overall well-being.<sup>25</sup> Education is a primary example in the economics literature of a “quasi-public good”—a good that, although not strictly speaking a nonrivalrous, nonexcludable classic public good, still has such substantial positive externalities and spillover effects as to be within government’s purview.<sup>26</sup> There is a broad social consensus that K–12 education should be universal and publicly funded, for example, and as human knowledge expands beyond the capacity of primary and secondary education, the same argument could apply to higher education.

Second, there is a deep relationship between educational attainment and income inequality<sup>27</sup> due to skill-biased technological change.<sup>28</sup> That is, the most highly valued skills today tend to be those involved with manipulating more advanced technologies, such as computer programming and industrial engineering. Old-line factory jobs increasingly require more advanced technical skills, such as the ability to operate a computer numerical control (CNC) machine.<sup>29</sup>

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23. See, e.g., Daron Acemoglu & Joshua Angrist, *How Large Are the Social Returns to Education? Evidence from Compulsory Schooling Laws 2* (Nat’l Bureau of Econ. Research, Working Paper No. 7444, 1999) (finding, using ordinary least-squares (OLS) estimates, that a one-year increase in average schooling rates correlates with a 7% increase in average wages); Enrico Moretti, *Social Returns to Education and Human Capital Externalities: Evidence from Cities 4* (Univ. of Cal., Berkeley Ctr. for Labor Econ., Working Paper No. 9, 1998) (finding that a 1% increase in the share of workers with college degrees increase the wages of high school dropouts by 2.2%, high school graduates by 1.3%, and those with some college by 1.2%). But see Acemoglu & Angrist, *supra*, at 16–17 (finding almost no social returns when using an instrumental variables approach rather than OLS).

24. See, e.g., Robert J. Barro, *Determinants of Economic Growth: A Cross-Country Empirical Study* (Nat’l Bureau of Econ. Research, Working Paper No. 5698, 1996); Andrea Bassanini & Stefano Scarpetta, *Does Human Capital Matter for Growth in OECD Countries? Evidence from Pooled Mean-Group Estimates 2* (Org. for Econ. Co-operation & Dev., Working Paper No. 282, 2001) (finding that one additional year of schooling leads to a 6% increase in overall output).

25. See, e.g., BYNNER & EGERTON, *supra* note 19, at 39; Adriana Lleras-Muney, *The Relationship Between Education and Adult Mortality in the United States*, 72 REV. ECON. STUD. 189 (2005) (finding a causal relationship between education levels and adult mortality levels).

26. See *supra* note 10.

27. On data showing increases in income inequality, see, for example, CLAUDIA GOLDIN & LAWRENCE F. KATZ, *THE RACE BETWEEN EDUCATION AND TECHNOLOGY* 47–49 figs.2.1, 2.2 & 2.3 (2008); PIKETTY, *supra* note 13, at 291–96; Stephen B. Cohen, *Inequality and the Deficit*, 132 TAX NOTES 273, 273–80 (2011) (summarizing research).

28. See, e.g., ARCHIBALD & FELDMAN, *supra* note 12, at 56–60; GOLDIN & KATZ, *supra* note 27, at 89–125. To be clear, this is not the only explanation. Other factors include globalization forces, both by increasing the earnings of those with high skills and by increasing the supply of low-skilled workers through outsourcing and immigration; the decline of unions; the erosion of the federal minimum wage; and new tax- and accounting-driven executive compensation arrangements. See GOLDIN & KATZ, *supra* note 27, at 90. A particularly prominent alternative explanation is the growth in capital income (and the income of managers of capital) relative to labor income, given the extreme concentration of capital ownership. See PIKETTY, *supra* note 13, at 25–27. Piketty questions whether the Goldin & Katz thesis can adequately explain observed features of income inequality in the U.S. *Id.* at 314–15. However, Piketty’s focus is particularly on the top 1% of incomes, rather than more moderately high earners, and he acknowledges that the Goldin & Katz thesis likely does partly explain the more general wage premium for college graduates. *Id.* The skyrocketing incomes and wealth of the top 1% (or even the top 0.1%) likely have a different cause, but that is not crucial for the argument in this Article.

29. See Tom Ashbrook, *The New Blue Collar Jobs of Tomorrow*, *On Point*, WBUR (Oct. 14, 2014, 10:00 AM), <http://onpoint.wbur.org/2014/10/14/blue-collar-jobs-unemployment-rate>. CNC machines

Even jobs that one might consider low-tech, like law or fashion design, have increasingly large technological components (consider Westlaw or computer-aided design, respectively) and compete for talented people who could choose different professions.<sup>30</sup> Thus, high-skilled workers are in high demand by businesses.

In recent decades, however, the supply of high-skilled workers has not kept up with demand, and this is likely a source of income inequality.<sup>31</sup> For most of the twentieth century, supply largely kept up with demand, which helped to keep inequality in check; there was no need to pay a large premium for skills if there were plenty of people with such skills.<sup>32</sup> In earlier periods, the demand for skills was met through increasing high school graduation rates and female labor-force participation;<sup>33</sup> today we must look to higher education. Our education system has not been producing enough skilled workers to meet demand, and this drives up the premium for skills, and in turn, income inequality.<sup>34</sup> According to the Georgetown University Center on Education and the Workforce, getting a bachelor's degree adds a median of \$1 million to lifetime earnings, and even just attending college can add as much as \$250,000.<sup>35</sup> Furthermore, the unemployment rate for those with a bachelor's degree or higher is less than half the rate for those with only a high-school degree<sup>36</sup>—another sign of high demand for skills.

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are used in milling or machining manufacturing components that require highly precise and accurate specifications, such as parts for computers or medical devices. See *Numerical Control*, WIKIPEDIA, [https://en.wikipedia.org/wiki/Numerical\\_control](https://en.wikipedia.org/wiki/Numerical_control) (last modified Oct. 29, 2015). Some postsecondary school is required for CNC machine operators. See, e.g., MaryJo Webster, *Where the Jobs Are: The New Blue Collar*, USA TODAY, <http://www.usatoday.com/story/news/nation/2014/09/30/job-economy-middle-skill-growth-wage-blue-collar/14797413> (last visited Oct. 10, 2015).

30. If an industry is competing with technology-driven industries for skilled workers, then it will have to pay similar wages to attract workers who could alternatively make more money in a technology-driven field. This is a subset of the larger cost disease story told *infra* Part I.B.

31. See GOLDIN & KATZ, *supra* note 27, at 91–95; see also *id.* at 293–96 (presenting a model for predicting wage differentials based on fluctuations in both supply and demand for skilled workers).

32. See *id.* at 296–304 (arguing that the college wage premium is driven mostly by changes in relative supply of college-educated workers, rather than in relative employer demand for skills).

33. See ARCHIBALD & FELDMAN, *supra* note 12, at 59–60; GOLDIN & KATZ, *supra* note 27, at 164, 168.

34. See GOLDIN & KATZ, *supra* note 27, at 291. This process also feeds back on itself and on the growth of income from capital. The high incomes to those with high skills are reinvested back into the economy in the form of capital. *Id.* at 40. This changes the capital-to-labor ratio in the economy, increasing capital's share, and the concentration of capital is another significant driver of income inequality. See PIKETTY, *supra* note 13, at 220–22. Furthermore, the investment in capital likely also has an indirect effect on labor productivity and the demand for yet more skills. This potentially exacerbates the labor income inequality caused by skill-biased technological change.

35. ANTHONY P. CARNEVALE, STEPHEN J. ROSE & BAN CHEAH, GEORGETOWN UNIV. CTR. ON EDUC. & WORKFORCE, *THE COLLEGE PAYOFF: EDUCATION, OCCUPATIONS, LIFETIME EARNINGS 3–4* (2011), available at <http://cew.georgetown.edu/report/the-college-payoff>.

36. In August 2015, the unemployment rates were 2.5% and 5.4%, respectively. See *Labor Force Statistics from the Current Population Survey, Table A-5: Employment Status of the Civilian Noninstitutional Population 25 Years and Over by Educational Attainment, Seasonally Adjusted*, BUREAU LAB. STAT., <http://www.bls.gov/web/empstat/cpseea05.htm> (last modified Sept. 4, 2015).

Third, higher education is (or ought to be) a force for social mobility by giving more young people access to the college wage premium.<sup>37</sup> Unfortunately, the data show that there is still a significant barrier to higher education for students from low-income families; thus, the current higher-education system may actually be hindering, rather than promoting, social mobility. In 2013, only 48.8% of students from families in the lowest income quintile enrolled in college, compared with 79.5% of students from families in the top income group.<sup>38</sup> The gap for college completion is even larger because high-income students are more likely to graduate.<sup>39</sup>

Arguments differ as to the source of the barrier. One possible reason is simply that students from less privileged backgrounds may not be as prepared for college, either academically or in terms of the institutional knowledge of how to apply and then how to seek services once enrolled.<sup>40</sup> Reforms to address these problems are vital but beyond the scope of this Article. A more relevant reason for this Article's purposes is the cost; many prospective students balk at the cost of tuition or the prospect of taking on large amounts of debt.<sup>41</sup> In addition, students who have to work during college to support themselves may be disadvantaged, both academically and socially, and may be less likely to

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37. See JULIA B. ISAACS, ISABEL V. SAWHILL & RON HASKINS, BROOKINGS INST., GETTING AHEAD OR LOSING GROUND: ECONOMIC MOBILITY IN AMERICA 95 (2008), available at [http://www.brookings.edu//media/Research/Files/Reports/2008/2/economic-mobility-sawhill/02\\_economic\\_mobility\\_sawhill.PDF](http://www.brookings.edu//media/Research/Files/Reports/2008/2/economic-mobility-sawhill/02_economic_mobility_sawhill.PDF) (“Only 14 percent of the adult children without a college degree from the bottom quintile of parental income reach the top two quintiles. By contrast, 41 percent of adult children from the bottom quintile make it to the top two quintiles if they earn a college degree.”).

38. Nat'l Ctr. for Educ. Statistics, *Table 302.30. Percentage of Recent High School Completers Enrolled in 2-year and 4-year Colleges, by Income Level: 1975 through 2013, Digest of Education Statistics 2014*, U.S. DEP'T EDUC. (July 2014), [http://nces.ed.gov/programs/digest/d14/tables/dt14\\_302.30.asp](http://nces.ed.gov/programs/digest/d14/tables/dt14_302.30.asp). These percentages are down from their peaks. In 2008, 56.1% of low-income high school graduates enrolled in college, and in 2010, 83% of high-income graduates did. *Id.*

39. See Martha J. Bailey & Susan M. Dynarski, *Inequality in Postsecondary Education*, in WHITHER OPPORTUNITY? RISING INEQUALITY, SCHOOLS, AND CHILDREN'S LIFE CHANCES 117, 122 fig.6.4 (Greg J. Duncan & Richard J. Murnane eds., 2011).

40. See, e.g., SUZANNE METTLER, DEGREES OF INEQUALITY: HOW THE POLITICS OF HIGHER EDUCATION SABOTAGED THE AMERICAN DREAM 25–26 (2014); David Leonhardt, *A Case Study in Lifting College Attendance*, N.Y. TIMES (June 10, 2014), <http://www.nytimes.com/2014/06/10/upshot/a-case-study-in-lifting-college-attendance.html> (discussing Delaware's program to increase the number of low-income high school students applying for college).

41. See GOLDIN & KATZ, *supra* note 27, at 349; Susan Dynarski, *The Behavioral and Distributional Implications of Aid for College*, 92 AM. ECON. REV. 279, 281 (2002) (finding that each subsidy of \$1000 in tuition costs increases college attendance by four to six percentage points); Thomas J. Kane, *College Cost, Borrowing Constraints and the Timing of College Entry*, 22 E. ECON. J. 181 (1996) (finding that college entry by lower income students was delayed in states with higher tuition costs, in part due to borrowing constraints); Christopher Avery et al., *Cost Should Be No Barrier: An Evaluation of the First Year of Harvard's Financial Aid Initiative* 10 (Nat'l Bureau of Econ. Research, Working Paper No. 12029, 2006) (finding that Harvard had significantly more applicants from low-income backgrounds after instituting a policy of zero cost for families making less than \$40,000, and lower costs for families making \$40,000–\$65,000, see *infra* text accompanying notes 104–05).

graduate.<sup>42</sup> In summary, higher education can lead to greater skills and knowledge, lower income inequality, and greater social mobility, each of which our society needs badly.

#### B. THE COST OF HIGHER EDUCATION

At the same time that higher education has become increasingly necessary, it has also become increasingly expensive, with tuition and fees growing between two and five percentage points above inflation for decades.<sup>43</sup> Average four-year college tuition, fees, room, and board in 2013 ranged from around \$17,500 for in-state public universities to \$35,000 for private universities,<sup>44</sup> and tuition and fees alone can be \$50,000 or more for top-tier private colleges and universities.<sup>45</sup> Tuition for graduate and professional schools can top \$66,000.<sup>46</sup> Tuition is, of course, merely a list price subject to discounting, but higher-education costs have grown at a similar rate, and those costs should also include, for example, increased cost of living and technology and book requirements.<sup>47</sup> Because of that, higher education takes up an increasing percentage of household budgets.<sup>48</sup>

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42. See METTLER, *supra* note 40, at 13; Ralph Stinebrickner & Todd R. Stinebrickner, *Working During School and Academic Performance*, 21 J. LAB. ECON. 473 (2003) (finding evidence that increased employment during college decreases academic performance).

43. COLL. BD., TRENDS IN COLLEGE PRICING 16 fig.5 (2014), available at <http://trends.collegeboard.org/sites/default/files/2014-trends-college-pricing-final-web.pdf>.

44. Nat'l Ctr. for Educ. Statistics, *Table 330.20. Average Undergraduate Tuition and Fees and Room and Board Rates Charged for Full-time Students in Degree-granting Postsecondary Institutions, by Control and Level of Institution and State or Jurisdiction: 2012-13 and 2013-14, Digest of Education Statistics*, U.S. DEP'T EDUC. (Mar. 2015), [http://nces.ed.gov/programs/digest/d14/tables/dt14\\_330.20.asp](http://nces.ed.gov/programs/digest/d14/tables/dt14_330.20.asp). The comparable number for public universities 1964–1965 was \$1,051, or about \$8,000 in 2013 dollars—meaning that the real inflation-adjusted price has more than doubled. See NAT'L CTR. FOR EDUC. STATISTICS, U.S. DEP'T OF EDUC., DIGEST OF EDUCATION STATISTICS 317 tbl.306 (1995), available at <http://nces.ed.gov/pubs95/95029.pdf>.

45. The average tuition and fees of the top ten most expensive schools 2014–2015 was \$49,243. Susannah Snider, *10 Most, Least Pricey Private Colleges and Universities*, U.S. NEWS & WORLD REP. (Sept. 9, 2014, 9:00 AM), <http://t.usnews.com/Z2wapn> (last visited Aug. 2, 2015). Columbia University charged \$51,008. *Id.*

46. Harvard Business School tuition and fees totaled \$66,348 for 2014–2015. Susannah Snider, *10 Most Expensive Private Business Schools*, U.S. NEWS & WORLD REP. (Aug. 19, 2014, 9:00 AM), <http://www.usnews.com/education/best-graduate-schools/the-short-list-grad-school/articles/2014/08/19/10-most-expensive-private-business-schools>.

47. *Table 2.4.4: Price Indexes for Personal Consumption Expenditures by Type of Product, National Data*, BUREAU ECON. ANALYSIS, <http://www.bea.gov/iTable/iTableHtml.cfm?reqid=9&step=3&isuri=1&903=69> (last revised Aug. 6, 2015) (showing the nominal costs, including both personal expenditures and government spending); ARCHIBALD & FELDMAN, *supra* note 12, at 83 fig.61. Student tuition net of grants and aid has grown somewhat less than costs and list prices but has still tended to rise faster than inflation. See COLL. BD., *supra* note 43, at 23 fig.12 (showing student increases in net tuition, fees, room, and board for public four-year institutions). The net tuition, fees, room, and board amounts for public two-year and private four-year institutions actually fell for 2007–2008 and 2010–2011, but in both cases have started to rise again. See *id.* at 22, 24.

48. See ARCHIBALD & FELDMAN, *supra* note 12, at 194 tbl.12.2.

There are a number of possible explanations for the cost growth, including the addition of amenities and services provided by schools,<sup>49</sup> lack of price sensitivity by students when paying with debt and aid,<sup>50</sup> and university administration.<sup>51</sup> But a particularly important driver of cost growth is an economic phenomenon known as Baumol's cost disease.

The cost disease claims that wage growth in high-productivity industries such as manufacturing also puts upward pressure on wages economy-wide, including in low-productivity service industries such as education. But because output per worker in service industries rises only slowly or not at all, prices instead have to rise to pay those higher wages. A professor cannot grade exams or give lectures appreciably faster today than in 1900.<sup>52</sup> But should a university therefore freeze professors' real wages, it would after some time find its professors lured away by, say, Apple or Google, where output per worker is increasing.<sup>53</sup> In order for professors' salaries to grow in real terms, education prices have to grow faster than inflation, and over time total higher-education spending becomes a greater percentage of household budgets and overall GDP.<sup>54</sup> Other high-labor, low-productivity growth industries, such as health care and legal services, have also

49. See, e.g., METTLER, *supra* note 40, at 9; RICHARD VEDDER, GOING BROKE BY DEGREE: WHY COLLEGE COSTS TOO MUCH 44 (2004). But see discussion *infra* Part I.C (regarding the changing nature of "higher education" as a bundle of goods).

50. See ARCHIBALD & FELDMAN, *supra* note 12, at 201–06 (citing William J. Bennett, *Our Greedy Colleges*, N.Y. TIMES (Feb. 18, 1987), <http://www.nytimes.com/1987/02/18/opinion/our-greedy-colleges.html>) (discussing the "Bennett Hypothesis" that colleges just soak up federal financial aid by charging higher tuition); VEDDER, *supra* note 49, at 20–21, 26; WILLIAM ZUMETA ET AL., FINANCING AMERICAN HIGHER EDUCATION IN THE ERA OF GLOBALIZATION 24 (2012) (discussing the "revenue theory of costs," whereby "institutions will find ways to spend whatever revenues they can acquire in the pursuit of such value-driven goals as educational quality"); David O. Lucca, Taylor Nadauld & Karen Shen, *Credit Supply and the Rise in College Tuition: Evidence from the Expansion of Federal Student Aid Programs* 26, 40 tbl.7 (Fed. Reserve Bank of N.Y., Staff Report No. 733, 2015) (finding that as much as 65% of the value of student loans are passed through to schools as higher tuition); Richard Vedder & Matthew Denhart, *Why Does College Cost So Much?*, CNN, <http://www.cnn.com/2011/12/02/opinion/vedder-college-costs/index.html> (last updated Dec. 2, 2011, 9:22 AM) ("When some [sic] else is paying a lot of the bills, students are less sensitive to the price, thus allowing the colleges to care less about keeping prices under control."). Although the power of this effect on current tuition levels is disputed, whatever effect there has been will likely be larger under an income-driven repayment program because students may be even less sensitive to price. I discuss this issue and propose a solution in Part IV.C.3.

51. See VEDDER, *supra* note 49, at 44.

52. There are, though, some productivity improvements in higher education through the use of technology. I return to these issues in more detail in Part I.C.

53. For the sake of argument, I am abstracting away from some of the particulars of the academic job market, such as the glut of Ph.D.'s, which would suggest that there is perhaps enough supply of labor that wage growth would be limited. But the market is complex; different fields have different supply-and-demand dynamics, and it may be that the number of effective teachers and researchers is much smaller than simply the number of Ph.D.'s. See, e.g., WILLIAM G. BOWEN & JULIE ANN SOSA, PROSPECTS FOR FACULTY IN THE ARTS AND SCIENCES: A STUDY OF FACTORS AFFECTING DEMAND AND SUPPLY, 1987 to 2012 (1989). Furthermore, real wages for professors have risen over the long term.

54. See ARCHIBALD & FELDMAN, *supra* note 12, at 193–95 (showing that percentage of household income going to higher education has generally increased over time); BAUMOL, *supra* note 13, at 26.



seen similar growth in real prices.<sup>55</sup>

Another way to think of the cost disease is as essentially an accounting identity. If inflation is the weighted average price growth in a bundle of goods and services, and the prices for some of those goods and services are rising slower than inflation or actually dropping, then by definition, others must be rising faster than inflation no matter what the actual rate of inflation.<sup>56</sup> Of course, this does not mean that education *must* be one of those fast-rising services, but it is telling that, descriptively, “the list of those items whose real costs are rising remains roughly constant, decade after decade, while the same appears to be true of those items whose real costs are falling.”<sup>57</sup> The cost disease story helps to explain why.

That said, one need not fully accept the cost-disease argument to believe that some intervention in higher education is necessary. Higher-education costs are rising faster than inflation, and that alone demands a response.

How this cost growth affects most households is a complicated question, however. An important yet less understood corollary to the cost disease is that *an economy can still afford the goods and services subject to the cost disease* because other goods and services are getting cheaper at the same time.<sup>58</sup> The allocation of money might shift away from manufactured goods and toward services, but the overall bundle of goods need not change. The money we save on cheaper cars, toasters, and food can go toward more expensive education and health care. And indeed there is evidence that, despite the high growth in higher-education prices, wage growth may more than compensate for it for the average worker.<sup>59</sup> As a result, one cannot simply say that higher education is becoming more unaffordable for everyone.

That said, we are not all average, and there are clear distributional differences in who attends college.<sup>60</sup> Whereas the average worker may still have plenty left over for other goods and services, those in the lower-income groups likely would not, even after accounting for financial aid grants and other subsi-

55. See ARCHIBALD & FELDMAN, *supra* note 12, at 20–27; BAUMOL, *supra* note 13, at 6–7 figs.1.1 & 1.2 (on medicine); *id.* at 28–29 fig.2.1 (on legal services). This includes a notable period of flat growth in the 1970s, which coincided with a period of flat labor productivity growth in manufacturing. See ARCHIBALD & FELDMAN, *supra* note 12, at 85–86.

