




Can Income-Driven Repayment Policies be Efficient, Effective, and Equitable?

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Executive Summary

This paper recommends strategies for evaluating the federal government's three income-driven student loan repayment programs (IDR): Income-Contingent Loans, Income-Based Repayment, and Pay As You Earn. Despite advocacy efforts to expand these programs, there is no clear guidance on how to evaluate their efficacy. In this paper, we review the authorizing legislation and regulations for these programs, identifying areas where federal officials could provide clarity around program efficiency, effectiveness, and equity goals:

- **Efficiency.** Program inputs, outputs, and outcomes are often not explicit, making it difficult to evaluate program efficiency. Without basic participation data, it is impossible to conclude that IDR is a more efficient use of federal funds than standard repayment plans.
- **Effectiveness.** There are several implicit program goals (e.g., consumption smoothing, income risk insurance, liquidity risk insurance, aid simplification, default protection, shaping career trajectories and major choice), none of which are explicitly or consistently stated in existing policies.
- **Equity.** Existing policies focus extensively on eligibility criteria (i.e., who qualifies for the benefits), which addresses some equity concerns. But without explicit policy goals or mechanisms for achieving them, policies do not go far enough to ensure that the most disadvantaged borrowers are left better off by IDR.

We also discuss the need for basic program participation data and we suggest research strategies for conducting future evaluations:

- Create an inventory of existing IDR-relevant data sources.
- Identify how state-level data systems can link with existing federal repayment records.
- Conduct a longitudinal randomized control trial to evaluate the efficacy of each program.

The paper also compares the design features (e.g., loan eligibility, income thresholds, repayment caps, interest rates, and program administration) of U.S. programs against models from Australia, New Zealand, and the United Kingdom, where we argue against using these countries as examples for guiding IDR reforms.

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Can Income-Driven Repayment Policies be Efficient, Effective, and Equitable?

Current debates about federal student loan debt tend to follow one of two general discussions. The dominant discussion is about *rising debt levels*, focusing on more than \$1 trillion dollars of student loan debt carried by more than 40 million borrowers. It illustrates that more students are borrowing – and are borrowing more money – to pay for college, with the average college student carrying \$24,800 in loan debt (Federal Reserve Bank of New York, 2013). The less dominant, yet equally important discussion focuses on trends and challenges of *repaying student loans*. This discussion often highlights the fact that 30% of borrowers currently repaying their student loans are at least 90 days behind on their payments. It also draws attention to the fact that 15% of borrowers default within three years of entering repayment (U.S. Department of Education, 2013). We view debt levels and debt repayment as two distinct yet inter-related policy debates because the borrowers who struggle to repay their debts are not necessarily the same borrowers who accumulate large sums of loan debt. Nevertheless, debates about student loan default are often entangled with debates about rising debt levels.

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This paper focuses on repaying student loans and strategies that the federal government is using to help borrowers make on-time loan payments. When a borrower gets behind on their loan payment by more than 270 days, their loan enters into default. Once in default, the federal government can garnish the borrower’s wages, seize tax refunds, or engage in a variety of other collection mechanisms to ensure the loan is repaid. Since student loans are not dischargeable in bankruptcy and there is no statute of limitations on collecting them, some borrowers may have a lifetime of student loan debt. Interestingly, borrowers who default carry nearly half as much debt as the average borrower. In fact, recent studies on the topic show that debt level is a poor predictor of default. This research finds that being unemployed after college, not completing a degree, and attending a for-profit college are the

best predictors of default (Deming, Goldin, & Katz, 2012; Gross, Cekic, Hossler, & Hillman, 2009; Hillman, 2014). Borrowers default on their loans for far more reasons than “high debt levels,” and federal policymakers are seeking ways to help protect borrowers against the risk of defaulting on their loans.

Our aim in this paper is to develop recommendations for evaluating three student loan repayment plans sponsored by the U.S. federal government (Pay As You Earn, Income Based Repayment, and Income Contingent Repayment). Given the newness of these programs, we do not conduct a formal (i.e., outcomes-based) evaluation, but rather engage in an *evaluability assessment* of the policies. Evaluability assessments help determine whether a policy can be evaluated while offering guidance about what information must be collected in order to help policy makers. To that end, our recommendations focus on the baseline information needed to begin evaluating income-driven repayment (IDR) plans. Evaluability assessments are concerned with analyzing the decision-making system that should benefit from the policy evaluation while clarifying goals, objectives, and other criteria against which policy performance is to be measured and valued (Dunn, 2007).

Evaluating IDR models domestically and abroad is challenging because of the variation in programs and their contexts: policies vary greatly in their design, context, and implementation (Dente & Piraino, 2011). Moreover, IDR policies are characterized by latent goals and implicit theories of the nature of the problem, which observers could easily call “solutions in search of problems” (Kingdon, 2010). Despite these challenges, evaluation is an essential part of the policy making process: Evaluation provides crucial information about the difference between intended and actual policy outcomes (Dunn, 2009). Rather than endeavoring to explain the causes and consequences of rising student loan debt levels and default rates, this paper provides a foundation for developing outcomes-based evaluations of existing IDR models in the U.S. Three questions guide this pursuit:

1. What are the assumptions linking problems to policy actions?
2. What are the design features of the policy, and are they clearly articulated?
3. Are there clear and objective goals embedded within the policies?

Our goal is to provide an analysis of the evaluability of existing IDR policies, rather than engaging in a value debate about alternative policies. For example, we take as given that the federal government prefers to fund college students via student loans rather than grants. Since the late 1970's, federal aid has steadily shifted away from grants towards loans while the purchasing power of the Pell Grant has weakened (Hearn & Holdsworth, 2004; Mahan, 2011). Even with the recent expansion of the Pell Grant, the *maximum* award covers less than 75 cents for every \$1 charged in public four-