56. See BAUMOL, *supra* note 13, at 19 (“The rate of inflation, then, is an *average* of the rates of growth of many different prices. It follows immediately and unequivocally that *if the prices of all commodities are not rising at the same pace, then some must be increasing at a rate above average.*”).

57. *Id.*; see William J. Baumol, *Health Care, Education and the Cost Disease: A Looming Crisis for Public Choice*, 77 PUB. CHOICE 17, 20 (1993) (“[W]hat is surprising is that those services [including higher education] whose productivity grows slowly today are the same ones whose productivity grew slowly as far back as there are data available.” (emphasis omitted)).

58. See BAUMOL, *supra* note 13, at 43–58.

59. See ARCHIBALD & FELDMAN, *supra* note 12, at 193–95 (showing that most households have more money available for purchases even after accounting for higher-education costs because wages have more than kept up with higher education on average).

60. See *supra* note 38 and accompanying text.

dies.<sup>61</sup> Thus, with respect to individual students and families, the affordability question is ultimately about cost sharing. Even if an economy as a whole can pay the rising costs of higher education, if too much of that cost is put onto individual students, lower-income individuals may be shut out and overall levels of education could stagnate or drop. This puts the policy focus on tuition—the student’s share of overall costs—which Part II addresses.

### C. TECHNOLOGY IMPROVEMENTS AND ONLINE EDUCATION

Before moving on to the question of cost sharing, it is worth a brief discussion of some of the technological improvements in higher education that have developed and new ones developing at the time of this writing. The main reason for low labor productivity growth in higher education is that a professor can teach only so many students. If students are the output, a professor likely produces close to the same output today as a century ago.<sup>62</sup>

That said, there are technological and other changes to higher education. First, there have been technological improvements to productivity, such as word processing and online research. But the cost disease does not require *no* productivity growth, only *slow* productivity growth.<sup>63</sup>

Second, the bundle of goods and services called “higher education” has itself changed with improvements in technology and standards of living. For example, higher education now includes sophisticated science laboratories, classroom audiovisual equipment, wireless Internet services, expanded health care services, academic and career counseling, fitness and wellness services, and so on. Technological improvements do not always bring down costs; sometimes they increase quality.<sup>64</sup> This is productivity improvement in a sense; we get much more for our dollar, even though we do not spend less. And the same could be said for higher education.<sup>65</sup>

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61. See ARCHIBALD & FELDMAN, *supra* note 12, at 193. The Education Trust has calculated that families in the lowest income quintile are asked to pay out of pocket 80% of annual income for public higher education. THE REIMAGINING AID DESIGN & DELIVERY CONSORTIUM FOR HIGHER EDUC. GRANTS & WORK-STUDY REFORM, BEYOND PELL: A NEXT-GENERATION DESIGN FOR FEDERAL FINANCIAL AID 6 fig.3 (2014), available at [http://edtrust.org/wp-content/uploads/2013/10/BeyondPell\\_FINAL.pdf](http://edtrust.org/wp-content/uploads/2013/10/BeyondPell_FINAL.pdf).

62. Indeed, output may even be less, due to smaller class sizes, especially in STEM fields, which require labs and other small classes.

63. See ARCHIBALD & FELDMAN, *supra* note 12, at 39–41; BAUMOL, *supra* note 13, at 22.

64. See ARCHIBALD & FELDMAN, *supra* note 12, at 76.

65. Other quality improvements may also lower productivity. Consider the rise in law school clinical education. Students and law firms have rightly demanded that students graduate from law schools with more hands-on practice skills, and clinics are the primary way for law schools to teach those skills. See Daniel Thies, *Rethinking Legal Education in Hard Times: The Recession, Practical Legal Education, and the New Job Market*, 59 J. LEGAL EDUC. 598, 605–07 (2010); Michelle Weyenberg, *Top Schools of Clinics*, NAT’L JURIST, Feb. 2014, at 20–21. But clinics are also expensive and time-consuming, with a much lower faculty-student ratio and more resources needed per student than for a traditional podium class. See ARCHIBALD & FELDMAN, *supra* note 12, at 72–73 (discussing smaller classes). *But see* Robert R. Kuehn, *Pricing Clinical Legal Education*, 92 DENV. U. L. REV. 1, 1 (2014) (“[T]here is no effect on the tuition and fees that students pay from requiring or guaranteeing every student a clinical experience and no difference in tuition between schools that already have sufficient capacity to provide a clinical



However, the rise of Massive Open Online Courses (MOOCs) and similar online courses and lectures may provide a way to boost productivity and bring down real costs. The number of attendees in an online lecture is not limited by room size, and indeed some of the most popular early MOOCs have had more than 150,000 students.<sup>66</sup> So, in theory, a professor could teach many more students than in a traditional classroom.

It is too early to say for sure, however, whether this will be the productivity-enhancing technology that higher education has been lacking. First, it is not clear that the product is the same. An online class is, at this point, a qualitatively different experience than a traditional class, requiring not only limited interaction between professor and students but also a different form of evaluation and grading.<sup>67</sup> Although it may turn out to educate as well or even better than a traditional class, that has not been shown at this point. If the product is actually of lower quality, then the inflationary forces are still in effect; paying less for a worse product could be just as inflationary as paying more for the same product.<sup>68</sup> This would be a reverse of the trend described above—using technology to decrease, rather than increase, quality.<sup>69</sup> Indeed, some of the early excitement for MOOCs appears to have worn off due to weak early results.<sup>70</sup>

Second, if in fact an online course is designed to have similar levels of engagement and evaluation as a traditional course, it may not turn out to be

experience to each student and those that do not.”). The quality of the education increases, but so does the cost.

66. See Philip G. Schrag, *MOOCs and Legal Education: Valuable Innovation or Looming Disaster?*, 59 VILL. L. REV. 83, 89 (2014); Laura Pappano, *The Year of the MOOC*, N.Y. TIMES (Nov. 2, 2012), <http://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html> (reporting that over 150,000 students signed up for an Introduction to Artificial Intelligence Course offered by Udacity, but that in a separate course focused on machine learning only 13,000 of 46,000 enrollees completed the class and earned a certificate).

67. See, e.g., Anna Ya Ni, *Comparing the Effectiveness of Classroom and Online Learning: Teaching Research Methods*, 19 J. PUB. AFF. EDUC. 199, 201–04 & tbl.1 (2013).

68. This parallels the other significant cost control in higher education: the increasing use of nontenure-track adjunct professors, likely with similarly poor results. Whether the ultimate quality-adjusted real price increases or decreases will depend on the magnitude of each change; if costs drop by a greater degree than quality, it may be that productivity has increased on net. See discussion of disruption *infra* note 69. However, that is considering just price and not other costs, such as time and opportunity. If a student would have to take endless free MOOCs to simulate the quality of traditional higher education, the total cost is still high.

69. See BAUMOL, *supra* note 13, at 21 (noting that, in health care and education, increased productivity often means declining quality). Note, however, that what is sometimes called “disruptive innovation” involves using technology to develop cheaper but lower quality products for new markets, with the innovation eventually overtaking the existing market. See generally CLAYTON M. CHRISTENSEN, *THE INNOVATOR’S DILEMMA: WHEN NEW TECHNOLOGIES CAUSE GREAT FIRMS TO FAIL* (1997). The theory of disruptive innovation is not without its critics, however, particularly when applied as a general theory relevant to all businesses and products. See, e.g., Jill Lepore, *The Disruption Machine: What the Gospel of Innovation Gets Wrong*, NEW YORKER (June 23, 2014), <http://www.newyorker.com/magazine/2014/06/23/the-disruption-machine>.

70. See METTLER, *supra* note 40, at 33; Tamar Lewin, *After Setbacks, Online Courses Are Rethought*, N.Y. TIMES (Dec. 10, 2013), <http://www.nytimes.com/2013/12/11/us/after-setbacks-online-courses-are-rethought.html>.

much of a labor-saving device. Although there may be less need for tenured professors, there will be more need for teaching assistants, discussion leaders, graders, and so on.<sup>71</sup> Though these individuals would likely earn lower wages, their wages would still need to grow. Firing the extra professors may provide a one-time boost to productivity, but after that the same cost disease trends could take over.<sup>72</sup> Furthermore, the professors left standing are likely to be talented, which could lead to them extracting much of the benefits of the productivity improvements for themselves.<sup>73</sup>

Third, even the most techno-utopian advocates of online education must still see a role for the traditional university. It may be that online higher education is best suited for teaching specific skills and for addressing more marginal students and newer entrants to higher education, whereas the most able students will continue to attend traditional universities.<sup>74</sup> This segmenting of higher education raises important issues of distributive justice,<sup>75</sup> which are mostly beyond this Article. But at whatever size the traditional university system settles out, it will remain an expensive one and thus potentially off-limits to poorer students regardless of ability or potential, absent public intervention.<sup>76</sup>

All that being said, if MOOCs and other online educational programs are successful in providing high-quality higher education at a dramatically reduced cost, then we will have at least partly solved the cost and distributional problems, making government intervention less necessary.

## II. TUITION AND STUDENT LOANS

The previous Part discussed not only the need for higher education but also the cost of higher education and the role of cost disease forces in causing the

71. See Schrag, *supra* note 66, at 99–102 (noting the need for essay readers and exam proctors and graders).

72. A similar argument applies to the calls to lower the costs of law school by removing the third year of a J.D. program. Even in the unlikely scenario that the professoriate is cut by a third, the remaining professors would still like competitive wages. All we will have done is made law school somewhat cheaper for a few more years. Eventually, the cost disease would catch up again.

73. We have seen this in other “superstar” settings, such as entertainment, professional sports, and medical and legal services. See, e.g., Sherwin Rosen, *The Economics of Superstars*, 71 AM. ECON. REV. 845, 845 (1981); Schrag, *supra* note 66, at 109; see also Amanda Ripley, *The \$4 Million Teacher*, WALL ST. J., <http://www.wsj.com/articles/SB10001424127887324635904578639780253571520> (last updated Aug. 3, 2013, 4:46 AM). If the best teachers are in high demand, they can extract much of the surplus for themselves through high prices. More importantly, if they actually have the ability to substantially increase a student’s skills, they will also be in position to extract much of the student’s anticipated bump in income.

74. See ARCHIBALD & FELDMAN, *supra* note 12, at 127.

75. These issues are not new because our system of higher education already is highly segmented. See ZUMETA ET AL., *supra* note 50, at 66–70; Michael N. Bastedo & Ozan Jaquette, *Running in Place: Low-Income Students and the Dynamics of Higher Education Stratification*, 33 EDUC. EVALUATION & POL’Y ANALYSIS 318 (2011); Schrag, *supra* note 66, at 110–11; Susan Dynarski, *Rising Inequality in Postsecondary Education*, BROOKINGS (Feb. 13, 2014, 4:30 PM), <http://www.brookings.edu/blogs/social-mobility-memos/posts/2014/02/13-inequality-in-postsecondary-education>.

76. Note that this “public intervention” could take many forms, including European-style full public funding. In Part IV, I turn to the question of the best form for such an intervention. The only point here is that MOOCs may not solve the problem of higher-education costs.

growth rate to outstrip inflation. That view claims that economic forces outside the control of any institution, or even of public policy, are one of the significant drivers of higher-education costs. The question of *how* these costs are paid and shared, however, is an institutional and public policy question. This Part briefly discusses the evolution of higher-education finance to its current heavy reliance on tuition and student loans.<sup>77</sup> Section A briefly describes historical trends in higher-education financing, whereas section B looks more closely at the role of debt-financed tuition.

#### A. THE SHIFT FROM PUBLIC TO PRIVATE SPENDING

The higher-education finance system has always been a pastiche of government, individual, and charitable spending, but the current period has been marked by a decline in government support and a rise in individual tuition payments. Government support, especially for public universities, has existed since the early days of the republic<sup>78</sup> but began to grow more with the Morrill Land Grant Acts of 1862 and 1890<sup>79</sup> and hit a peak in the post-war years. The Truman Commission Report in 1947 recommended a large expansion of higher education, with significant support from federal and state governments.<sup>80</sup> These ideas were put into practice at the federal level in legislation such as the GI Bill, the National Defense Education Act, the Economic Opportunity Act of 1964, and the Higher Education Act of 1965, and at the state level with, for example, the creation of California's three-tiered system through the Master Plan for Higher Education of 1960,<sup>81</sup> and with the formation and expansion of the State University of New York System.<sup>82</sup> Over the twentieth century, the number of students attending college,<sup>83</sup> and public colleges especially,<sup>84</sup> grew dramatically.

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77. For richer and more detailed accounts, see ARCHIBALD & FELDMAN, *supra* note 12; GOLDIN & KATZ, *supra* note 27; ZUMETA ET AL., *supra* note 50.

78. See GOLDIN & KATZ, *supra* note 27, at 255.

79. 7 U.S.C. §§ 301, 321 (2012); see GOLDIN & KATZ, *supra* note 27, at 255–56; ZUMETA ET AL., *supra* note 50, at 59–60.

80. PRESIDENT'S COMM'N ON HIGHER EDUC., HIGHER EDUCATION FOR AMERICAN DEMOCRACY (1947); see ZUMETA ET AL., *supra* note 50, at 61–62.

81. CAL. STATE DEP'T OF EDUC., A MASTER PLAN FOR HIGHER EDUCATION IN CALIFORNIA 1960-1975 (1960), available at <http://www.ucop.edu/acadinit/mastplan/MasterPlan1960.pdf>.

82. See ZUMETA ET AL., *supra* note 50, at 64.

83. Compare GOLDIN & KATZ, *supra* note 27, at 248 (of those born at the beginning of the twentieth century, about 10% attended college and 5% graduated), with *Table 1. Educational Attainment of the Population 18 Years and Over, by Age, Sex, Race, and Hispanic Origin: 2014 (All Races), Educational Attainment in the United States: 2014 - Detailed Tables*, U.S. CENSUS BUREAU, <http://www.census.gov/hhes/socdemo/education/data/cps/2014/tables.html> (last revised Nov. 2, 2015) (of those eighteen years old and older in 2014, 58.03% attended college and 38.61% graduated), and *Table A-2. Percent of People 25 Years and Over Who Have Completed High School or College, by Race, Hispanic Origin and Sex: Selected Years 1940 to 2014, CPS Historical Time Series Tables*, U.S. CENSUS BUREAU, <http://www.census.gov/hhes/socdemo/education/data/cps/historical/index.html> (last revised Nov. 2, 2015) (of those twenty-five years old and older in 2014, 32.00% completed four or more years of college).

84. At the beginning of the twentieth century, about one in five college students attended a public university. See GOLDIN & KATZ, *supra* note 27, at 266. In 2000, about two in three did. See *id.* This

But in the 1970s, direct government support started to wane and tuition began to play a larger role, a trend that has continued to the present day. There are several reasons for this. First, the real cost of higher education began its acceleration in the 1960s. Though it paused briefly during the stagflation years of the 1970s,<sup>85</sup> when there was little labor productivity growth, the strain on state and institutional budgets was starting to show. By the early 1970s, many institutions were already showing signs of financial trouble.<sup>86</sup>

Second, after almost twenty years without a recession, the recession caused by the oil shock of 1973 was the beginning of our more recent boom-and-bust business cycle, with recessions generally occurring every ten years or less. At the same time, changes in the tax base left states with more revenue volatility and less ability to absorb the effects of economic downturns.<sup>87</sup> State higher-education budgets have often been the first to be cut in a downturn because the benefits are perceived, perhaps rightly, to accrue to the more well-off, and universities have other sources of revenue to tap, namely tuition.<sup>88</sup> The pattern in recent decades has been for tuition hikes to accompany cuts in public funding during a recession. After a recession, public funding increases somewhat, though not to prerecession levels, and tuition remains high.<sup>89</sup>

Finally, starting in the 1970s, there was an explicit policy push for students and families to share more of the overall cost.<sup>90</sup> This reflected an understanding that much of the benefits of higher education accrue to the students themselves, and that generous public funding, especially for tiered state university systems, had the potential to be regressive, because attendees at well-funded flagship universities were disproportionately from high-income families and more likely to have high incomes in the future. Some commentators in the 1970s and 1980s recommended that instead of high public funding and low tuition, states and their public universities should instead have high tuitions but high need-based aid.<sup>91</sup> And indeed, that has become the *de facto* policy at many of the best-funded private colleges and flagship public universities.<sup>92</sup>

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reflects, in part, changes in higher education overall, especially the growth in large research universities, which have tended to be public institutions, beginning in the late nineteenth and early twentieth centuries. *See id.* at 263, 265. Although there are still more private institutions than public today, *see id.* at 254, the public institutions tend to be much larger, *see id.* at 266–67.

85. *See* ARCHIBALD & FELDMAN, *supra* note 12, at 85–86.

86. *See* ZUMETA ET AL., *supra* note 50, at 67.

87. *See* John R. Brooks II, *Fiscal Federalism as Risk-Sharing: The Insurance Role of Redistributive Taxation*, 68 TAX L. REV. 89, 120–21 (2014); David Gamage, *Preventing State Budget Crises: Managing the Fiscal Volatility Problem*, 98 CALIF. L. REV. 749, 759–60 (2010).

88. *See* ZUMETA ET AL., *supra* note 50, at 18.

89. *See id.* at 20 fig.1.8.

90. *See id.* at 68–70.

91. *See, e.g.*, THE BROOKINGS INST., PUBLIC POLICY AND PRIVATE HIGHER EDUCATION (David W. Breneman & Chester E. Finn, Jr. eds., 1978).

92. *See* ZUMETA ET AL., *supra* note 50, at 68–69; *see also* ARCHIBALD & FELDMAN, *supra* note 12, at 156–65 (on the rise of tuition discounting).

As state subsidies began to decline (and tuition to rise), the federal government also stepped in to provide need-based aid, especially Pell Grants, which were first introduced in 1972.<sup>93</sup> Pell Grants are need-based, unlike direct state subsidies, and originally covered most, if not all, tuition.<sup>94</sup> For example, the maximum grant in 1975–1976 was \$1400,<sup>95</sup> which was more than double the average tuition and fees for a public four-year institution and over 78% of average tuition, fees, room, and board.<sup>96</sup> The rapid growth in tuition costs eroded the value of Pell Grants over time, however, despite periodic funding increases. Even after the maximum Pell Grant was raised by 13%, to \$5350, in 2009,<sup>97</sup> it covered only 36% of the average tuition, fees, room, and board for public four-year institutions.<sup>98</sup> The federal government<sup>99</sup> also introduced significant tax credits in 1997,<sup>100</sup> which it expanded in 2009.<sup>101</sup> The credits phase out for incomes above \$80,000<sup>102</sup> and thus are directed at those with more need. Yet they are also imperfect tools, in large part because they are only partially

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93. See Education Amendments of 1972, Pub. L. No. 92-318, § 131, 86 Stat. 235, 247–48 (1972) (authorizing “basic grants” and “supplemental educational opportunity grants,” the predecessors to the Pell Grants).

94. Roughly, Pell Grants cover the difference between the Cost of Attendance (COA) and the Expected Family Contribution (EFC) up to a maximum that adjusts each year. See 20 U.S.C. §§ 1070a, 1087kk (2012); Federal Student Aid, *How Aid Is Calculated*, U.S. DEP’T EDUC., <https://studentaid.ed.gov/sa/fafsa/next-steps/how-calculated> (last visited Nov. 3, 2015). The maximum grant 2015–2016 was \$5775. Federal Student Aid, *Federal Pell Grants*, U.S. DEP’T EDUC., <https://studentaid.ed.gov/sa/types/grants-scholarships/pell> (last visited Nov. 3, 2015). The COA is based on the school and includes some costs of living. The EFC is a complex formula that includes student and parental income and assets. See 20 U.S.C. § 1087oo (2012).

95. OFFICE OF POSTSECONDARY EDUC., U.S. DEP’T OF EDUC., 2012–2013 FEDERAL PELL GRANT PROGRAM END-OF-YEAR REPORT tbl.1 (2013), available at <http://www2.ed.gov/finaid/prof/resources/data/pell-2012-13/pell-eoy-2012-13.pdf>.

96. Author’s calculations based on Pell Grant data, *id.*, and average tuition data in current dollars from NAT’L CTR. FOR EDUC. STATISTICS, U.S. DEP’T OF EDUC., DIGEST OF EDUCATION STATISTICS 541 tbl.381 (2012), available at <http://nces.ed.gov/pubs2014/2014015.pdf>.

97. OFFICE OF POSTSECONDARY EDUC., *supra* note 95. The revenue to pay for this expansion came in part from the repeal of the subsidies for student loans made by private lenders. See *infra* notes 124–25, 156.

98. See *supra* note 96.

99. For simplicity, this discussion ignores the role of federal research grants, even though these have become significant sources of revenue for large research universities. For example, National Science Foundation grants to universities in 2014 totaled over \$26 billion, about the same amount as Pell Grants. See NAT’L SCI. FOUND., FEDERAL FUNDS FOR RESEARCH AND DEVELOPMENT: FISCAL YEARS 2013–15, at 11 tbl.2 (2015), available at <http://www.nsf.gov/statistics/2015/nsf15324/pdf/nsf15324.pdf>. On Pell Grant funding, see *infra* note 180 and accompanying text.

100. The Hope and Lifetime Learning Credits were added by the Taxpayer Relief Act of 1997, Pub. L. No. 105-34, § 201, 111 Stat. 788, 799–806 (1997).

101. The American Opportunity Tax Credit temporarily increases the Hope Scholarship Credit for taxable years 2008–2018. I.R.C. § 25A(i) (2012). The provision was added by the American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 1004(a), 123 Stat. 115, 313–14.

102. I.R.C. § 25A(i)(4); see also Rev. Proc. 2013-35, § 3.05, 2013-47 I.R.B. 537. Technically, the phase-out applies to those with “modified adjusted gross income” above \$80,000. Modified adjusted gross income is AGI with certain add-backs related to otherwise-excluded foreign earned income. See I.R.C. § 25A(d)(3).

refundable.<sup>103</sup>

On the charitable side, many private institutions, particularly the wealthiest, expanded the use of institutional grants to balance the growth in tuition. Most notably, Harvard in 2004 announced that tuition would be free for students with parental income less than \$40,000,<sup>104</sup> later increased to \$65,000.<sup>105</sup> Other rich schools, like Yale, Stanford, and Princeton, quickly followed suit.<sup>106</sup> Yet less wealthy institutions are not able to be as generous and have turned many of their grant dollars toward attracting top students to boost rankings, rather than aiding poorer students.<sup>107</sup>

#### B. THE RISE OF STUDENT LOANS

As direct grants subsided, net tuition (tuition net of grants and aid) naturally rose. This money can come from only a couple of places: either the income of the parents (current income or past income in the form of savings) or the student. For tuition borne by the student, some could perhaps come from current earnings, but more often it comes from future income in the form of loan payments. Thus, a student loan is essentially a way to have a share of higher-education costs paid for out of a graduate's future wages. And indeed, the overall mix of financial aid began to shift toward loans starting in the late 1970s.<sup>108</sup> In the 1975–1976 academic year, total federal grants were four times the volume of federal loans, but by 1981–1982, loans became a greater share of federal funding,<sup>109</sup> and by 2012 the volume of federal grants was about half the volume of federal loans.<sup>110</sup>

In the abstract, student loans are an appropriate part of the overall higher-education funding system. As noted above, there are good equitable reasons to ask a student to bear a large share of the costs of a college education, given the

103. *Id.* § 25A(i)(5). A tax credit is “refundable” if it can be used not just to lower taxes to \$0, but in fact to go into negative territory, thus causing a net transfer from the government. The neediest students and recent graduates are unlikely to owe much in taxes; thus, a nonrefundable credit provides no benefit, and a partially refundable credit provides only some benefit.

104. See Daniel J. Hemel, *College Cuts Costs for Low-Income Families*, HARV. CRIMSON (Mar. 1, 2004), <http://www.thecrimson.com/article/2004/3/1/college-cuts-costs-for-low-income-families>.

105. See *Scholarships & Grants*, HARV. UNIV., <http://college.harvard.edu/financial-aid/types-aid/scholarships-grants> (last visited Nov. 3, 2015).

106. See, e.g., Emily Jane Fox, *Stanford Offers Free Tuition for Families Making Less Than \$125,000*, CNN MONEY (Apr. 3, 2015, 11:04 AM), <http://money.cnn.com/2015/04/01/pf/college/stanford-financial-aid/index.html>.

107. See, e.g., Matthew Quirk, *The Best Class Money Can Buy*, ATLANTIC (Nov. 2005), <http://www.theatlantic.com/magazine/archive/2005/11/the-best-class-money-can-buy/304307> (describing the rise of specialized “enrollment management” functions at colleges and universities).

108. See ZUMETA ET AL., *supra* note 50, at 76–78 figs.4.1 & 4.2; see also *id.* at 88 (“Higher education today is increasingly provided and sold as a private good, its purchase heavily reliant on debt financing.”).

109. *Id.* at 77 fig.4.1.

110. See DAVID RADWIN ET AL., NAT’L CTR. FOR EDUC. STATISTICS, 2011–12 NATIONAL POSTSECONDARY STUDENT AID STUDY (NSPAS:12): STUDENT FINANCIAL AID ESTIMATES FOR 2011–12, at 10 tbl.4 (2013), available at <http://nces.ed.gov/pubs2013/2013165.pdf>.



large private benefits.<sup>111</sup> And allowing the student to pay that cost out of future earnings, which are likely to be higher precisely because of the education, is also appropriate. As shown by Gary Becker and others, investing in higher education has consistently been one of the best forms of investment around,<sup>112</sup> and borrowing at a reasonable rate to leverage that investment can make a lot of sense financially.

The historical difficulty with this, however, was that private credit markets were not willing to loan significant amounts without some security, and the only asset many students have is their nontransferable human capital. Recognizing this market failure, even Milton Friedman advocated government intervention in the student loan market.<sup>113</sup> The government responded with steps like creating Sallie Mae in 1972,<sup>114</sup> expanding the guaranteed loan program in the late 1970s,<sup>115</sup> and constraining discharge of student loans in bankruptcy (essentially an additional subsidy to lenders).<sup>116</sup>

With loans in place, students were able to finance tuition out of future earnings. Again, in the abstract, this is entirely appropriate. But as with any leveraged investment, a student loan comes with increased exposure to risk—in this case the risk that future labor income is too low. Although the average graduate is still likely to earn a substantial return on the investment, more than enough to pay the debt,<sup>117</sup> graduates at the lower end may not. Furthermore, as tuitions continue to rise, the degree of leverage also rises. Total outstanding

111. See *supra* text accompanying notes 90–92.

112. See generally GARY S. BECKER, *HUMAN CAPITAL: A THEORETICAL AND EMPIRICAL ANALYSIS, WITH SPECIAL REFERENCE TO EDUCATION* (3d ed. 1993); Christopher Avery & Sarah Turner, *Student Loans: Do College Students Borrow Too Much—Or Not Enough?*, 26 J. ECON. PERSP. 165, 176 (2012) (“The message is clear: expected lifetime earnings associated with a college degree have increased markedly over time. As the investment value of a college degree rises, it is natural to think of individuals increasing their willingness to borrow to achieve these higher returns.”); Michael Greenstone & Adam Looney, *Where Is the Best Place to Invest \$102,000—in Stocks, Bonds, or a College Degree?*, BROOKINGS (June 25, 2011), <http://www.brookings.edu/research/papers/2011/06/25-education-greenstone-looney> (finding a 15.2% annual return on a college degree).

113. MILTON FRIEDMAN, *CAPITALISM AND FREEDOM* 104 (1962) (“Whatever the reason, an imperfection of the market has led to underinvestment in human capital. Government intervention might therefore be rationalized on grounds both of ‘technical monopoly,’ insofar as the obstacle to the development of such investment has been administrative costs, and of improving the operation of the market, insofar as it has been simply market frictions and rigidities.”).

114. The Student Loan Marketing Association was created by the Education Amendments of 1972, Pub. L. No. 92-318, § 133(a), 86 Stat. 235, 265–69 (1972).

115. See ZUMETA ET AL., *supra* note 50, at 70.

116. The first limitation on discharging of student loans appeared in the 1976 amendments to the Higher Education Act. See Higher Education Amendments of 1976, Pub. L. No. 94-482, § 127(a), 90 Stat. 2081, 2099, 2141 (1976) (amending HEA § 439A to allow discharge only after five years or if payment would impose undue hardship). This was later added to the Bankruptcy Code of 1978. See Pub. L. No. 95-598, § 523, 92 Stat. 2549, 2591 (1978) (adding, *inter alia*, 11 U.S.C. § 523(a)(8) (1978)).

117. See *supra* notes 34–35 and accompanying text.



student debt was over \$1.1 trillion as of 2014,<sup>118</sup> and the average debt load for the class of 2013 was \$28,400 per borrower, though at some private, nonprofit colleges average debt per borrower exceeds \$70,000.<sup>119</sup>

Moreover, certain professions are likely to be particularly risky for borrowers, such as those that require or encourage graduate degrees but which have low or uncertain future income streams. Nursing, teaching, social work, ministry, journalism, academia, and the arts are particularly subject to this risk, as are some legal and medical practices.<sup>120</sup> Debt for graduate school can easily exceed \$100,000.<sup>121</sup>

These debt loads may not end up being that daunting for many graduates, particularly considering the earnings premium for higher education and the long time period over which the loans are amortized. But, of course, half of graduates will earn below-median income for their cohort, and the loan burden disproportionately falls on early and thus lower-earning years. And the debt loads for future students will increase as tuitions continue to increase. This has the risk of deterring risk-averse potential students from attending college or of deterring risk-averse graduates from joining certain careers.

Furthermore, the claim that borrowing to fund higher education is a sensible plan depends on the loan being offered at relatively fair terms and with a fair allocation of risk between borrower and lender. The borrower should borrow only what is needed and at a fair risk-adjusted discount rate; otherwise, she could end up with unaffordable loan payments, even if she landed a high-wage job after graduation.

However, heading into the twenty-first century, these conditions seemed not to hold. Federal subsidization of lenders led in some cases to predatory-style lending by private student loan companies, sometimes in cahoots with university financial aid offices.<sup>122</sup> The outcry from that, plus the rapid rise in debt

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118. Federal Student Aid, *Federal Student Aid Portfolio Summary, Federal Student Loan Portfolio*, U.S. DEP'T EDUC., <https://studentaid.ed.gov/about/data-center/student/portfolio> (last visited Nov. 3, 2015).

119. INST. FOR COLLEGE ACCESS & SUCCESS, *STUDENT DEBT AND THE CLASS OF 2013*, at 1, 7 (2014), available at <http://projectonstudentdebt.org/files/pub/classof2013.pdf>.

120. Note that these are also professions with arguably large positive externalities.

121. Between 2011 and 2012, average graduate student debt in current dollars per borrower was \$74,710 for all programs and \$110,570 for professional programs. NAT'L CTR. FOR EDUC. STATISTICS, *supra* note 44, at 647 tbl.332.10. Typical combined undergraduate and graduate debt was over \$140,000 for those who graduated law school in 2012. See JASON DELISLE, NEW AMERICA, *THE GRADUATE STUDENT DEBT REVIEW: THE STATE OF GRADUATE STUDENT BORROWING 4* (2014), available at <https://static.newamerica.org/attachments/750-the-graduate-student-debt-review/GradStudentDebtReview-Delisle-Final.pdf>.

122. See, e.g., SUZANNE METTLER, *THE SUBMERGED STATE: HOW INVISIBLE GOVERNMENT POLICIES UNDERMINE AMERICAN DEMOCRACY* 73–74 (2011); Jonathan D. Glater, *Offering Perks, Lenders Court Colleges' Favor*, N.Y. TIMES (Oct. 24, 2006), [http://www.nytimes.com/2006/10/24/education/24loans.html?\\_r=4](http://www.nytimes.com/2006/10/24/education/24loans.html?_r=4); Jonathan D. Glater, *U.S. Is Lax on Loans, Cuomo Says*, N.Y. TIMES (Apr. 26, 2007), [http://www.nytimes.com/2007/04/26/us/26loans.html?src=tp&\\_r=0](http://www.nytimes.com/2007/04/26/us/26loans.html?src=tp&_r=0); Doug Lederman, *Taming the Student Loan 'Wild West'*, INSIDE HIGHER ED (June 7, 2007), <https://www.insidehighered.com/news/2007/06/07/loans>.

levels and fears of financial distress for graduates, led to the large—though still not well-understood—policy change described in the next section: the creation and expansion of Income-Based Repayment and Pay As You Earn.

### III. THE INCOME-BASED REPAYMENT AND PAY AS YOU EARN PROGRAMS

This Part describes the new shift of the student loan system from one of subsidized private lending, with payments based on typical loan terms, to public lending, with payments based on income. Section A discusses the implementation of the IBR and PAYE programs and their current rules. Section B examines in detail the cost estimates of the program. Section C presents the argument for why an income-driven loan repayment program should be viewed, in part, as a tax program.

#### A. CURRENT IBR AND PAYE RULES

Following reports about corruption and predatory lending by private student loan lenders,<sup>123</sup> the student loan industry was effectively nationalized by provisions of the Health Care and Education Reconciliation Act (HCERA) of 2010 that repealed the subsidies paid to private lenders under the Federal Family Education Loan Program and expanded the Direct Loan program.<sup>124</sup> Since then, nearly all student loans have come directly from the federal government.<sup>125</sup>

Furthermore, in 2008 the government instituted the first Income-Based Repayment (IBR) program,<sup>126</sup> which allowed students to limit their loan-service payments to 15% of discretionary income, and to have any remaining loan balance forgiven after twenty-five years.<sup>127</sup> In 2010, the HCERA expanded the program and lowered the payments to 10% of discretionary income with

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123. See Jonathan D. Glater, *The Other Big Test: Why Congress Should Allow College Students to Borrow More Through Federal Aid Programs*, 14 N.Y.U. J. LEGIS. & PUB. POL'Y 11, 48–51 (2011) (reviewing history of student loan scandals in 2007).

124. In particular, Title II of the HCERA ended the government subsidy for private student loans, increased the amount of public loans available, and expanded and redefined the IBR program. See Health Care and Education Reconciliation Act of 2010, Pub. L. No. 111-152, §§ 2201–13, 124 Stat. 1029, 1074–81 (2010).

125. For the 2013–2014 academic year, private lenders originated only \$10 billion out of \$106 billion in all student loans; the federal government thus originated over 90% of all student loans 2013–2014. COLL. BD., TRENDS IN STUDENT AID 16 fig.5 (2014), available at <http://trends.collegeboard.org/sites/default/files/2014-trends-student-aid-final-web.pdf>. This percentage of private loans has gradually crept up from a low of around 7% 2010–2011, likely due to the caps on federal loans for undergraduate education. See *infra* note 200 and accompanying text.

126. There was also an earlier Income-Contingent Repayment (ICR) option in effect since 1994. See Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, § 4021, 107 Stat. 312, 341–54 (1993); Philip G. Schrag, *The Federal Income-Contingent Repayment Option for Law Student Loans*, 29 HOFSTRA L. REV. 733, 764–74 (2001) (describing the history and operation of the ICR program).

127. College Cost Reduction and Access Act, Pub. L. No. 110-84, § 203, 121 Stat. 784, 792–95 (2007); see Philip G. Schrag, *Federal Student Loan Repayment Assistance for Public Interest Lawyers and Other Employees of Governments and Nonprofit Organizations*, 36 HOFSTRA L. REV. 27, 34–41 (2007) (discussing 2008-era IBR rules).

forgiveness after twenty years, beginning in 2014.<sup>128</sup> However, the Obama administration, through regulation, accelerated the implementation of the 10% payment program to 2012,<sup>129</sup> eased the treatment of accrued interest,<sup>130</sup> and redubbed it “Pay As You Earn” (PAYE).<sup>131</sup> These programs are designed as entitlement programs and therefore are not dependent on annual appropriations.<sup>132</sup>

The combination of the nationalization of the student loan industry and the wide availability of IBR and PAYE programs are together a huge shift in higher-education policy. But the administration is not done yet. In a June 2014 presidential memorandum, the White House directed the U.S. Department of Education to find ways to extend PAYE to more borrowers and to better educate borrowers about income-based options.<sup>133</sup> At the time of this writing, the Department of Education had recently finalized a new Revised Pay As You Earn Plan (REPAYE), to take effect July 2016, which will apply to *any* federal Direct Loan, not just those after 2007.<sup>134</sup> The White House has proposed making PAYE or REPAYE the sole income-driven program available to borrowers.<sup>135</sup>

128. Health Care and Education Reconciliation Act of 2010, Pub. L. No. 111-152, § 2213, 124 Stat. 1029, 1081 (2010).

129. The PAYE rules apply to anyone who received a Direct Loan after October 1, 2011, provided that the borrower has no outstanding balance on any Direct Loan from before October 1, 2007. 34 C.F.R. § 685.209(a)(1)(iii) (2015). Technically, this means that loans from as early as the 2007–2008 school year could apply, as long as the borrower continued to take out loans for 2011–2012. *Id.*

130. *See infra* note 139.

131. 34 C.F.R. § 685.209(a). Technically, PAYE was implemented by the administration using its authority under the ICR, not IBR, provisions of the Higher Education Act. *See* Federal Perkins Loan Program, Federal Family Education Loan Program, and William D. Ford Federal Direct Loan Program, 77 Fed. Reg. 42,086, 42,099 (proposed July 17, 2013) (to be codified at 34 C.F.R. pts. 674, 682, 685) (claiming authority for PAYE rules under Section 455(d)(1)(D) of the HEA, 20 U.S.C. § 1087e(d)(1)(D) (2012)). This is because the IBR provisions of the HCERA had a 2014 effective date, whereas Section 455(d)(1)(D) of the HEA was already in effect and gave relatively expansive authority for setting loan repayment terms.

132. By “entitlement program,” I mean one where funds are automatically available each year depending on qualifying formulas, as opposed to a discretionary program that requires Congress to appropriate funds annually. *See* 20 U.S.C. § 1087a(a) (“There are hereby made available, in accordance with the provisions of this part, such sums as may be necessary (1) to make loans to all eligible students . . .”). The funding for entitlement programs, including Social Security and Medicare, is thus more politically stable than for discretionary programs.

133. Helping Struggling Federal Student Loan Borrowers Manage Their Debt, 79 Fed. Reg. 33,843 (June 12, 2014).

134. Student Assistance General Provisions, Federal Family Education Loan Program, and William D. Ford Federal Direct Loan Program, 80 Fed. Reg. 67,203, 67,204 (October 30, 2015) (to be codified at 34 C.F.R. pts. 668, 682, 685) [hereinafter REPAYE Rules]. The rules call for, *inter alia*, one half of the otherwise accruing interest to be forgiven while a student is in “partial financial hardship”; for AGI to include the income of a borrower’s spouse, even where the couple files taxes separately; and for forgiveness after twenty-five, rather than twenty, years for borrowers with graduate-school debt. *Id.* at 67,204–05.

135. *See* Student Assistance General Provisions, Federal Family Education Loan Program, and William D. Ford Federal Direct Loan Program, Notice of Proposed Rulemaking, 80 Fed. Reg. 39,608, 39,617 (referring to “proposed reforms” that would “establish a single income-driven repayment plan”); U.S. DEP’T OF EDUC., STUDENT LOANS OVERVIEW: FISCAL YEAR 2015 BUDGET PROPOSAL S-13, *available at* <http://www2.ed.gov/about/overview/budget/budget15/justifications/s-loansoverview.pdf>.

Under PAYE and IBR, a student loan borrower's monthly payments to service the loan's principal and interest is the lesser of 10% of the borrower's discretionary income<sup>136</sup> or the default payment under the typical ten-year, non-income-driven loan.<sup>137</sup> If thereby some principal and interest goes unpaid, it accumulates and adds to the loan balance, though under PAYE and REPAYE (rather than IBR<sup>138</sup>), the amount of any interest capitalized into loan principal cannot exceed 10% of the original principal—effectively another substantial form of debt forgiveness.<sup>139</sup> However, after twenty years for all borrowers,<sup>140</sup> and ten years for those in public service jobs,<sup>141</sup> any remaining loan balance is forgiven.<sup>142</sup> To be clear, the twenty-year forgiveness (as opposed to the ten-year public service forgiveness) is not dependent on the nature of the job, or on any degree of financial hardship, other than that the borrower's discretionary income did not allow full payment during the term of the loan.

As of this writing, the forgiveness itself can create taxable income from the discharge of indebtedness. In general, the cancellation of a debt provides a benefit to a taxpayer by erasing a liability, as if a third party had simply given

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136. Discretionary income is adjusted gross income (AGI) less 150% of the relevant poverty line. 34 C.F.R. § 685.209(a)(1)(v). “Discretionary income” is actually a defined term only under the Income-Contingent Repayment loan program (as distinct from both the IBR and PAYE programs). *See id.* § 685.209(b)(1)(iii)(A). But both IBR and PAYE use the same calculation to determine “partial financial hardship.” Thus, for clarity I use “discretionary income” throughout to describe the difference between a borrower's AGI and 150% of the relevant poverty line, regardless of the program.

137. *Id.* § 685.209(a)(2)(i), (a)(4)(i). Under REPAYE, there is no cap; thus, all borrowers in REPAYE will pay 10% of their discretionary income, unless they opt to leave the program. REPAYE Rules, *supra* note 134, at 67,213–14.

138. This difference between IBR and PAYE in the treatment of interest has sometimes been missed in commentary on the plans. *See, e.g.,* LAUREN ASHER ET AL., THE INST. FOR COLL. ACCESS & SUCCESS, SHOULD ALL STUDENT LOAN PAYMENTS BE INCOME-DRIVEN? 20 (2014), available at [http://ticas.org/sites/default/files/pub\\_files/TICAS\\_IDR\\_White\\_Paper.pdf](http://ticas.org/sites/default/files/pub_files/TICAS_IDR_White_Paper.pdf) (“For example, under . . . IBR[] and PAYE, unpaid accrued interest capitalizes when borrowers no longer qualify to make income-based payments due to increases in income or decreases in family size.”).

139. For both IBR and PAYE, there is no charge for unpaid accrued interest for the first three years for Direct Subsidized loans or the subsidized portion of a Direct Consolidation loan (though not for Direct Unsubsidized loans). 34 C.F.R. §§ 685.209(a)(2)(iii), 685.221(b)(3). For non-PAYE IBR, accrued interest is not capitalized while the borrower has a “partial financial hardship” (that is, the standard ten-year loan payment exceeds 10% of discretionary income), but accrued interest becomes fully capitalized once the borrower ceases to have a “partial financial hardship.” *Id.* § 685.221(b)(4); *see* Schrag, *supra* note 127, at 35. For PAYE, by contrast, even if the borrower ceases to have a partial financial hardship, the amount of capitalized interest cannot exceed 10% of the original principal balance of the loan, though additional interest will still accrue once the borrower has left the PAYE payment plan. 34 C.F.R. § 685.209(a)(2)(iv). Under the new REPAYE rules, only one-half of the otherwise-due interest would accrue for borrowers in partial financial hardship, thus providing an additional benefit and form of forgiveness. *See* REPAYE Rules, *supra* note 134, at 67,205.

140. *See* 34 C.F.R. § 685.209(a)(6). Under the new REPAYE rules, forgiveness would be after twenty-five years for borrowers with any graduate student debt. *See* REPAYE Rules, *supra* note 134, at 67,205.

141. *See* Public Service Loan Forgiveness Program, 34 C.F.R. § 685.219(c) (borrowers qualify for ten-year forgiveness if they make regular payments under an income-based repayment plan or an income-contingent repayment, and are employed full time by a public-service organization).

142. The twenty-year period is tolled during any period of default, however. *Id.* § 685.209(a)(6)(iv).

the debtor the cash to pay the loan.<sup>143</sup> Thus, the Internal Revenue Code treats discharged indebtedness as income and taxes it accordingly.<sup>144</sup> Although the Code provides an exception to this for student loan debt discharged under a program encouraging students to work in public service or the public interest,<sup>145</sup> that exclusion does not currently apply to the more general twenty-year forgiveness under PAYE for borrowers working in other areas.<sup>146</sup> As a result, PAYE really forgives only about 60%–75% of the loan balance.<sup>147</sup> Some lawmakers have recognized this as a problem, however, and have introduced legislation to extend the tax forgiveness to all income-driven loans.<sup>148</sup> The White House's 2014, 2015, and 2016 budget proposals also included calls to add an exclusion from gross income for forgiven IBR and PAYE debts.<sup>149</sup> Because this Article addresses broader questions of the appropriateness of income-driven payments for higher education, I ignore the specific cancellation of indebtedness income issue.<sup>150</sup>

Early uptake of the programs was low,<sup>151</sup> though it has begun to accelerate. As of the fourth quarter of 2015, only about 21% of federal student loan borrowers are enrolled in an income-driven repayment program.<sup>152</sup> Less than 4% are in the newer PAYE version, though the number of borrowers with PAYE loans has more than doubled each year and is now at 770,000.<sup>153</sup> Although large

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143. See *Old Colony Trust Co. v. Comm'r*, 279 U.S. 716, 729 (1929).

144. See I.R.C. § 61(a)(12) (2012).

145. See *id.* § 108(f). Thus, the exclusion is applicable to PSLF loan forgiveness. See *supra* note 141.

146. See Gregory Crespi, *Should We Defuse the “Tax Bomb” Facing Lawyers Who Are Enrolled in Income-Based Student Loan Repayment Plans?* (July 11, 2015) (unpublished manuscript), available at <http://ssrn.com/abstract=2615561>; Letter from Eric Solomon, Assistant Sec’y for Tax Policy, to Sander Levin, U.S. Representative (Sept. 19, 2008), available at [http://www.finaid.org/loans/20080919\\_treasurylevinforgiveness.pdf](http://www.finaid.org/loans/20080919_treasurylevinforgiveness.pdf).

147. The percentage could be even higher for a person in a lower tax bracket, but I am assuming that the cancellation of debt income itself is likely to push a taxpayer at least into the 25% bracket.

148. See, e.g., H.R. 2492, 111th Cong. (1st Sess. 2009); Ron Lieber, *For Student Borrowers, Relief Now May Mean a Big Tax Bill Later*, N.Y. TIMES (Dec. 14, 2012), <http://www.nytimes.com/2012/12/15/your-money/for-student-borrowers-a-tax-time-bomb.html>.

149. See OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2014, at 209 (2013) [hereinafter 2014 BUDGET]; OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2015, at 190 (2014) [hereinafter 2015 BUDGET]; OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2016, at 53 (2015) [hereinafter 2016 BUDGET].

150. If the forgiveness is not excluded, the analysis is more complicated. See, e.g., Gregory S. Crespi, *Will the Income-Based Repayment Program Enable Law Schools to Continue to Provide “Harvard-Style” Legal Education?*, 67 SMU L. REV. 51, 85–99 (2014) (analyzing the financial effects of the program assuming that a borrower also sets aside sufficient savings to pay the future tax due on forgiveness).

151. See U.S. DEP’T OF EDUC., *supra* note 135, at S-14 (“Despite the generous benefits, income-based repayment take-up rates have been very low . . .”). Uptake and awareness of earlier programs has also been low. See Schrag, *supra* note 126, at 783–87.

152. Federal Student Aid, *supra* note 5. Note that these data do not include outstanding private student loans made prior to 2008.

153. *Id.*



and rapidly growing, these numbers are still only a small fraction of the 40 million people with some public or private student loan debt, however.<sup>154</sup>

The early low uptake rates were likely a function of, first, lack of knowledge, and second, difficulty in actually enrolling in IBR or PAYE. First, there was little marketing and promotion of IBR and PAYE initially, though the Department of Education is now doing more direct outreach, including a partnership with TurboTax and other tax preparers.<sup>155</sup> Ironically, some lack of knowledge of the program may also be because of how uncontroversial, and thus not newsworthy, passage was. The current IBR law was passed as part of the bill that enacted “Obamacare,” and thus was perhaps less publicized than if it had been enacted independently. Moreover, what debate there was on the student loan provisions tended to focus more on the provisions repealing the subsidies to private student-loan lenders and expanding Pell Grants, rather than on the IBR program.<sup>156</sup> And the estimated costs of the programs at the time of enactment were minimal, which meant there was perhaps less to fight over.<sup>157</sup> Although being under the radar likely helped passage, it did not help initial student awareness.<sup>158</sup>

The second friction in uptake was the early difficulty for borrowers enrolling in and then managing the system. Prior to 2012, the enrollment process was confusing and buggy, and required significant paperwork and documentation.<sup>159</sup> Once enrolled, borrowers are required to annually demonstrate their income and family size,<sup>160</sup> which is a heavy burden.<sup>161</sup> As of this writing, the application process has been streamlined, however, especially through use of an IRS Data Retrieval Tool to import tax return data. Enrollment appears to be accelerating.<sup>162</sup>

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154. Federal Student Aid, *supra* note 118.

155. See U.S. DEP'T OF EDUC., *supra* note 135, at S-14 (on outreach efforts); Kelsey Snell, *Student Loan Debt Deal Comes with Tax Catch*, POLITICO (Mar. 26, 2014, 5:05 AM), <http://www.politico.com/story/2014/03/student-loan-debt-deal-taxes-105025> (on TurboTax partnership).

156. See, e.g., METTLER, *supra* note 122, at 69–87 (detailing the policy battles over student loan reform).

157. See discussion *infra* Part III.B.

158. But see Philip G. Schrag, *Failing Law Schools—Brian Tamanaha's Misguided Missile*, 26 GEO. J. LEGAL ETHICS 387, 417–18 (2013) (challenging the idea that IBR and PAYE were under the radar, given that, *inter alia*, Obama specifically called for expanded IBR in his 2010 State of the Union speech).

159. See Memorandum from Barack Obama, President, to Arne Duncan, Sec'y of Educ., and Timothy Geithner, Sec'y of the Treasury, *Improving Repayment Options for Federal Student Loan Borrowers* (June 7, 2012), available at <http://www.whitehouse.gov/the-press-office/2012/06/07/presidential-memorandum-improving-repayment-options-federal-student-loan>; Press Release, Office of the Press Sec'y, The White House, *Fact Sheet: Helping Americans Manage Student Loan Debt with Improvements to Repayment Options* (June 6, 2012), available at <http://www.whitehouse.gov/the-press-office/2012/06/06/fact-sheet-helping-americans-manage-student-loan-debt-improvements-repay>; Libby A. Nelson, *An Underused Lifeline*, INSIDE HIGHER ED (Oct. 23, 2012), <http://www.insidehighered.com/news/2012/10/23/despite-student-debt-concern-income-based-repayment-lags>.

160. See 34 C.F.R. § 685.209(a)(5)(i)(A)–(C) (2015).

161. See, e.g., Kelly Field, *Thousands Fall Out of Income-Based Repayment Plans*, CHRON. HIGHER EDUC. (Apr. 2, 2015), <http://chronicle.com/article/Thousands-Fall-Out-of/229031>.

162. See *supra* text accompanying note 153.

## B. COST ESTIMATES

The PAYE program has the potential to be quite expensive, especially when loan forgiveness starts around 2027<sup>163</sup> (or earlier, with REPAYE available to older borrowers). Despite this, the cost estimates at the time of the IBR law's passage (and also at the time PAYE was promulgated by regulation) are quite murky, as are later estimates by the administration on the regulatory expansions. As noted above, it is likely that low or nonexistent cost estimates helped to ensure passage. Although a bit of a digression, this section provides some of the background on the relevant budget rules around these cost estimates, as well as more detail on the estimates themselves. These issues of cost are technical, but they are central to the politics around student loans and provide a useful window into the political economy of large-scale government programs.

Before getting into the cost estimates in detail, some basic budgeting rules will be helpful. For most federal expenditures, Congress makes an estimate of the costs over ten years—the so-called “budget window.” At first glance, that may appear to lower the estimates for IBR and PAYE because forgiveness would happen ten years after graduation at the earliest, which likely is outside the budget window at the time of the bill's passage. However, budget rules call for different treatment of federal loans, student or otherwise. Under these rules, the cost of a federal loan is recorded in the year that the loan is disbursed, and is calculated as the net present value of expected net cash flows over the full life of the loan, taking account of defaults, forgiveness, interest forbearance, and the like.<sup>164</sup> Thus, if there is some chance of default or of the loan balance being forgiven at any point, even beyond ten years, an estimate of that would show up in the budget in the year of the loan's disbursement, as would the value of the subsidies due to the cap on capitalized interest.<sup>165</sup>

Despite this, early cost estimates were still close to zero. When IBR was first enacted in 2007 (the version that limited payments to 15% of discretionary income, with forgiveness after twenty-five years), the Congressional Budget Office (CBO) only broke out the estimated costs for an earlier draft bill. In that cost estimate, CBO estimated the total cost over ten years to be only \$1.8 billion.<sup>166</sup> This is because CBO assumed relatively little uptake because that

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163. Technically, loans issued as early as October 2007 could qualify for PAYE, provided that the borrower also took out new debt after October 1, 2011. *See supra* note 129. But the bigger volume of loan forgiveness will begin around 2032.

164. Federal Credit Reform Act of 1990, 2 U.S.C. § 661a(5)(B) (2012).

165. The government also readjusts the estimates of the cost of outstanding loans based on changes in economic and other factors. *See, e.g.*, U.S. DEP'T OF EDUC., STUDENT LOANS OVERVIEW, FISCAL YEAR 2016 BUDGET PROPOSAL R-10 to R-12 (2015), available at <http://www2.ed.gov/about/overview/budget/budget16/justifications/r-sloverview.pdf>.

166. *See* CONG. BUDGET OFFICE, COST ESTIMATE: H.R. 2669: COLLEGE COST REDUCTION ACT OF 2007, at 4–7 (2007), available at <https://www.cbo.gov/sites/default/files/110th-congress-2007-2008/costestimate/hr26691.pdf>. This earlier version of the bill allowed forgiveness after twenty years, rather than twenty-five, which should have made this estimate higher than whatever the estimate would have been for the final version.



version of IBR required full interest capitalization, and because there had been little uptake of the earlier Income-Contingent Repayment option.<sup>167</sup>

When IBR was changed in 2010 to payments of 10% of discretionary income and forgiveness after twenty years, CBO did not provide a specific cost estimate.<sup>168</sup> However, the administration estimated the change to cost \$7.4 billion over ten years, though that included at least some loans going back to 2007, and so actually covered fourteen, rather than ten, years of loans. The annual cost by 2020 was estimated to be over \$1.2 billion per year—still tiny by budget standards.<sup>169</sup>

The PAYE program was instituted in 2012 by regulation, and the administration estimated that the ten-year cost of the change from IBR to PAYE would be an additional \$2.1 billion.<sup>170</sup> In addition to accelerating the implementation of the program, PAYE also instituted the limitation on interest capitalization, which should have changed uptake estimates based on CBO's earlier methodology; thus, it is surprising that the number was still so low, though as noted below, the administration has recently revised upward the cost of existing PAYE debt.

In its 2014 and 2015 budgets, the administration proposed extending PAYE to loans made earlier than 2007. In the 2014 budget, it estimated the ten-year cost of that change to be \$6 billion,<sup>171</sup> and in the 2015 budget, it estimated that cost at \$7.6 billion.<sup>172</sup> The 2015 budget also proposed more limited forgiveness, however,<sup>173</sup> which lowered estimated costs for 2020 and beyond by around half.<sup>174</sup> The administration estimates that the extension of the new REPAYE rules to pre-2015 borrowers would cost \$8.3 billion, plus an additional \$7.1 billion for the ten years beginning in 2016, though the annual estimates decrease such that the budget estimate for 2025 is only \$420 million based on an estimate of an incremental 2 million borrowers above those who would be on PAYE or IBR.<sup>175</sup>

The Department of Education's 2016 budget, however, states that the expected net cost to the government of all outstanding loans increased by \$21.8 billion in 2015, "due primarily to greater enrollment in income-driven repay-

167. *Id.*; see also Schrag, *supra* note 126, at 832–33 (discussing evidence that negative amortization dissuaded many borrowers from using the earlier ICR program).

168. The IBR amendments were part of the HCERA—the Obamacare reconciliation bill—and CBO did not break out the costs of IBR separately. See Health Care and Education Reconciliation Act of 2010, Pub. L. No. 111-152, § 2213, 124 Stat. 1029, 1081 (2010).

169. OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2011, at 166 (2010).

170. Federal Perkins Loan Program, Federal Family Education Loan Program, and William D. Ford Federal Direct Loan Program, 77 Fed. Reg. 66,088, 66,089 (Nov. 1, 2012) (to be codified at 34 C.F.R. pts. 674, 682, 685).

171. 2014 BUDGET, *supra* note 149, at 203.

172. 2015 BUDGET, *supra* note 149, at 178.

173. See U.S. DEP'T OF EDUC., *supra* note 135, at S-13.

174. 2015 BUDGET, *supra* note 149, at 178.

175. See REPAYE Rules, *supra* note 134, at 67,228–30.

ment plans, like IBR.”<sup>176</sup> Assuming that covers eight years worth of loans,<sup>177</sup> we could assume a rough annual cost of \$2.8 billion per year, though that is a backward-looking number.<sup>178</sup> Importantly, this extra cost for the first time in recent years pushed the overall student-loan program into a net subsidy position, paying out on net more than it receives, in present value terms. The Brookings Institution performed its own simulation, assuming (unrealistically) full uptake of PAYE, and estimated a cost of \$14 billion per loan cohort.<sup>179</sup>

In the end, the cost estimates are at best sketches, based on educated guesses about the volume of loan forgiveness twenty years out. The reasonable range for these estimates is somewhere between \$3 billion and \$10 billion per year, meaning that on average, taxpayers will be transferring \$3 billion–\$10 billion each year to college students through PAYE and other income-driven repayment programs, though in cash flow terms these costs will not appear for a decade or more. Although that is a big number, this is still well less than, for example, the annual funding for the Pell Grant program, which is around \$26 billion.<sup>180</sup> More importantly, it is far less than the nominal amounts of loans disbursed, which was nearly \$100 billion 2013–2014.<sup>181</sup> As discussed in the next section and in Part IV, the budgetary differences between funding higher education through loans versus taxes are enormous even if the overall effects are similar.

#### C. LOAN PAYMENTS AS TAX PAYMENTS

Though described as a loan-forgiveness program, here I suggest that income-driven repayment operates conceptually more like a progressive tax-and-transfer program. As we will see, the effect of the PAYE program, if it were widely adopted, would be as if the government paid tuition costs directly and raised the money to do so in a somewhat progressive way and as a percentage of income. Yet the spending would largely be off-budget because the budget captures only the net of the loan outlay and repayment, rather than the total

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176. U.S. DEP’T OF EDUC., *supra* note 165, at R-12.

177. Loans disbursed after October 1, 2007, may be eligible for IBR or PAYE.

178. The New American Foundation recently calculated a 2014 annual cost of \$11 billion based on the administration’s 2016 budget request, though, as they acknowledge, that estimate includes costs for all prior-year loans that were consolidated in 2014, and thus includes more than just 2014-vintage loans. See Jason Delisle, *What Does Income-Based Repayment for Student Loans Cost?*, EdCENTRAL (May 21, 2015), <http://www.edcentral.org/income-based-repayment-cost>. Not including consolidated loans, they calculate the 2014 cost to be \$2.8 billion—the same as my back-of-the-envelope calculation above. *Id.*

179. BETH AKERS & MATTHEW M. CHINGOS, STUDENT LOAN SAFETY NETS: ESTIMATING THE COSTS AND BENEFITS OF INCOME-BASED REPAYMENT 15, 19 (2014), available at [http://www.brookings.edu//media/research/files/papers/2014/04/14%20student%20safety%20nets/ibr\\_online.pdf](http://www.brookings.edu//media/research/files/papers/2014/04/14%20student%20safety%20nets/ibr_online.pdf).

180. See, e.g., CONG. BUDGET OFFICE, PROGRAM COSTS ASSUMING A MAXIMUM DISCRETIONARY AWARD LEVEL OF \$4,860 IN THE FEDERAL PELL GRANT PROGRAM—CBO’S APRIL 2014 BASELINE (2014), [https://www.cbo.gov/sites/default/files/cbofiles/attachments/44199-2014-04-Pell\\_Grant.pdf](https://www.cbo.gov/sites/default/files/cbofiles/attachments/44199-2014-04-Pell_Grant.pdf) (projecting outlays of \$26.4 billion for Pell Grants in 2014).

181. See COLL. BD., *supra* note 125.

nominal cash flow.<sup>182</sup>

Consider two students graduating from a private four-year college, each with \$50,000 in student debt.<sup>183</sup> The interest rate on the debt is 4.29%.<sup>184</sup> Student 1 joins a large investment bank, starting at a \$70,000 annual salary. Student 2 becomes a public school teacher, starting at a \$35,000 annual salary.<sup>185</sup> Both have consistent wage growth over time. Both enroll in PAYE. Under that program, each pays no more than 10% of discretionary income for twenty years, if the banker, or ten years, if the teacher.<sup>186</sup>

Student 1 easily pays off the loan, following just the normal ten-year repayment schedule, except for a few lower early payments. Student 2, on the other hand, makes relatively small payments, and ends up having a significant amount of debt forgiven in ten years. In present-value terms, more than \$27,000 of the initial \$50,000 debt is written off.

Let us look again at the PAYE program and the example above, but this time as a traditional tax-and-spending program. Under this view, the government simply pays tuition costs directly to schools but then charges an additional tax to former students, on top of typical income taxes, to partly pay those costs. Former students enrolled in PAYE pay 10% of discretionary income—that is, AGI less 150% of the poverty line.<sup>187</sup> Because the standard deduction and

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182. See *supra* Part III.B; OFFICE OF MGMT. & BUDGET, FISCAL YEAR 2015: ANALYTICAL PERSPECTIVES: BUDGET OF THE UNITED STATES GOVERNMENT 37 (2014) (“The individual cash flows to and from the public associated with the loans or guarantees, such as the disbursement and repayment of loans, the default payments on loan guarantees, the collection of interest and fees, and so forth, are recorded in the credit program’s *non-budgetary* financing account.” (emphasis added)). As I discuss in Part IV.A below, there are important political economy ramifications from the government outlays on tuition being off-budget.

183. This is on the high end. In 2013, 69% of student-loan borrowers had less than \$25,000 in debt because of the large fraction of students who attend low-cost undergraduate programs. See COLL. BD., *supra* note 125, at 27 fig.18A. For this reason, PAYE discussions have primarily focused on graduate programs, such as law, teaching, and nursing, with the potential for high cost and low wages. However, average student debt per borrower increased 35% 2004–2013. See *id.* at fig.18B.

184. As of 2014, the statutory interest rate for Direct Stafford Loans to undergraduates, both subsidized and unsubsidized, is set at the ten-year Treasury Note rate in the year of the loan grant, plus 2.05%, with a cap of 8.25%. 20 U.S.C. § 1087e(b)(8)(A) (2012). For 2015–2016, that rate was 4.29%. See Federal Student Aid, *Interest Rates and Fees*, U.S. DEP’T EDUC., <https://studentaid.ed.gov/types/loans/interest-rates> (last visited Nov. 4, 2015).

185. The average starting salary for a teacher 2012–2013 was \$36,141. *2012-2013 Average Starting Teacher Salaries by State*, NAT’L EDUC. ASS’N, <http://www.nea.org/home/2012-2013-average-starting-teacher-salary.html> (last visited Nov. 4, 2015).

186. The following calculations are made using the IBR calculator at <http://www.finaid.org/calculators>. For more on the calculators, see Schrag, *supra* note 126, at 804–05. Note that the calculation uses the 2012 poverty level guidelines (the latest year available in the calculator), and thus overstates slightly the out-of-pocket costs for 2015. The calculator also makes certain assumptions about, for example, salary growth rates and inflation, which are noted at the above website.

187. See 20 U.S.C. § 1098e(a)(3)(B) (2012); 34 C.F.R. § 685.209(a)(2)(i) (2015). On the term “discretionary income,” see *supra* note 136.

personal exemptions are roughly equivalent to the poverty line,<sup>188</sup> such a tax looks similar to a tax of 10% of taxable income,<sup>189</sup> so we could imagine PAYE as a 10% income surtax on top of our existing income tax.<sup>190</sup>

Another tax-like feature of PAYE is that, in calculating the payment, the regulations include income of both the borrower and the borrower's spouse,<sup>191</sup> much as the income tax treats a married couple as a single tax unit with a single combined income. This is in contrast to the traditional student loan, where the debtor is just the individual.<sup>192</sup>

But this simple story breaks down quickly because there are a number of complications to consider. First, the "discretionary income" base is somewhat smaller than the taxable income base for having a larger zero bracket—150% versus 100% of the poverty line, roughly. That, plus that AGI is arguably a better measure of economic income than taxable income is, means that there is a little bit of progressivity baked in at the low ends. Student 2 in the example above, for example, starts off paying about 5% of AGI, whereas Student 1 pays about 7.5% of AGI.<sup>193</sup>

Second, under IBR and PAYE<sup>194</sup> the monthly payments are capped at what would have been the typical ten-year amortization payment—\$513.15, if a \$50,000 loan. That means that a former student with this debt making more than \$79,233 actually pays *less than* 10% of discretionary income.<sup>195</sup> These two features combined mean that PAYE starts out with increasing rates at low

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188. See John R. Brooks II, *Doing Too Much: The Standard Deduction and the Conflict Between Progressivity and Simplification*, 2 COLUM. J. TAX L. 203, 212 (discussing historical connection between standard deduction and the poverty line).

189. The income tax is levied against the tax base defined as "taxable income." I.R.C. § 1 (2012). For most taxpayers, "taxable income" is equal to AGI minus the combination of the standard deduction and personal exemptions. See *id.* § 63(b).

190. See D. BRUCE JOHNSTONE & PAMELA N. MARCUCCI, FINANCING HIGHER EDUCATION WORLDWIDE: WHO PAYS? WHO SHOULD PAY? 153 (2010) (noting similarities between an income-contingent loan and a graduate tax); Alessandro Cigno & Annalisa Luporini, *Scholarships or Student Loans? Subsidizing Higher Education in the Presence of Moral Hazard*, 11 J. PUB. ECON. THEORY 55, 77 (2009) (stating that the only difference between an income-contingent loan and a graduate tax is that loans are opt-in); Panu Poutvaara, *Educating Europe: Should Public Education Be Financed with Graduate Taxes or Income-Contingent Loans?*, 50 CESIFO ECON. STUD. 663 (2004).

191. 34 C.F.R. § 685.209(a)(1)(v)(B). A married individual who files separately does not, under current law, include a spouse's income. *Id.* § 685.209(a)(1)(v)(A). The new REPAYE program combines household income for married individuals who file separately. See REPAYE Rules, *supra* note 134, at 67,205.

192. See, e.g., 34 C.F.R. § 685.212(a)(1) (discharging the student loan if the borrower has died).

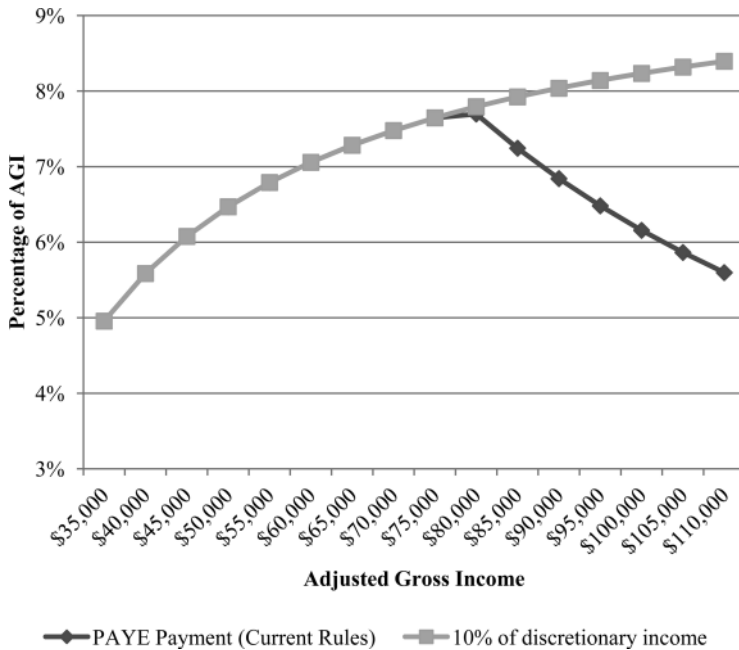
193. Treating the salary as the AGI, Student 1 pays 10% of the difference between \$70,000 and 150% the relevant poverty line (\$11,770 in 2015, Annual Update of the HHS Poverty Guidelines, 80 Fed. Reg. 3236, 3237 (Jan. 22, 2015)), or about \$5235 per year—7.5% of the student's salary. Student 2 pays 10% of the difference between \$35,000 and 150% of \$11,770, or about \$1735 per year—5% of the student's salary.

194. Under REPAYE, there is no cap on the 10% payment. See REPAYE Rules, *supra* note 134, at 67,213–14. However, it is relatively easy for a high-income borrower to switch out of REPAYE and into a traditional loan program.

195. That is, \$513.15 per month is equal to 10% of discretionary income at an AGI of \$79,233.

income levels, but then has decreasing rates after a peak.<sup>196</sup> The peak will be different for different loan amounts (and interest rates),<sup>197</sup> but eventually the payments do shrink as a percentage of income as income increases.

Third, the tax is not indefinite or even for a fixed number of years. One pays the above percentages only until the nominal debt is either paid off or forgiven. Thus, in some cases a high-income graduate could stop paying the PAYE “tax” sooner than the low-income graduate, even though the high-income graduate pays more in dollar terms.<sup>198</sup>



**Figure 1. Payment Schedule (% AGI)<sup>199</sup>**

Fourth, there are limits to how much an undergraduate can borrow using loans eligible for PAYE. The most in total that an undergraduate can borrow is \$31,000 if the student is dependent (and only \$27,000 for the first four years) or \$57,500 if the student is independent.<sup>200</sup> For an undergraduate degree in 2014, this may be sufficient, especially for public universities, because of the combination of other forms of aid, such as institutional grants, public subsidies, Pell Grants, Perkins loans, and work-study. In addition, Direct PLUS loans are

196. See *infra* Figure 1.

197. For a debt of \$150,000, for example, the peak point is at a salary of around \$202,000.

198. This is unlikely to be the case for low-income graduates in public-interest jobs because PSLF forgiveness is at ten years, the same period over which a traditional loan is fully paid. But a low-income graduate in a non-public-interest job may be paying 10% of discretionary income for twenty years, whereas a higher-income graduate may stop paying after as few as ten years.

199. Figure 1 is based on a poverty level of \$11,770 and a \$50,000 loan at 4.29% interest.

200. 34 C.F.R. § 685.203(e) (2015).

available to parents, though such loans are not eligible for PAYE.<sup>201</sup> Finally, there is some residual private lending if these other sources are not sufficient. But as tuitions keep rising, these borrowing caps may put some strain on a student's ability to finance tuition with PAYE-eligible debt.<sup>202</sup>

For graduate students, however, there is no limit to the amount of PAYE-eligible debt. There is a cap on aggregate Direct Loans (in contrast to Direct PLUS Loans) of \$138,500, which also includes any undergraduate debt.<sup>203</sup> But graduate students can also take out Direct PLUS loans themselves up to the school's cost of attendance,<sup>204</sup> and such loans qualify for PAYE and IBR.<sup>205</sup> Thus, PAYE-eligible loans can cover essentially the full tuition and living expenses for any graduate program. This skews the PAYE benefits toward graduate education, though that may be justified in part by the existence of more generous direct aid for undergraduates, such as Pell Grants.

Fifth, under the current rules, the twenty-year forgiveness creates taxable income from the discharge of indebtedness.<sup>206</sup> Although nominally a tax-like feature, this actually acts like a balloon payment or a form of liquidated damages—an amount of money that the government aims to collect, with only limited regard for the borrower's ability to pay.<sup>207</sup> Thus, with regard to that amount, the government stands again more like a creditor than a tax agency. That said, the administration has proposed excluding the income from the twenty-year forgiveness, in addition to the ten-year forgiveness.<sup>208</sup>

Finally, PAYE and IBR, as loan programs, are administered by the Education Department, not the Internal Revenue Service.<sup>209</sup> Early implementation of IBR and PAYE was criticized as cumbersome, with a difficult enrollment process and complicated annual approval procedures, though the situation is improving as of this writing.<sup>210</sup>

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201. *Id.* § 685.209(a)(1)(ii).

202. The amount of private lending has crept up somewhat since the initial drop when the subsidy for private student loan lenders was repealed. *See supra* note 125.

203. 34 C.F.R. § 685.203(e). For graduate students in health profession programs, the aggregate limit is \$224,000. Information for Financial Aid Professionals, *Aggregate Loan Limit for Graduate and Professional Students Preparing for the Health Professions*, U.S. DEP'T EDUC. (Apr. 18, 2008), <https://ifap.ed.gov/dpccletters/041808GEN0804.html>.

204. 34 C.F.R. § 685.203(f)–(g); *see also* Philip G. Schrag & Charles W. Pruett, *Coordinating Loan Repayment Assistance Programs with New Federal Legislation*, 583 J. LEGAL EDUC. 591–92 (2011).

205. 34 C.F.R. § 685.209(a)(1)(ii) (limiting the exclusion of Direct PLUS loans to those made to a parent); Federal Student Aid, *PLUS Loans*, U.S. DEP'T EDUC., <https://studentaid.ed.gov/types/loans/plus> (last visited Sept. 18, 2015).

206. *See supra* notes 143–50 and accompanying text.

207. The borrower would still have the advantage of the graduated tax rate structure and other features of the income tax that provide for progressive payments, though she still would not have the actual cash.

208. *See supra* note 149.

209. Compare Australia's similar HELP program, in which the tax agency collects payments through tax returns. *See infra* Part IV.B.2.

210. *See supra* text accompanying notes 159–62.



As a result of these complications, the simple story of PAYE as a tax-and-transfer program is not quite accurate, but neither is the simple story of students just paying back a loan. The current system is a partial hybrid of the two, combining a baseline income tax-like payment with the caps and finite terms of a loan program.<sup>211</sup> A key policy question, therefore, is whether the program should become more tax-like, and if so, whether alternative structures, such as full public funding, would be more appropriate. The next Part turns to these questions.

#### IV. INCOME-DRIVEN REPAYMENT AS PROGRESSIVE PUBLIC FUNDING

In this Part, I first lay out the theoretical case for income-driven repayment as a method of public higher-education funding, especially as compared to both U.S.-style need-based grants and Continental Europe-style full public funding. As I discuss in section A, there is a good case for using income-driven repayment, but it is far from sure and depends heavily on system design and implementation. Drawing on some analysis of other forms of income-driven repayment in section B, I return to the design and implementation question in section C and suggest possible changes to PAYE to address some of the problems the Article identifies. These suggested changes differ from those offered by the Obama administration and other analysts, and this is largely because these reform suggestions arise out of the specific analytic framework of this Article—that income-driven repayment should be thought of more as a tax program than a loan program. Section D addresses the specific and important criticism that income-driven repayment encourages borrowers to take on excessive levels of debt. I explain in that section why this should not be a significant problem.

##### A. THE CASE FOR INCOME-DRIVEN REPAYMENT

As laid out in Part II.A, U.S. higher-education finance has evolved to a consensus that funding should be largely through a combination of direct,

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211. There are other possible framings of IBR. One alternative would be to view it purely as a transfer program, whereby the government picks up the tab for some tuition costs based on an individual's income, much as it does for food (SNAP), health care (Medicaid), and other costs (TANF and EITC). But unlike those programs, which are for goods typically purchased and consumed all in one period, higher education paid for with debt is purchased in one or more periods, and then paid for over many future periods. Thus, the subsidy comes in the form of reduced debt payments (and ultimate forgiveness) rather than an upfront subsidy for tuition. This is what creates the *ex post* progressivity discussed earlier: rather than subsidize tuition based on ability to pay at the time of enrollment and payment, it is subsidized based on ability to pay after leaving college. The loan structure, with the government as lender, also means that the government pays everything up front, and simply seeks different levels of repayment from different individuals, as opposed to only subsidizing the initial purchase. Ultimately, however, the distinction between tax and transfer is arbitrary, and any progressive tax could instead be framed as a progressive transfer and vice versa. Imagine, for example, a lump-sum head tax in which every person pays an equal amount of tax in dollar terms, the revenue from which is then used to make direct payments that vary with income and other factors in such a way that the distribution of after-tax income is exactly the same as under our current tax system. Another possible framing is as a substitute for bankruptcy. *See infra* Part IV.D.



debt-financed tuition on students, with need-based grants for those low-income students and families who would otherwise be unable to pay tuition. In many other countries, especially Western Europe, higher education is instead fully or largely funded out of general revenue. Thus, a first key question is how an income-driven repayment program, such as PAYE, compares with these two other methods.<sup>212</sup> With our framing of PAYE as a tax-and-transfer program, we can also ask the question in a slightly different way: should the transfers necessary to achieve optimal levels of higher education go (mostly) from taxpayers generally to needy (or all) students *ex ante*, or (mostly) from high-income *former students* to needy *former students ex post*?

We can break that question down further. First, how well would an income-driven loan program, relative to the other options, serve the policy goals motivating public spending on higher education, namely expanding access while alleviating the pressures of cost increases? Second, what would be the distributional effects of an income-driven program, especially given the distributional incidence of the cost disease? Third, what effects would an income-driven program have on deadweight loss and excess burden? Would it be more or less economically efficient than other forms of higher-education finance?<sup>213</sup>

### 1. Targeted Spending on Public Policy Goals

There are important public benefits from expanding higher education.<sup>214</sup> Much of these can come simply from increasing the supply of people with skills, which in turn can lead to higher economic growth, more social mobility, and less income inequality, plus higher social welfare simply from increasing individuals' welfare.

Although there are many educational, social, and cultural factors that may be limiting the number of people seeking post-secondary education, from the financial side there are essentially two barriers: high upfront costs and an aversion to the downside risk of high debt for those with low future income. Need-based grants, full public funding, and income-driven repayment can each lower both barriers, whereas traditional loans lower only the first barrier but leave borrowers exposed to the risk of future low income. But for need-based grants, full public funding, and income-driven repayment, the classes of subsidy recipients differ. With full public funding, everyone receives the subsidy. With need-based grants, those with low parental income or wealth at the time of enrollment receive the subsidies. And with an income-driven repayment program, those with low income *after* leaving school receive the subsidies. The full

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212. We could also compare it to all students simply paying out of pocket. I effectively rule this option out for the reasons laid out in Part I.

213. Note that these three questions roughly line up with the three ways David Schizer argues that we should analyze tax expenditures, by looking at the programmatic benefits, the effects on distribution, and the degree of excess burden, respectively. See David M. Schizer, *Limiting Tax Expenditures*, 68 TAX L. REV. 275, 289–90 (2015).

214. See *supra* Part I.A.

public funding model is almost certainly wildly over-inclusive if the intent is to drive enrollment, especially given that the private benefits from higher education are still large.<sup>215</sup> The comparison of need-based grants with an income-driven repayment program is more complex, however.

The population of income-driven subsidy recipients can be roughly divided into four categories: those who enter low-income, but high-positive externality careers (such as teaching or public interest law); those who are simply unlucky;<sup>216</sup> those who do not have the ability to earn sufficient income to reasonably cover tuition or loan payments;<sup>217</sup> and those who have the ability, but not the inclination, to earn sufficient income—the high-ability “beachcomber.”<sup>218</sup> The first group is the appropriate target for programmatic subsidies, and the second is the appropriate target for social insurance.<sup>219</sup> Yet need-based grants are not aimed at either group. Directing a subsidy only to those with low parental income or wealth, as need-based grants do, targets public spending without any regard for either public externalities or social insurance.<sup>220</sup> A child of two schoolteachers may go on to be a schoolteacher or a hedge fund manager, and there is little reason to subsidize the latter’s education, no matter the parents’ income.<sup>221</sup>

However, the third and fourth groups are arguably the wrong recipients of higher-education subsidies.<sup>222</sup> For an income-driven program to be successful

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215. Of course, this may be offset by higher-income former students who will later pay higher taxes. But, first, this does not differentiate between those who received the free higher education and those who did not, and second, it requires much higher nominal tax revenue to achieve results than do need-based grants or IBR. See *infra* Part IV.A.3.

216. This is a loaded term. Depending on one’s definition of “luck,” the second and third category could be combined, given that ability is also determined by a lottery, in a sense. See Brooks, *supra* note 87, at 99. Here, I mean “unlucky” as being on the low end of the income distribution for people with similar characteristics, rather than on the low end of the distribution of such characteristics in the first place.

217. Defining ability in the broadest possible sense, including propensity to gain and use skills, predilection toward higher earning fields, social capital and family position, and so on.

218. Arguably, the third and fourth categories could be collapsed, if one considered traits such as desire for leisure or willingness to expend effort as a subset of “ability.” Indeed, even the desire to work in a low-income but high positive externality field could be thought of as a part of ability. The difficulty of drawing these sorts of lines is one reason why the income tax does not attempt to do so, treating income alone as the sole basis for allocating tax burdens, regardless of why a person has a particular income.

219. Schrag notes a similar set of transfers. Schrag, *supra* note 158, at 405.

220. See Lance Lochner & Alexander Monge-Naranjo, *Student Loans and Repayment: Theory, Evidence and Policy* 81–82 (Nat’l Bureau of Econ. Research, Working Paper No. 20849, 2015), available at <http://www.nber.org/papers/w20849> (using a theoretical student loan model to show, *inter alia*, that insurance should be a key principle in student loan program design).

221. The hedge fund manager’s K–12 education was subsidized if the manager attended public school. It is beyond the scope of this Article to analyze all the possible cross-subsidies that high-income individuals might receive at one time or another, but we can at least say that minimizing such subsidies is worthwhile.

222. Importantly, I mean “wrong” leaving aside any distributional concerns, which are addressed in the next section. The issue for this section is purely the programmatic grounds for spending public money to increase the total volume of higher education in cost-effective ways.

on programmatic grounds, therefore, the benefits of the transfers to the first two groups should exceed the costs of misdirecting to the third and fourth groups.

The costs of the third group, those with lower ability, can be managed in part through educational policies and incentives to direct individuals to the appropriate educational services, such as university admissions policies, as well as policies to manage adverse selection. Neither the student nor society is well served by a school accepting the student to a program the student is unlikely to complete, particularly when the debt is payable regardless.<sup>223</sup> More positively, however, the costs of misallocation to this group can also be addressed by trying to *increase* ability, especially through primary and secondary education. But there are still real risks, especially given that there is already a serious misallocation problem in federal student loans. A disproportionate amount of federal loans go to students attending for-profit schools,<sup>224</sup> for example, which have notoriously bad results in terms of graduation rates and career placement.<sup>225</sup> Yet these problems could be exacerbated under income-driven repayment.

The costs of the fourth group, the high-ability beachcombers, could also be exacerbated by the moral hazard effects of income-driven repayment. If the highly educated beachcomber faced a high loan payment, he might feel compelled to work harder, or he might reconsider higher education altogether. But if some of the risks of low income are removed by income-driven repayment, there would be less incentive against simply collecting degrees while working on one's tan. How much less incentive, however, is an empirical question. Related work in public finance tends to show that income tax rates that vary with income have little effect on work effort for most people,<sup>226</sup> and it is not clear why loan repayment rates that vary with income would have a different effect.

Furthermore, if we complicate the idea of the beachcomber to also include those who simply choose less demanding (or, alternatively, more financially risky) jobs because of personal preferences, the proper result is not so obvious.<sup>227</sup> It is not at all clear that we would describe as a virtue of our current loan

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223. Again, this is leaving aside any equity-based reason for providing relief to someone in that situation. *See infra* note 236.

224. For 2007–2008, 94% of bachelor's degree recipients at for-profit schools had federal loans, whereas only 69% did at private nonprofit schools and 58% at public schools. METTLER, *supra* note 40, at 36.

225. *See id.* at 34–36.

226. *See, e.g.*, Emmanuel Saez, Joel Slemrod & Seth H. Giertz, *The Elasticity of Taxable Income with Respect to Marginal Tax Rates: A Critical Review*, 50 J. ECON. LITERATURE 3, 3–4 (2012) (surveying literature).

227. Here, the fourth group can overlap with the first because it is difficult to untangle a desire for leisure from a desire for lower income work. If anything, we probably have too many talented individuals working in finance, corporate law, and specialized medicine, rather than in entrepreneurship, public interest law, and family medicine, for example. Many of those people might choose careers differently if not facing large loan payments. *See* Jesse Rothstein & Cecilia Elena Rouse, *Constrained After College: Student Loans and Early-Career Occupational Choices*, 95 J. PUB. ECON. 149, 158, 162 (2011) (finding that high student debts lead graduates to choose higher-paying jobs, and vice versa,

system that graduates may be forced to work more or in different fields than they would otherwise prefer if they did not have high loan payments.<sup>228</sup> Income is generally thought to be reward enough, and if a person would choose a particular labor-leisure trade-off given potential income, we ought not to introduce a crippling loan payment to distort that choice.<sup>229</sup> Moreover, income-driven repayment hardly removes the risk of low income. Shrinking the required loan payment is helpful, but many of the other risks of low income will remain.

All that said, program design is crucial to minimizing these potential moral hazard costs,<sup>230</sup> and some degree of government regulation and monitoring is likely required, though this is also true of the traditional loan program.<sup>231</sup> Furthermore, the above analysis assumes that students consider only the expected financial benefits and costs of the programs, and are indifferent to the structure—reducing upfront tuition costs versus reducing later debt payments. If, however, students are debt-averse,<sup>232</sup> even if irrationally so, or the complexity of the PAYE program introduces a friction,<sup>233</sup> then need-based grants should still play a role in increasing access.<sup>234</sup>

contrary to what standard life-cycle theory would predict). To the degree that that constitutes moral hazard, it would be “good” moral hazard—that is, somewhat costly, but still desirable on balance. See Brooks, *supra* note 87, at 131–32.

228. See Schrag & Pruet, *supra* note 4, at 587 (discussing survey results showing that high debt dissuades law students from taking public interest jobs).

229. One could make the argument, relying on the optimal tax literature, that a loan payment functions like a lump-sum tax on ability (college being a proxy for ability, and the standard loan payment not being a function of income) and therefore would not induce a distortionary substitution from labor to leisure. Then all that would remain would be a nondistortionary income effect. But a more complete social welfare function would have to take into account the utility losses from, *inter alia*, pushing people into undesired careers.

230. See Lochner & Monge-Naranjo, *supra* note 220, at 82 (using a theoretical student loan model to show, *inter alia*, that management of incentive problems should be a key principle in student loan program design).

231. The Obama Administration has proposed stricter standards on schools that accept federal loans and on for-profit schools generally. See, e.g., Stephanie Simon & Caitlin Emma, *Barack Obama Cracks Down on For-Profit Colleges*, POLITICO (Mar. 13, 2014, 9:53 PM), <http://www.politico.com/story/2014/03/barack-obama-education-for-profit-colleges-104661>; see also *infra* note 329.

232. See, e.g., Erica Field, *Educational Debt Burden and Career Choice: Evidence from a Financial Aid Experiment at NYU Law School*, 1 AM. ECON. J.: APPLIED ECON. 1, 2 (2009) (finding evidence that students planning to enter public interest law jobs preferred upfront tuition waivers, with potential repayment later if they had higher income, to upfront debt with income-driven repayment, despite the financial equivalence of the two programs, likely because of the nominal debt for the latter program); Benjamin M. Marx & Lesley J. Turner, *Borrowing Trouble? Student Loans, the Cost of Borrowing, and Implications for the Effectiveness of Need-Based Grant Aid* 22, 28–33 (Nat’l Bureau of Econ. Research, Working Paper No. 20850, 2015), available at <http://www.nber.org/papers/w20850> (finding that \$1 of Pell Grant Aid leads to an average \$1.80 reduction in debt, implying a fixed cost of borrowing, some of which may be a “psychic” cost).

233. See, e.g., Susan Dynarski & Judith Scott-Clayton, *Financial Aid Policy: Lessons from Research* 21–23 (Nat’l Bureau of Econ. Research, Working Paper No. 18710, 2013), available at <http://www.nber.org/papers/w18710> (summarizing research finding that complexity limits effectiveness of financial aid).

234. See *id.* at 19–21 (summarizing research finding that access to aid and other forms of cost reduction increases college access). But see *id.* at 22–23 (summarizing research suggesting that Pell Grant availability may not increase enrollments).

## 2. Equity and Distribution

The question of distributional equity is related to the first question but distinct conceptually. The first question addresses the appropriate allocation of government's spending on public goods and social insurance. The second addresses government's role in distribution: from whom and to whom should income be redistributed, if at all?<sup>235</sup> In this subsection, I first try to answer this general theoretical question, and then analyze the redistributive effect of the current PAYE program.

*a. Theory.* Consider the following table, which categorizes transfers to students based on whether their postgraduation income is high or low, and also whether their parents' income is high or low at the time of enrollment.<sup>236</sup> The table uses PAYE as shorthand for all of income-driven repayment, and Pell as shorthand for need-based ex ante aid.

**Table 1. Which Students Receive Transfers?**

| STUDENT POST-GRAD INCOME |      |      |      |      |     |  |
|--------------------------|------|------|------|------|-----|--|
| PARENT INCOME            |      |      | HIGH |      | LOW |  |
|                          | HIGH | PAYE | ✗    | PAYE | ✓   |  |
|                          |      | Pell | ✗    | Pell | ✗   |  |
|                          | LOW  | PAYE | ✗    | PAYE | ✓   |  |
| Pell                     |      | ✓    | Pell | ✓    |     |  |

As the table shows, with respect to low-income former students with low-income parents, and with respect to high-income former students with high-income parents, income-driven repayment and need-based aid essentially act the same—transfers in one case (the fourth quadrant), but not the other (the first quadrant). In both cases, that is the appropriate answer from an equity stand-

235. Note that this distinction lines up with Musgrave's conceptual separation of government into the Allocation and Distribution Branches (along with the Stabilization Branch). See RICHARD A. MUSGRAVE, *THE THEORY OF PUBLIC FINANCE: A STUDY IN PUBLIC ECONOMY* 5–22 (1959). Distinguishing between these two functions of a tax-and-transfer system can be difficult in practice, however, because the effects overlap. See Brooks, *supra* note 87, at 94–101.

236. I am grateful to Ruth Mason for suggesting such a table. The table is a simplification for illustrative purposes. Income is more of a spectrum, and there are also other dimensions to consider, such as wealth. Also, on equity grounds there is little reason to determine *why* someone might have low income, in contrast to my approach in Part IV.A.1. In this view, redistribution is not an issue of merit, or of ex ante decisions, but rather an issue of ex post results. For example, those in the third group from Part IV.A.1—those with lower ability—are a reasonable target for redistributive policies, even if not educational subsidies. Even if the government should not subsidize inappropriate education choices ex ante, it ought to be sympathetic to those who have to live with those choices ex post. But a further discussion of equity norms and justice is beyond the scope of this Article.

point. It is in the second and third quadrants that the two programs differ.<sup>237</sup>

Looking at the third quadrant, need-based aid causes a transfer to a high-income former student, but income-driven repayment does not. Because the *student* should be the focus of the equity analysis, income-driven repayment produces a more equitable result than need-based aid for this group. The more difficult “to whom” question, however, is regarding the group of low-income former students with high-income parents—the second quadrant. Even if one accepts that there might be *programmatic* reasons to subsidize at least some of those students’ choices (for example, if they enter low-income, but high positive-externality careers),<sup>238</sup> there are few *equity* reasons for doing so. This is a concern because wealthy parents with children who plan low-income careers would be well advised just to pay their child’s PAYE loan payment rather than pay upfront tuition; that would leave greater wealth to transfer directly to the child.

Weighing against that risk, however, is a strong social norm of paying for a child’s education when possible; rich parents are likely to continue to pay out of pocket rather than direct their children to loans, at least in the near term.<sup>239</sup> Furthermore, in other redistributive programs we typically disregard a parent’s income or wealth, at least until it is actually transferred. For example, an adult child’s income tax rate or eligibility for certain transfers is, in most cases, based only on the child’s own income and not the parents’.<sup>240</sup> Nonetheless, for income-driven repayment to be superior to need-based aid on equity grounds, program design to minimize excessive transfers to this group is important.

In addition to the “to whom” question, there is also the “from whom” question of whether that redistribution should come disproportionately from successful former students, as it could with certain forms of income-driven repayment, or from taxpayers at large, as it would for both need-based grants and full public funding.<sup>241</sup> What makes this question particularly difficult is that we already have a progressive income-tax structure, meaning that a high-income former student will end up paying more back into the system regardless, simply by virtue of having higher income. Thus, the question really is whether the high-income graduate should pay more than a high-income nongraduate *with the same income*.

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237. As in Part IV.A.1, I again dismiss full public funding, at least on the “to whom” question, because the transfers in that case go to everyone rather than a means-tested subgroup. The “from whom” question is a more difficult one that I address below.

238. *See supra* Part IV.A.1.

239. Particularly because there are capital gains and gift tax incentives to transfer wealth in the form of college tuition. *See* I.R.C. § 529 (2012).

240. This ignores the question of whether a child bears some of the incidence of tax on the parents or the parents’ estate, but that is a disputed claim and not central to this issue.

241. The amounts transferred would be larger for full public funding than for need-based grants, though the population of transferors is the same: high-income taxpayers.



From a horizontal equity standpoint, income alone would not justify tax differences between those two individuals.<sup>242</sup> Looking beyond just income levels though, there are relevant differences. First, higher education is still valuable above and beyond its ability to increase income: it can increase utility and wellbeing more broadly. If a person has received that benefit from the government, the government would be justified in seeking some additional payment, beyond just higher income tax payments.<sup>243</sup>

Second, the income-driven borrower has also received an insurance benefit against the risk of impoverishment by high loan payments (or lack of savings) if the borrower has low income. In section IV.A.1, I said that social insurance is an appropriate form of public spending.<sup>244</sup> Here, the question is how the costs of that insurance should be allocated. Income-driven repayment, like all redistributive programs, contains an insurance element, namely that the borrower faces some ex-ante risk of future low income, and paying full student loan payments (or draining the student's or parents' savings) in that case could drive the person into destitution.<sup>245</sup> Income-driven repayment allows the borrower to minimize that risk by instead spreading it across all borrowers, and to some degree all taxpayers, just as other social insurance programs do.<sup>246</sup> That benefit exists ex ante even if the borrower's income remains high ex post, and so in that sense the PAYE borrower is better off than the traditional borrower, even if both are currently making the same loan payments at the traditional ten-year loan rate.<sup>247</sup> Therefore, because high-income former students disproportionately benefit from the system, it is appropriate that they also disproportionately support the program, at least somewhat.

*b. Current Rules.* PAYE, as currently designed, is partially redistributive in three ways: first, in charging high-income borrowers an interest rate above the

242. We could say that a person with higher education might have somewhat more ability than a person who does not, even if they have equal income—that it is a “tag” for ability. But we generally accept income as the sole proxy for ability, and this does not seem like the place to depart from that. Otherwise, we would also have to consider other tags for ability, such as height. See N. Gregory Mankiw & Matthew Weinzierl, *The Optimal Taxation of Height: A Case Study of Utilitarian Income Redistribution*, 2 AM. ECON. J.: ECON. POL'Y 155 (2010).

243. Here I am distinguishing these nonpecuniary benefits from those benefits that could increase a person's income-producing ability. Those benefits should be picked up by income itself. If they are not, then we are left with the task of this section, of trying to tease out why—whether due to career choice, luck, desire for leisure, or another factor.

244. See *supra* note 217.

245. On the insurance component of redistributive tax-and-transfer programs, see, for example, Brooks, *supra* note 87, at 94–101, and Hilary W. Hoynes & Erzo F.P. Luttmer, *The Insurance Value of State Tax-and-Transfer Programs*, 95 J. PUB. ECON. 1466, 1466–67 (2011). On the relationship of income insurance to an egalitarian or Rawlsian approach to justice in taxation, see, for example, LIAM MURPHY & THOMAS NAGEL, *THE MYTH OF OWNERSHIP: TAXES AND JUSTICE* 54–57 (2002), and Brooks, *supra* note 87, at 99–100.

246. See MICHAEL J. GRAETZ & JERRY L. MASHAW, *TRUE SECURITY: RETHINKING AMERICAN SOCIAL INSURANCE* 27 (1999) (defining social insurance as insurance against inadequate labor income).

247. Recall that under the current IBR and PAYE plans, the borrower switches back to paying the typical loan payment once that payment becomes less than 10% of discretionary income.

government's borrowing rate, the revenue from which can be used to subsidize forgiveness of principal and interest for low-income borrowers; second, in deferring payments for those with low income in a given period; and third, in forgiving the debts of low-income borrowers after some period, though this benefit may be muted somewhat by the possibility of taxable income from the debt forgiveness.

Of these, the deferral benefit requires a bit more unpacking. If the deferred amounts, including interest, simply accrued and were subject to the same statutory interest rate, there would be no deferral benefit—the amounts paid would be the same in present-value terms in any period.<sup>248</sup> Full interest capitalization for those who no longer had a “partial financial hardship” (that is, whose standard loan payment was no longer greater than 10% of discretionary income<sup>249</sup>) was a feature of IBR as enacted in 2007 and as extended in 2010,<sup>250</sup> and thus the CBO originally projected relatively little uptake in the program because the present value benefit of IBR was minimal.<sup>251</sup> Under the PAYE regulations, however, the amount of capitalized interest is limited to 10% of the original principal balance.<sup>252</sup> As a result, for PAYE, some interest goes unpaid in present value terms, and the lower one's income relative to the debt, the more goes unpaid. This thus provides PAYE an additional element of redistribution in present-value terms.<sup>253</sup>

Who pays for this redistribution? To some degree, higher-income graduates do. Although 4.29% is a low market interest rate, it is set statutorily to be 2.05% higher than the government's borrowing rate,<sup>254</sup> and that spread is essentially profit to the government (though some question this accounting<sup>255</sup>). So, students able to fully pay off their loans would, at the current statutory rates, end up also

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248. See Daniel I. Halperin & Alvin C. Warren, Jr., *Understanding Income Tax Deferral*, 67 *Tax L. Rev.* 317 (2014) (discussing the role of accrual in considering deferral benefits). Though in that case, we could describe the deferred payments as redistributive within-person—redistribution from a richer future self to a poorer current self—and arguably a good portion of our redistributive tax-and-transfer system operates in that way. See Brooks, *supra* note 87, at 99–101; Hoynes & Luttmer, *supra* note 245, at 1467 (identifying the within-person component of redistribution).

249. See *supra* notes 136–39.

250. See *supra* note 139.

251. See *supra* note 166.

252. See *supra* note 139. Additional unpaid interest still accrues but is not capitalized. *Id.*

253. This benefit would be even larger under the new REPAYE plan, which also forgives half of the otherwise-accrued interest while the borrower is in partial financial hardship. See *supra* note 134.

254. See *supra* note 184.

255. Some analysts encourage the government to use “fair-value accounting,” whereby instead of discounting future loan revenues and costs using the government borrowing rate, as required under the Federal Credit Reform Act, 2 U.S.C. § 661a(5)(E) (2012), the government would use market borrowing rates which better reflect credit risk and thus provide a sort of risk adjustment. See, e.g., CONG. BUDGET OFFICE, *FAIR-VALUE ESTIMATES OF THE COST OF SELECTED FEDERAL CREDIT PROGRAMS FOR 2015 TO 2024*, at 1–4 (2014); Jason Delisle & Jason Richwine, *The Case for Fair-Value Accounting*, NAT'L AFFAIRS, Fall 2014, at 95, available at [http://www.nationalaffairs.com/doclib/20140918\\_Delisle.Richwine.pdf](http://www.nationalaffairs.com/doclib/20140918_Delisle.Richwine.pdf). Under fair-value accounting, the overall student loan program would provide a larger net subsidy to borrowers. CONG. BUDGET OFFICE, *supra*, at 1–2. But there are strong arguments against the fair-value approach to government budgeting, and it is not the dominant methodology. See, e.g., David Kamin, *Risky*

partially subsidizing those with lower incomes. But any necessary funding beyond that must come instead from general revenues. And indeed, the administration's 2016 budget reflects for the first time that PAYE borrowers receive a net subsidy on average, meaning that the federal student loan system is somewhat supported by general revenues.<sup>256</sup>

The relatively light degree of redistribution is because of the annual and lifetime payments caps; an individual's monthly payment will not exceed what the ten-year loan service payment would have been,<sup>257</sup> and the individual stops paying altogether once the payments total the unpaid principal and interest. This causes the payment schedule to take the unusual shape depicted in Figure 1. Current proposals to increase progressivity focus on reform to these payments caps. However, as I discuss below, these efforts may not be effective alone.<sup>258</sup>

### 3. Economic Efficiency

Finally, the third way in which income-driven repayment may be superior to direct grants—and definitely superior to full public funding—is that it may provide for lower effective tax rates and thus less deadweight loss. This happens for two key reasons. First, income-driven repayment has the potential to cost less in present value terms than direct grants because it does not over-subsidize future rich college graduates—the inframarginal consumers who would consume the good anyway<sup>259</sup>—and because it allows many borrowers twenty years to repay, thus making it likely that most borrowers will pay the full tuition costs. Even using the current highest estimates for PAYE costs, they are still far less than the cost of Pell Grants in present value terms.<sup>260</sup>

The second reason is more subtle and requires me to introduce the idea of “quasi-public spending.” I address quasi-public spending in depth in a follow-up article,<sup>261</sup> so what follows here is just a brief description. The basic idea is that government can structure public-good provision in an “off-budget” manner, whereby a good is provided in part through direct payments by recipients of the good and in part by more limited taxes and subsidies that, all together, can mimic the sort of allocative and distributional effects of a traditional public spending program—thus my term “quasi-public spending.”<sup>262</sup>

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*Returns: Accounting for Risk in the Federal Budget*, 88 IND. L.J. 723 (2013) (arguing against the fair-value methodology and risk adjustment generally in federal budgeting).

256. See *supra* notes 176–77 and accompanying text.

257. Under REPAYE, a borrower will continue to pay 10% of discretionary income at all income levels and will not default back to the standard 10-year loan payment. However, because switching out of REPAYE is straightforward, there will still be effectively a cap. See *supra* note 134.

258. See *infra* Part IV.C.1.

259. See Lawrence H. Summers, *Some Simple Economics of Mandated Benefits*, 79 AM. ECON. REV. 177, 180 (1989) (noting that mandated employee benefits do not affect wages, and thus levels of employment, for the inframarginal employees already receiving the benefit).

260. See discussion *supra* notes 180–81.

261. See Brooks, *supra* note 8.

262. In other words, there is some separation between Musgrave's Allocation and Distribution Branches of government. See MUSGRAVE, *supra* note 235, at 6.

A key feature of the quasi-public spending model is that much of the spending on the good or service is made by individuals rather than government; therefore, it does not add to the nominal size of the public sector, nor does it appear to raise nominal taxes. There may still be a direct cost to the government due to subsidies but much less than if the good or service were supplied directly. This can potentially make the political process smoother because the budgetary costs will be much lower than if the government supplied the good or service directly.<sup>263</sup>

Furthermore, because the distributional element can be both more flexible and less salient, it is possible to design a system with less overall distortion. The flexibility allows lawmakers to charge an individual an amount closer to the good's benefit to the individual, with more targeted redistribution just where necessary to increase provision. If the net cost to an individual is close to the degree of benefit, there will be little or no distortion to the individual's work effort.<sup>264</sup> And if the distributional element is less salient, then the program could be less distortionary even with the same effective marginal tax rates as a traditional public spending program.<sup>265</sup>

Higher-education tuition payments are nominally out-of-pocket, even if funded with debt, meaning that students face a price, rather than a tax, for higher education.<sup>266</sup> The income-driven loan payment and forgiveness structure introduces a degree of progressivity, but that progressivity exists in large part to improve access and risk-sharing, not as a broader tool for redistribution, and thus can be somewhat more limited than the progressivity of the primary tax system. Furthermore, if that progressivity is achieved in part through instruments like the loan interest rate,<sup>267</sup> it may be less salient to the high-income borrowers asked to disproportionately support the system. On the other hand, reduced payments and forgiveness are likely to be highly salient to those in partial financial hardship, which could lead to inefficient behaviors by those at the margin, such as hiding income or lowering work effort.<sup>268</sup>

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263. See James M. Poterba, *Government Intervention in the Markets for Education and Health Care: How and Why?*, in *INDIVIDUAL AND SOCIAL RESPONSIBILITY: CHILD CARE, EDUCATION, MEDICAL CARE, AND LONG-TERM CARE IN AMERICA* 277, 291 (Victor R. Fuchs ed., 1996) ("In times of fiscal stringency, such as the present, mandates may be particularly attractive to policy makers because they provide a mechanism for affecting real activity without spending money.").

264. See Louis Kaplow, *The Optimal Supply of Public Goods and the Distortionary Cost of Taxation*, 49 *NAT'L TAX J.* 513, 515–16 (1996); Summers, *supra* note 259, at 181 (noting that mandated employee benefits can mimic the effects of lump-sum taxes).

265. If the response to a distributional element in a quasi-public spending program is less elastic than the response to taxation, then deadweight loss is lower, even for the same marginal tax rates.

266. This is true even though much of the cash flows actually run through the government in the form of loans. But even with income-driven repayment, the loans are still used to pay the price of a good. Furthermore, under budget rules, loans are not considered government outlays. Only the present value of the expected cost of defaults (or expected gain from interest paid) count as budget items. See *supra* note 164 and accompanying text.

267. See *infra* Part IV.C.1.

268. Anecdotally, I have found that students are aware of the marriage penalty under IBR and PAYE, and the advantages to filing taxes as married filing separately because combining income with a spouse could push a borrower out of partial financial hardship. See Jason Delisle & Alexander Holt, *Beware*

There is a tension to underscore here. The efficiency argument depends in part on individuals seeing their loan payments as loan payments for tuition, even if income-driven ones, rather than taxes. But if the program becomes more redistributive, it could divorce the payment for the good from the value of its benefit, which could cause a shift toward seeing the loan payment as a tax payment, with all the associated distortions. In section IV.A.2, I pointed out that the current PAYE program is not especially redistributive at the top end. If, however, PAYE were reformed by removing the annual and lifetime caps, it would effectively become a true graduate tax, and much of this efficiency argument would become moot. This is perhaps an additional reason for relying more heavily on general revenue to fund the subsidies, compared to graduates.

#### B. EXAMPLES OF OTHER INCOME-DRIVEN MODELS

Before turning to potential improvements to the PAYE program, it is helpful to look at three examples of other income-driven repayment models that operate similarly to PAYE: the Yale University Tuition Postponement Option from the 1970s, Australia's current Higher Education Loan Program (HELP), and a recent proposed pilot program in Oregon, known as "Pay it Forward."

##### 1. Yale University Tuition Postponement Option

The framing of income-driven repayment as collective payment for college may seem novel to some readers, especially for a country like the United States. But we have seen this before, at least privately, with the Yale University Tuition Postponement Option (TPO) plan, in effect 1971–1978. The plan was designed in part by Nobel Prize-winning economist James Tobin.<sup>269</sup> The voluntary TPO plan had Yale students pay, in lieu of upfront tuition, 0.4% of future earnings for each \$1000 borrowed, for thirty-five years or until the participating cohort of the class paid off its debt, whichever came first.<sup>270</sup> The net effect was for a subset of each class to pay for tuition collectively, and for the higher earning graduates to subsidize the lower earning graduates.

TPO was considered a failure, however, due to a combination of design problems and external forces. First, the program did not manage moral hazard well, and as a result 15%–20% of enrollees defaulted.<sup>271</sup> The program was only offered for a few class years, and by the time payments were finally cancelled completely in 1999, no class had yet paid off its debt, due to the high number of

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*Savvy Borrowers Using Income-Based Repayment*, EDCESTRAL (Dec. 4, 2013), <http://www.edcentral.org/beware-savvy-borrowers-using-income-based-repayment>. It is still too early to know if this is having a broader effect on tax filing status, however.

269. See William E. Curran, *Yale's Tuition Postponement Option*, 2 J.L. & EDUC. 283, 285 (1973); *Yale to Erase Alumni Debts in 2 Loan Plans*, N.Y. TIMES (Apr. 13, 1999), <http://www.nytimes.com/1999/04/13/nyregion/yale-to-erase-alumni-debts-in-2-loan-plans.html>.

270. See Curran, *supra* note 269, at 286–87; see also Note, *A Tax Shelter for Students: Yale's Tuition Postponement Option*, 81 YALE L.J. 1392, 1396–98 (1972) (discussing the program generally).

271. See *Yale to Erase Alumni Debts in 2 Loan Plans*, *supra* note 269.

defaults.<sup>272</sup> Second, the program did not manage adverse selection well. There were likely too few high-income enrollees because students could choose between TPO and a conventional tuition payment or loan plan, and the students in TPO could later buy themselves out for 150% of the original principal.<sup>273</sup> Thus, students who anticipated higher income would likely have chosen a conventional plan, in which they would pay less, or otherwise left the program early. Third, the increased availability of federal subsidized loans after 1972 undercut the appeal of TPO and likely exacerbated the adverse selection problem. These problems underscore the importance of managing moral hazard and adverse selection well.

A final problem with the Yale program was buy-in and political support by the high-income graduates. What looked like a good choice *ex ante* to insure against the risk of low income did not look so good *ex post* to those who ended up with high income. The high earners paying 2%–4% of their income for thirty-five years ended up paying substantially more than they would have if they had just paid tuition up front or with a traditional loan. *Ex ante* most probably understood that possibility as the trade-off for potentially paying little if they had low incomes, but *ex post* it looked to the high earners like simply a bad deal. It was chiefly their complaints to Yale that caused the university to end the program in 1999—less than thirty-five years after it started—and cancel any remaining debt of the TPO participants.<sup>274</sup> Thus, there may be a roll for caps or prepayment to limit the upside risk so as to ensure continued support from participants. If future Bill Gateses and Mark Zuckerbergs<sup>275</sup> had to pay 10% of their annual income, it could undermine political support.

## 2. Australia's Higher Education Loan Program

Since 1989, any Australian citizen can borrow money from the government to pay tuition costs at Australian (and in some cases overseas) universities.<sup>276</sup> There are currently limits on the borrowing amount for some loans, though the Australian government has announced that the loan limits will cease starting in 2016.<sup>277</sup> The loans have a nominal interest rate equal to inflation.<sup>278</sup> Borrowers pay back the loans over their lifetime as a function of income. No payment is

272. *See id.*

273. *See* Bret Ladine, '70s Debt Program Finally Ending, YALE DAILY NEWS (Mar. 27, 2001), <http://yaledailynews.com/blog/2001/03/27/70s-debt-program-finally-ending>.

274. *See* Yale to Erase Alumni Debts in 2 Loan Plans, *supra* note 269 (“‘We received, over the course of the last year or so, complaints from borrowers who were paying for a longer period of time,’ said [Yale spokesman, Lawrence J. Hass]. ‘We took these complaints seriously.’”).

275. Yes, they both went to Harvard and neither graduated. But still.

276. The system is actually a mix of several different programs that apply to, respectively, Commonwealth-supported students (those paying partially subsidized tuition), fee-paying students (those paying full tuition), vocational students, and overseas students. To keep the discussion brief, I focus on the key features shared by all the programs.

277. For 2015 FEE-HELP loans (those for full-paying students), students in medicine, dentistry, or veterinary science could borrow up to \$122,162 AUD; other students could borrow up to \$97,728 AUD. FEE-HELP, STUDY ASSIST, <http://studyassist.gov.au/sites/studyassist/help-payingmyfees/fee-help/pages/>



due on income under a certain amount, and for incomes above that, borrowers pay back the loan at graduated rates, going from 4% to 8% of income, rising in half-percentage increments.<sup>279</sup> Thus, the repayment schedule resembles an income tax with graduated rates, though importantly these rates are not marginal; the relevant rate applies to all income, not just the income above the threshold.

Payments are calculated by and paid through the tax system and included as part of an individual's overall tax assessment. The payments continue until the borrowed amount, plus accrued interest, is paid back or until the borrower dies. Any debts outstanding are cancelled at death.

A significant difference between HELP and PAYE is that there is much less cross-subsidization and forgiveness with HELP. Under HELP, each borrower's account is essentially separate, and each continues to pay it down for the borrower's whole life. Because of that (and collection through the tax system), default rates are low,<sup>280</sup> though Australia too is dealing with rising costs and expanding debt, such that default rates may be increasing.<sup>281</sup> The lifetime repayment in HELP is in contrast to PAYE, which has substantial forgiveness at a much earlier point—a maximum of twenty years after borrowing.<sup>282</sup>

There is still some cross-subsidization under HELP, however, because of the combination of low interest and graduated repayment rates. Because the loan principal grows only at the rate of inflation, there is a real time-value benefit to deferring payments as long as possible, something that low-income people are relatively more able to do than high-income people, due to the graduated repayment rate schedule. The deferral benefit would also exist under a flat-rate system, like PAYE, because payments would still be a function of income. But the relative distribution of the benefit of low interest is skewed more toward

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fee-help- (last visited Sept. 18, 2015). On removal of the FEE-HELP limit, see *Students*, DEP'T OF EDUC. & TRAINING, <http://education.gov.au/students-2> (last modified May 13, 2015).

278. 2.1% for 2015. Between 2010 and 2015, the indexation rate ranged between 1.9% and 3.0%. See *HELP and Financial Supplement Indexation Rates*, AUSTRALIAN TAX OFF., <https://www.ato.gov.au/rates/help-and-financial-supplement-indexation-rates> (last modified May 29, 2015).

279. For 2015–2016, payment starts at 4% of income for incomes at or above \$54,126 AUD; those with incomes at or above \$100,520 AUD pay 8% of income. See *Loan Repayment*, STUDY ASSIST, <http://studyassist.gov.au/sites/studyassist/payingbackmyloan/loan-repayment/pages/loan-repayment> (last visited Sept. 18, 2015). Prior to 2015, the threshold at which payments began was calculated based on the average annual income in Australia. The government recently announced changes to the repayment schedule, however, including making the repayment threshold closer to 90% of the average income, or around \$50,638 AUD. See Daniel Hurst, *Budget: University Students to Pay More with Removal of Caps on Fees*, GUARDIAN (May 13, 2014, 6:50 AM), <http://www.theguardian.com/world/2014/may/13/budget-university-students-to-pay-more-with-removal-of-caps-on-fees>.

280. JOHNSTONE & MARCUCCI, *supra* note 190, at 180.

281. One recent study estimates that as much as 24% of currently outstanding HELP debt in 2012 will not be repaid. ANDREW NORTON, GRAITAN INST., MAPPING AUSTRALIAN HIGHER EDUCATION 43 (2013), available at [http://grattan.edu.au/wp-content/uploads/2014/04/184\\_2013\\_mapping\\_higher\\_education.pdf](http://grattan.edu.au/wp-content/uploads/2014/04/184_2013_mapping_higher_education.pdf). By contrast, the Australian government estimates that 17% of the debt issued 2011–2012 will not be repaid. *Id.* A good portion of these defaults are because the borrowers move overseas, *id.*, which would be less of a problem for the U.S.'s citizenship-based tax system.

282. Or 25 years under REPAYE if the borrower has graduate school debt. See *supra* note 134.

low-income borrowers by using graduated repayment rates. Moreover, the Australian government is losing money on the deal by not charging market interest rates, or even its own borrowing rate—that is a subsidy from taxpayers generally, which is thus funded largely by higher-earning taxpayers.

Another important difference is the cap on borrowing. Until 2016, some HELP loans have a lifetime borrowing cap, though the cap may be lifted for loans after 2016.<sup>283</sup> Although there are caps on PAYE loans for undergraduate students, there effectively is none for graduate students.<sup>284</sup> One concern about PAYE is that it may lead to increases in net tuition by either raising list prices or lowering grants, especially at law schools and other graduate schools, because students may become less price-sensitive.

By most accounts, HELP has been a success: it has operated for almost twenty-five years without creating significant budgetary problems. During the recent low-inflation years, however, there was some concern that Australia could not afford to charge interest only at the rate of inflation, particularly as higher-education costs grow. The Australian government originally proposed raising the interest rate, along with lowering the threshold for repayment, to make the program more sustainable<sup>285</sup> but has withdrawn the proposal to raise the interest rate.

### 3. Oregon's Pay It Forward Proposal

In July 2013, the Oregon state legislature passed, and the governor signed, a bill that would authorize a pilot program, colloquially known as “Pay It Forward” (PIF).<sup>286</sup> The bill, based on a proposal by the Seattle-based Economic Opportunity Institute,<sup>287</sup> would have students at Oregon state colleges and universities forgo paying tuition and instead contractually promise to pay a set percentage of future income for a set number of years. The Oregon bill itself does not set out precise figures, though the Economic Opportunity Institute estimates that paying something like 1% of income per university year (that is, 4% of income for a standard four-year program) for twenty-five years would be sufficient to cover expenses.<sup>288</sup> As of this writing, Oregon has not created any pilot program, and therefore no students are actually participating. Similar bills have been brought up in California, Connecticut, Illinois, Maine, New Mexico,

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283. See *supra* note 277 and accompanying text.

284. See *supra* text accompanying notes 200–05.

285. See COMMONWEALTH OF AUSTRALIA, BUDGET: HIGHER EDUCATION 2014–15, at 7 (2014), available at [http://budget.gov.au/2014-15/content/glossy/education/download/Budget\\_Glossy\\_education\\_web.pdf](http://budget.gov.au/2014-15/content/glossy/education/download/Budget_Glossy_education_web.pdf).

286. H.R. 3472, 77th Leg. Assemb., Reg. Sess. (Or. 2013).

287. See AUDREY PEEK & JOHN R. BURBANK, ECON. OPPORTUNITY INST., PAY IT FORWARD: REFINANCING HIGHER EDUCATION TO RESTORE THE AMERICAN DREAM (2012).

288. *Id.*; see PAY IT FORWARD WORKGROUP, HOUSE BILL 3472: PAY IT FORWARD 8, 15 (2014), available at <http://library.state.or.us/repository/2014/201410231424054/> (also finding a 4% rate for a typical university program, as well as financial self-sufficiency after twenty-three years).

New Jersey, and Washington.<sup>289</sup> Legislators in New York and Pennsylvania have said that they would propose similar bills for their states.<sup>290</sup>

PIF has earned both praise and criticism among commentators, mostly along the lines set out in this Article.<sup>291</sup> On the one hand, it may provide more affordable college for more people, and in particular it socializes the provision of education for students who might enter low-wage, but high positive-externality fields, like teaching, nursing, or social work.<sup>292</sup> But on the other hand, it risks being unaffordable, particularly because it may lead to excessive adverse selection and moral hazard.<sup>293</sup>

Although details are few, PIF seems to most closely resemble the Yale TPO plan, rather than PAYE or HELP. Like TPO, PIF would require payment for a fixed number of years, regardless of the total paid, whereas PAYE and HELP stop payments after principal and interest are repaid. Similarly, the payment rate is flat, rather than graduated as in HELP or effectively regressive as in PAYE. Thus, commentators who worry about TPO-type problems with PIF—adverse selection and moral hazard—may be right to be concerned. That said, the situation is quite different from the 1970s, when TPO was available. First, adverse selection is likely less of a problem because the huge rise in tuition costs and the inability of student debt to be discharged in bankruptcy means that there are fewer low-risk students. In other words, even a person who expects to make a high income might also recognize that downside risk is quite large and thus happily enroll in an insurance-like program such as PIF.

Second, because the program would be administered by the state, which has taxation powers, default ought to be less likely than under the Yale plan, thus limiting potential moral hazard problems. If Oregon chooses, it could even collect PIF payments directly through its tax system, as in Australia, which would effectively wipe out in-state defaults—though out-migration will remain a problem. The moral hazard of students going into low-paying jobs may, as discussed below, not be a big risk.<sup>294</sup> And the moral hazard of schools raising tuition is likely constrained by the program being for only state public universi-

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289. ECON. OPPORTUNITY INST., *PAY IT FORWARD: AN UPDATE ON NATIONAL PROGRESS* (2014), available at <http://www.eoionline.org/wp/wp-content/uploads/Update-on-national-progress1.pdf>.

290. See Steven Dubois, *Plan Would Make Tuition Free at Ore. Colleges*, YAHOO! (July 4, 2013, 4:10 AM), <http://news.yahoo.com/plan-tuition-free-ore-colleges-225956705.html>. Other states interested include Wisconsin and Ohio. See Julia Lawrence, *First Oregon, Now Ohio Looking at 'Pay It Forward' Tuition Plan*, EDUC. NEWS (July 22, 2013), <http://www.educationnews.org/higher-education/first-oregon-now-ohio-looking-at-pay-it-forward-tuition-plan>.

291. For a political-economic analysis of PIF-type plans, see Jennifer A. Delaney & Dharmika Dharmapala, "Pay It Forward" and Higher Education Subsidies: A Theoretical Model (Jan. 11, 2015) (unpublished manuscript), available at <http://ssrn.com/abstract=2518248>.

292. See, e.g., Bill Lyne, *The Perfect and the Good*, UNITED FAC. WASH. ST. BLOG (Oct. 16, 2013), <http://www.ufws.org/2013/10/16/the-perfect-and-the-good>.

293. See, e.g., Zac Bissonnette, *Oregon Tuition Plan Punishes Graduates' Success*, BLOOMBERG VIEW (July 12, 2013, 1:02 PM), <http://www.bloombergview.com/articles/2013-07-12/oregon-tuition-plan-punishes-graduates-success>.

294. See discussion *infra* Part IV.C.3.a.

ties, which face political obstacles to raising tuition (as compared to private nonprofit universities).

### C. PROPOSALS FOR REFORM

The discussion thus far, including the comparisons of PAYE to Yale's TPO, Australia's HELP, and Oregon's proposed PIF plan, suggests several possible reforms to address the programmatic, equity, and efficiency issues raised in Part IV.A. This is not an exhaustive list. For example, I would also advocate that income from the discharge of student loan debt be excluded from gross income for tax purposes.<sup>295</sup> However, these are the proposals that follow most directly from the analytic framework in this Article—namely viewing income-driven repayment as, in essence, a tax program—and their novelty underscores the value of that framework.

#### 1. Raise the Student Loan Interest Rate

The Obama administration's primary proposal to increase progressivity of the program is to "[e]liminat[e] the standard payment cap under PAYE so that high-income, high-balance borrowers pay an equitable share of their earnings as their income rises."<sup>296</sup> In other words, borrowers would pay 10% of discretionary income all the way up the income distribution and would not default back to the ten-year loan payment once income is high enough. That appears reasonable on its face, and would address the odd shape of the payment schedule shown in Figure 1. The recently adopted REPAYE plan incorporates this change.<sup>297</sup>

The problem is that, under the current rules, the result would be to accelerate the rate at which a high-income borrower pays off a loan, rather than increase the total amount paid. If a PAYE borrower pays only until the total payments equal principal and accrued interest, then increasing the monthly payments just means paying off the debt more rapidly. That could also mean less revenue for the government in present-value terms, if it is charging a spread above its borrowing cost. This could in turn lead to *less* subsidization by high-income graduates and more from general revenues—not necessarily ideal. This is in contrast to Australia's HELP program, in which accelerating payments *decreases* the subsidy to high-income graduates because the subsidy is largely due to a low interest rate.<sup>298</sup> This is a major oversight in the new REPAYE program.

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295. See *supra* text accompanying notes 143–50.

296. U.S. DEP'T OF EDUC., *supra* note 135; see also U.S. DEP'T OF EDUC., *supra* note 165, at R-13. The other proposals focus more on cost management and limiting incentives for schools to increase tuition. The New America Foundation made a similar proposal. See JASON DELISLE & ALEX HOLT, NEW AM. FOUND., SAFETY NET OR WINDFALL?: EXAMINING CHANGES TO INCOME-BASED REPAYMENT FOR FEDERAL STUDENT LOANS 14 (2012), available at [https://static.newamerica.org/attachments/2332-safety-net-or-windfall/NAF\\_Income\\_Based\\_Repayment.18c8a688f03c4c628b6063755ff5dbaa.pdf](https://static.newamerica.org/attachments/2332-safety-net-or-windfall/NAF_Income_Based_Repayment.18c8a688f03c4c628b6063755ff5dbaa.pdf).

297. See REPAYE Rules, *supra* note 134, at 67,213–14.

298. See *supra* Part IV.B.2.

Offsetting that cost would be a decrease in the amount of forgiveness after twenty years. Suppose someone had low income for the first ten years and thus accrued a substantial unpaid balance. If that person had a high income for the next ten years, and thus paid what would have been the original ten-year loan payment, it is possible that there would still be an unpaid balance after ten years. If instead, the payments during the last ten years were a function of income, and thus higher than the standard ten-year loan payment, there would be less to forgive at the end of twenty years. It is difficult to know the distributional impact of these two effects together given our limited experience, but it is at least not certain that removing the annual payment cap would lead to more progressivity in all cases.

Therefore, to ensure that changes like removing the annual payment cap or even introducing graduated rates, such as in Australia's HELP program, increase progressivity and redistribution, the *lifetime* cap would also have to be lifted or removed so that high-income graduates would pay more than the present value of their tuition. For example, the government could require all borrowers to pay a percentage of discretionary income at flat or graduated rates for at least fifteen years, even if a traditional loan would have been paid off sooner.<sup>299</sup> This would be similar to the design of Yale's TPO and Oregon's PIF programs.

But this would introduce a number of problems. First, and most obvious, is the political risk to the program if high-income graduates start to see it as unfair. This is part of what led to the demise of Yale's program. Second, as already noted, there is value in keeping the payments tied to the benefit of the good itself.<sup>300</sup> If the payments become decoupled from benefit and become merely a function of income, then they truly become income taxes, with all the distortions and politics that go along with that. Third, lifting the lifetime cap could remove what little market check there is on tuitions. Right now, the nominal tuition amount still affects the total amount paid. Even if payments were only a function of income, students would still have a reason to care about the school's list price. If the lifetime cap were changed or removed, however, that final reason would disappear, leaving schools either free to raise tuition as much as they would like or, alternatively, subject to stiffer government price regulation.

A more immediate and practical way to increase progressivity would be to raise the statutory student loan interest rate. In 2013, the interest rate on unsubsidized federal loans was 6.8%, and the rate for subsidized loans had recently changed from 3.4% to 6.8%. These high rates were controversial, given high debt loads and tuitions. The charge was that the government was profiting

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299. This would also require either disallowing prepayment or adding a prepayment penalty. Currently, full prepayment is allowed without penalty. 34 C.F.R. § 685.209(a)(3)(ii) (2015). The prepayment would ideally be targeted to the present value of the expected spread the government was to earn on future interest. But a rough measure, such as the 150% prepayment allowed under the Yale TPO plan, might be appropriate. *See supra* note 273 and accompanying text.

300. *See supra* Part IV.A.3.

from the need of students who could not afford to pay up front.<sup>301</sup> Congress responded by passing the Bipartisan Student Loan Certainty Act of 2013,<sup>302</sup> which fixed the interest rate for undergraduate loans at the ten-year Treasury note rate plus 2.05% (capped at 8.25%), and the rate for graduate loans at the ten-year Treasury note rate plus 3.6% (capped at 9.5%).<sup>303</sup> For 2015–2016, that meant rates of 4.29% and 5.84% for undergraduate and graduate Direct Loans, respectively (and 6.84% for Graduate PLUS loans).<sup>304</sup>

This change was misguided, in my view. If income-driven repayment is widely adopted, then the only people who would actually pay a high rate like 6.8% are those with relatively high income; all others pay just 10% of discretionary income with limited interest accrual and capitalization, and possible forgiveness, and so should be largely indifferent to the statutory interest rate. Thus, lowering the statutory rate for undergraduates may actually have made the overall PAYE system *less* progressive and put a greater burden on general revenues. Increasing the rate would put more of the overall cost of the program on high-income graduates without the risk of entirely decoupling the payments from the underlying tuition.<sup>305</sup>

## 2. Increase Borrowing Limits by Shifting Funding from Pell Grants

Commentators' main criticisms of the current IBR and PAYE programs are that they are both expensive and potentially regressive because they provide the most benefit for graduates of professional schools, such as law and medicine.<sup>306</sup> There is some truth to the regressivity point, but this is an artifact of, first, higher tuition for professional and graduate school, and second, the cap on PAYE-eligible loans for undergraduates, but not for graduate students.

High tuitions for law and medicine, among other schools, are likely justified because of the high earnings premiums available to individuals with those

301. See, e.g., Tim Dickinson, *The Student Loan Crusader: How Elizabeth Warren Wants to Reduce Debt*, ROLLING STONE (Aug. 20, 2014), <http://www.rollingstone.com/politics/news/the-student-loan-crusader-how-elizabeth-warren-wants-to-reduce-debt-20140820>.

302. Pub. L. No. 113-28, 127 Stat. 506.

303. *Id.* § 2(a)(3), 127 Stat. at 506–07.

304. Annual Notice of Interest Rates of Federal Student Loans Made Under the William D. Ford Federal Direct Loan Program on or After July 1, 2013, 80 Fed. Reg. 42,488, 42,489 (2015).

305. This could result in private lenders cherry-picking low-risk borrowers. See, e.g., Jordan Weissmann, *A Sign That Washington Might Be Charging Grad Students Too Much Interest on Their Student Loans*, SLATE (June 12, 2015, 4:51 PM), [http://www.slate.com/blogs/moneybox/2015/06/12/student\\_loan\\_refinancing\\_it\\_might\\_be\\_about\\_to\\_cost\\_the\\_government\\_a\\_lot.html](http://www.slate.com/blogs/moneybox/2015/06/12/student_loan_refinancing_it_might_be_about_to_cost_the_government_a_lot.html). Grad students are a somewhat special case, however, because their interest rate on federal Grad PLUS loans is higher and their risk is lower. But the government should still be able to charge somewhat more than private lenders, given the insurance benefit of potential lower payments and forgiveness for those with low income. See *infra* note 324.

306. See, e.g., DELISLE & HOLT, *supra* note 296, at 10; see also AKERS & CHINGOS, *supra* note 179, at 2, 8 (arguing that benefits accrue disproportionately to students with expensive B.A. degrees, though the authors ignore graduate school).



degrees.<sup>307</sup> But the high tuition also increases the magnitude of downside risk for graduates who do not end up earning a high salary; thus, somewhat greater downside protection through income-driven repayment may be reasonable. Furthermore, in many cases, much of the tuition revenue generated by a professional school goes to subsidize other areas of a university; thus, it is not quite right to say that the graduate student is the sole beneficiary of forgiveness. Nonetheless, a full accounting of the reasons for different tuition levels is beyond the scope of this Article.

But the other way to increase the relative benefit to undergraduates would be to increase the loan limits. Currently, a dependent student can borrow only a total of \$31,000 in PAYE-eligible loans for an undergraduate degree and only \$27,000 for the first four years, whereas a graduate student can borrow up to the full cost of attendance, including some living expenses.<sup>308</sup> As noted earlier, the limitation may not be a large hindrance to undergraduate attendance because of the availability of Pell Grants and institutional aid, but it may still be the wrong allocation of resources. For example, private student loans are a growing share of new debt, likely reflecting a need beyond existing financial aid and federal loans.<sup>309</sup>

In its most recent budget, the Obama administration estimates the cost of an expanded income-driven loan repayment program at somewhere between \$1 billion and \$3 billion per year.<sup>310</sup> At the same time, the administration has requested an appropriation of \$28.9 billion for Pell Grants for the 2016 fiscal year. Because these amounts are with respect to the same student cohort for the same year of college, there is roughly a ten-to-one focus on students with low-income parents versus students who might earn low incomes after graduation. As argued above, I believe this to be both poor targeting of public funds and inequitable. Even if need-based grants should continue to play a role—even the majority role—due to behavioral effects,<sup>311</sup> it is unlikely that they need to swamp income-driven repayment to this degree.

Raising the loan limits will likely increase their budgetary costs because higher debt levels would likely lead to more forgiveness. But even if the costs doubled, they would still be less than the cost of Pell Grants. However, if expanding the PAYE program requires a pay-for, Congress should consider shrinking the Pell Grant program. This is, of course, a somewhat counterintuitive proposal, particularly when part of the policy reason to nationalize student lending in the first place was to free up revenue to expand the Pell Grant

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307. See, e.g., Michael Simkovic & Frank McIntyre, *The Economic Value of a Law Degree*, 43 J. LEGAL STUD. 249, 284 (2014).

308. On the aggregate borrowing limits, see *supra* text accompanying notes 200–05.

309. See *supra* note 125.

310. See *supra* Part III.B. Recall that the loan cost estimate reflects the present value of the difference between total loan outlays and receipts over the life of the loan.

311. See *supra* notes 232–34 and accompanying text.

program.<sup>312</sup> But it follows straightforwardly from the analysis in Part IV.A: the overall shift would be both revenue-neutral and, in my view, more effective and equitable.<sup>313</sup>

### 3. Require a Discount on PAYE-Funded Tuition

Two of the biggest concerns with income-driven repayment are, first, that schools could raise tuition indefinitely because students would not bear much of the risk of the higher payments; and, second, that students who can pay out of pocket would opt out, particularly if the payment caps were lifted. These are, in essence, the classic moral hazard and adverse selection problems in any risk-sharing program. I address them each in detail, and then offer a solution to both: discounting PAYE-funded tuition.

*a. Moral Hazard.* There are essentially three possible avenues for moral hazard from income-driven repayment. First, graduates may simply default. Second, graduates may change their behavior to avoid high payments, such as by working less or for less income. Third, students may purchase “too much” education, especially if prices go up. The first was a significant problem for the Yale TPO program but is less of a risk for the PAYE program because it brings with it the weight of federal enforcement. Only by leaving the country could one simply not pay.<sup>314</sup> Furthermore, it appears that the twenty-year forgiveness is tolled during any period during which the loans are in default.<sup>315</sup>

Second, the risk that graduates have an incentive to earn less income has already been addressed.<sup>316</sup> The risk here seems contained and manageable. Furthermore, the risk is likely no greater than the risk created by the income tax system itself, and may be less if the program maintains the quasi-public spending elements discussed in section IV.A.3.

Thus, the largest moral hazard is likely to be an excess of spending on education, either because students simply buy too much or schools accelerate their tuition increases. If the increased costs simply lead to more forgiveness, then students may become indifferent to costs, which could in turn erase any market check on prices.<sup>317</sup> This is a real concern.<sup>318</sup> For-profit schools have

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312. See METTLER, *supra* note 122, at 69–70.

313. There is some risk that high loan limits could drive up tuition because there is more money made available for schools. See *supra* note 50 (discussing the revenue theory of costs). I discuss a way to limit this risk in the next section. Note, however, that Pell Grants would have similar theoretical effects, and so substituting student loans for Pell Grants should not have any first-order effect on tuitions.

314. This is the significant source of defaults for Australia’s HELP program. See *supra* note 281. Emigration of skilled workers is not generally believed to be a problem for the U.S. compared with, say, Europe. See, e.g., Poutvaara, *supra* note 190, at 664–65 (discussing how Sweden abandoned its income-contingent loan program in part because of the pressures of labor mobility).

315. See 34 C.F.R. § 685.209(a)(6)(iv) (2015).

316. See *supra* Part IV.A.1.

317. To be clear, students do continue to bear some risk under current rules. First, the nominal tuition amount sets the borrower’s lifetime cap amount, and thus the higher tuition is, the longer a

already been criticized for exactly this problem under the pre-existing student loan regime.<sup>319</sup> It appears that Yale instituted the TPO plan in part to finance desired tuition increases.<sup>320</sup> And this writer's employer has been accused (unfairly) of similar behavior with respect to the IBR program.<sup>321</sup> Left unchecked, such behavior would undermine the goals of the program and could ultimately bankrupt it.

*b. Adverse Selection.* Under our current system, in which a student borrower can choose to enroll in PAYE or stay in the typical ten-year repayment plan, there is little incentive not to enroll; that it can be no worse than the ten-year plan ensures that any well-informed student should enroll in PAYE, even those who could afford to pay out of pocket.<sup>322</sup> Thus, *as currently designed*, there really is no adverse selection problem.

But if the program is changed to increase redistribution, the system may become less attractive to low-risk borrowers. Enhancing the redistribution in the system would mean charging high-income graduates more than the present value of their tuition. If a student is confident about high future income (perhaps because she is majoring in computer science<sup>323</sup> or the like), then that student may not want to take on the risk of overpaying later. This could then leave the pool of borrowers with more overall risk of low income, thus requiring more

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student will be paying into the program. Unless the student were already expecting forgiveness, tuition hikes would cost the student. Second, the forgiveness remains, as of this writing, taxable income from the discharge of indebtedness. Thus, students are only partly insured against excessive payments.

318. Others have noted this risk as well. *See, e.g.,* DELISLE & HOLT, *supra* note 296, at 12; Schrag, *supra* note 158, at 418–19; Brian Z. Tamanaha, *The Problems with Income Based Repayment, and the Charge of Elitism: Responses to Schrag and Chambliss*, 26 GEO. J. LEGAL ETHICS 521, 534 (2013).

319. *See* U.S. SENATE HEALTH, EDUC., LABOR & PENSIONS COMM., 112TH CONG., FOR PROFIT HIGHER EDUCATION: THE FAILURE TO SAFEGUARD THE FEDERAL INVESTMENT AND ENSURE STUDENT SUCCESS 24–34 (Comm. Print 2012); Tamar Lewin, *Senate Committee Report on For-Profit Colleges Condemns Costs and Practices*, N.Y. TIMES (July 29, 2012), <http://www.nytimes.com/2012/07/30/education/harkin-report-condemns-for-profit-colleges.html>.

320. *See, e.g.,* John Geesman, *New Dean, Tuition Plan to Be Announced Today*, YALE DAILY NEWS (Feb. 5, 1971), at 1 (connecting tuition increase with TPO); Albert W. Buesking, *Introduction to YALE UNIVERSITY TUITION POSTPONEMENT OFFICE, THE YALE TUITION POSTPONEMENT SEMINAR 4* (1972), *available at* <http://files.eric.ed.gov/fulltext/ED067012.pdf> (“Then the problem became, how do you finance increases in tuition? Because obviously we felt those increases would come. Our costs were still rising at a rate that we could not accept without passing at least a portion of it along to the students through tuition. So in the summer of 1970 we undertook a university-wide study to develop a plan that we could make operational the following year.”).

321. *See, e.g.,* *Georgetown Law Is Giving Away a Free Education, and You're Paying for It*, NEW AM. (Aug. 8, 2013), <https://www.newamerica.org/education-policy/georgetown-law-is-giving-away-a-free-education-and-youre-paying-for-it>. For a response, see William M. Treanor, *Georgetown Law's Loan Policy Is Good for Society as Well as Students*, CHRON. HIGHER EDUC. (Aug. 21, 2013), <http://chronicle.com/article/Georgetown-Laws-Loan-Policy/141215>.

322. The combination of relatively low interest plus the ability to lower payments and interest capitalization for those with low income should be attractive to just about anyone, even someone from a family with enough liquid assets or income to pay directly.

323. *See* NAT'L ASS'N COLLS. & EMP'RS, SALARY SURVEY: APRIL 2012 EXECUTIVE SUMMARY 4 (2012) (reporting that computer engineering majors have the highest median starting salary at \$67,800 in 2012).

subsidization from general revenues. Furthermore, students from wealthier families may just choose to opt out, with negative distributional consequences.<sup>324</sup>

That said, it is not clear how large this risk is. At current tuition levels and rates of growth, the downside risk for a traditional student borrower (or out-of-pocket payer) is quite large. Student loan payments on traditional loans can easily get into the thousands of dollars per month, an amount that would be crippling for many people. Furthermore, changes in the labor market mean that job security is not as high as in previous periods. In our current economic climate, almost anyone can face the possibility of a substantial period of unemployment or underemployment. Moreover, student loans cannot in most cases be discharged in bankruptcy.<sup>325</sup> Finally, it may not be enough to simply expect future high income if the person is liquidity constrained at the time of enrollment. If PAYE is the only type of student loan, then it may only be those with wealthy families who opt out, though they still bear some risk through lower savings.<sup>326</sup> Therefore, it may be that there are relatively few students who would rationally refuse the PAYE deal, even if it meant that they might overpay in the future.

That said, solutions are still needed. Two potential, but unsatisfying, solutions are mandates and additional subsidies. Mandates raise liberty concerns and are politically difficult. It is hard to imagine banning out-of-pocket payments because that would be essentially equivalent to instituting a graduate tax.<sup>327</sup> And subsidies that would be large enough to induce even those with family wealth to use PAYE-eligible debt would complicate the delicate balance of programmatic and distributional spending discussed above. The next section details a perhaps better solution.

*c. Discount PAYE-Funded Tuition.* The federal government should consider requiring schools to provide a discount on tuition to those paying tuition with PAYE-eligible debt—essentially mandating institutional aid in addition to the loan.<sup>328</sup> This would address both moral hazard concerns about school tuition hikes, and also the adverse selection and distributional concerns of wealthy families paying out of pocket.

The rule would help to contain tuition price hikes by simply providing a discount and by requiring the schools to have some “skin in the game” by

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324. An additional possibility is private entrants into the market cherry-picking the lowest risks. There is some evidence of this happening under our current loan rules. *See, e.g.*, COMMONBOND, <http://commonbond.co> (last visited Oct. 10, 2015); SoFi, <http://www.sofi.com> (last visited Oct. 10, 2015). Although this strategy is possible for traditional loans, it is unlikely that a private lender could provide the sort of income insurance that PAYE provides, given the large commitment and potentially the need to spread risk across generations (much as the tax system does).

325. 11 U.S.C. § 523(a)(8) (2012).

326. Assuming that potential loan competitors do not offer a better deal. *See supra* note 324.

327. *See supra* note 190.

328. The discount would be prorated for those paying with a combination of PAYE-eligible debt and cash (or other debt).

paying some of the expected cost of future forgiveness. That is, by lowering the amount of debt a student is required to take on, there would likely be somewhat less forgiveness after twenty years. That expected cost would instead be borne by the schools through the tuition discount. And the schools would be somewhat restrained from simply raising list-price tuition because full-payers would provide a market check on tuition growth.

A more complex rule could include a variable discount that depended on the rate of default on loans to students attending that school. Thus, schools would bear some of the cost of their students' defaults.<sup>329</sup> An additional feature could be to apply the discount against an average discounted tuition or another measure that took account of what paying students actually paid out of pocket, not just the list-price tuition. These two features could provide a powerful constraint on school tuition pricing without implementing more active price regulation.

The rule would also potentially help with the opt-out problem by first making opting out of taking debt somewhat less attractive because the price would go up, and, second, by ensuring that those who opt out are still helping to support the system. If PAYE is made more progressive by, for example, raising the interest rate, that means that high-income *borrowers* disproportionately support the program. But it would be unfortunate from an equity standpoint if the richest students of all pay less by opting out of PAYE entirely and just paying cash. Requiring a higher payment from them can correct that problem.<sup>330</sup> This is, in a sense, just a particular application of the logic that underlies discounted tuition and institutional grants in the first place—some moderate redistribution from those with the ability to pay up front to those without that ability.<sup>331</sup>

#### D. PRIVATE DEBT AND CREDIT RATINGS

Although I argue here that PAYE is better thought of as a tax-and-transfer program than a loan program, the loan-like structure means that former students have nominal debt on their personal balance sheets. Thus, a key criticism of PAYE is that it could encourage students to take on more debt, and that even with generous repayment terms, that debt could still prove costly to students,

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329. This would be similar in spirit to the recent Gainful Employment (GE) rules for for-profit schools promulgated by the Obama Administration. GE rules look at a for-profit institution's ratio of typical student debt to typical postgraduation earnings as a condition for continued receipt of funds under Title IV of the Higher Education Act. *See* Program Integrity: Gainful Employment, 79 Fed. Reg. 64,890, 64,891 (July 1, 2014) (to be codified at 34 C.F.R. pts. 600, 668).

330. Additional rules would likely be needed to ensure that individuals do not simply take out loans just to get the discounted tuition and then immediately pay off the debt. For example, the discount could be applied on a month-to-month basis, taken out of the loan payment, so that it only applied as long as the debt was outstanding.

331. The risk of this proposal is that it will increase the already high incentives for colleges to prefer full-paying students in the admissions process. If that occurs, it could undermine any access benefits that PAYE provides. This is an additional argument for keeping direct grants, like Pell Grants, in the financial aid mix.

such as by lowering their credit scores, making it difficult to take on other debt, or just being a source of financial insecurity.<sup>332</sup> Because this issue is central to policy concerns regarding student debt, I address it separately here.

Excessive household debt is certainly dangerous for both individuals and the economy as a whole. As Atif Mian and Amir Sufi have shown, excessive household debt has been a feature of some of the worst financial crises and recessions, especially the Great Recession following the 2008 financial crisis.<sup>333</sup> Thus, we must be sensitive to policies that encourage even more household debt.

That said, the primary problems of household debt should not appear with PAYE. With some simplification, the individual and systemic risks of household debt take two key forms: First, excessive leverage with respect to assets risks wiping out any equity if asset prices drop, which can further contaminate asset prices through fire sales and the like.<sup>334</sup> And second, debt service payments can become debilitating if income drops. Neither risk presents itself with PAYE.<sup>335</sup>

The first risk is essentially what happened in the housing crisis 2007–2008, when many homeowners ended up underwater on their mortgages.<sup>336</sup> But this sort of destruction of equity cannot happen with respect to PAYE because there is no asset securitizing the loan. Or rather, the asset connected with the loan is the borrower’s human capital, which no other person can have an ownership stake in.<sup>337</sup> If a recession causes the “value” of that human capital to drop (for example, because wages have dropped), that does not change the relative ownership of that asset, unlike with housing or other leveraged assets. Of course, *other* assets may be affected, for example, because the government could have a claim on the borrower’s other assets in bankruptcy. But this then leads to the second risk of excessive debt—the risk of debilitating service payments.

332. *See, e.g.*, BRIAN Z. TAMANAHA, *FAILING LAW SCHOOLS* 109–12 (2012); ASHER ET AL., *supra* note 138, at 12–14.

333. ATIF MIAN & AMIR SUFI, *HOUSE OF DEBT* 4–9 (2014).

334. *See id.* at 19–30.

335. Note that the income-based structure of IBR is similar to Mian and Sufi’s proposal for “shared-responsibility mortgages,” which would allow for lower mortgage payments if home prices fall. *See id.* at 171–74.

336. If a house is leveraged 80% or more, then a price drop can wipe out any equity, making the bank effectively the 100% owner of the asset. *See id.* at 19. That means that homeowners, especially low-income homeowners, bear much of the risk of a price drop, whereas banks and their depositors, shareholders, and creditors bear little. And the foreclosures that follow a bubble bursting can create even more downward pressure on asset prices. *See id.* at 18–19. Between 2007 and 2008, the asset price drop thus acted to shift relative economic resources away from low-income people and toward higher-income savers and investors. *See id.* at 19–21.

337. Indeed, this is one primary answer given for why there are private credit market failures necessitating a government role in providing student loans. Because a private lender cannot get sufficient security in the borrower’s human capital, there is greater risk, and thus the creditor would demand higher interest. *See Avery & Turner, supra* note 112, at 167 (quoting FRIEDMAN, *supra* note 113, at 86–87).



That risk also does not exist, precisely because of the PAYE formula. A destitute person essentially owes the government nothing; thus, he bears little additional pain due to the debt. Indeed (and importantly), *neither would other creditors*. In bankruptcy or near-bankruptcy, because no current payments would be owed to the government, no money would go to the government prior to other creditors. Indeed, one of the functions of income-driven repayment is as a substitute for discharge of student loans in bankruptcy, which is in most cases not currently possible.<sup>338</sup> But instead of allowing payment adjustments and partial discharge only when insolvent, PAYE would allow a more gradual shift in payments at many different levels of income and wealth. In this way, it operates as a more nuanced and graduated form of discharge.

For these reasons, it also should be the case that credit rating agencies will not penalize students for PAYE debt. Because payments shift with income, default due only to low income is essentially impossible, and large payments are only owed if there is a large income to pay it. Recall that the main claim in this Article is that PAYE payments operate more like tax payments than loan payments; to treat PAYE debt negatively would be like treating future income tax liability as a debt overhang. Ultimately, credit rating agencies care about debt payments as a fraction of income, and by definition PAYE payments will never exceed 10%. Indeed, most of the factors that go into a person's FICO score have to do with timeliness of payments and number of debts outstanding. Only about 30% of the score relates to *amounts* outstanding, and even for that, installment loans, such as student loans, are treated more lightly than revolving loans, like credit card debt.<sup>339</sup>

Although the PAYE payment may crowd out other potential debt payments somewhat, the effect should be limited and contained. For example, the PAYE payment should make up only about 7%–8% of earned income,<sup>340</sup> but Federal Housing Authority guidelines allow a total debt-to-income ratio of 43% for conforming mortgage loans.<sup>341</sup> It may be that a credit rating agency or lender would see the overall size of the debt as a signal of financial profligacy, even if the debt is not risky in itself. But this is not at all certain, given that the debts are to invest in higher education, which likely makes the borrower *more* creditworthy. For these reasons, the nominal size of any PAYE debt should not have a large effect on a former student's overall creditworthiness.

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338. 11 U.S.C. § 523(a)(8) (2012).

339. See Schrag, *supra* note 158, at 402–04 (discussing effects of IBR loans on credit ratings).

340. Recall that IBR payments are 10% of the net of AGI less 150% of the relevant poverty line, which makes the base smaller than the income base lenders consider in evaluating potential borrowers. See *supra* note 187 and accompanying text.

341. FHA Requirements, *Debt-to-Income Ratio Guidelines*, FHA, [http://www.fha.com/fha\\_requirements\\_debt](http://www.fha.com/fha_requirements_debt) (last visited Nov. 8, 2015).

## CONCLUSION

The cost of higher education and the associated high levels of debt have become in recent years issues of significant public importance. Although higher education continues to be a good investment, it comes with risk, particularly as a greater share of the rising costs are being placed directly on individuals. This exposure to greater risk comes at a time when the supply of workers with advanced skills is arguably too low to meet the demands of skill-biased technological change and social mobility is stagnating.

Given the importance of higher education to an economy and a society, one might ask whether government should just provide higher education directly, just as local governments do for primary and secondary education. By directly providing higher education, a government could spread the risk and socialize the costs in the service of solving the undersupply problem. The problem, however, is the sheer expense of doing so because as both the cost of and demand for higher education grows, so do other demands on public resources.

Another potential solution would be to subsidize just the students from low-income families, rather than everyone. This describes more recent approaches to higher education, with subsidies coming from the federal government and from the institutions themselves, both public and private. But these subsidies are mistargeted; subsidies ought to be for those who enter low-wage but high-positive externality jobs (and for those simply with bad luck), rather than for those who end up entering higher-income business and professional jobs. Furthermore, as a practical matter, Pell Grants and institutional financial aid are often not generous enough, and the system creates complicated means-testing issues that themselves can be a barrier to potential students.

In this Article, I claim that a series of changes to the student loan program point a way toward a potentially superior form of public financing for higher education—*income-driven repayment*. By providing tuition for all, but demanding repayment only as a function of income, the government can meet the demands both of an economy that requires more skills and of justice and fairness in ensuring that family wealth is not a barrier to entry. And it can do so with limited taxes and limited growth in nominal public spending. Although PAYE will need adjustments to better serve these goals, it may also provide a model for future large-scale government programs in an age of income inequality.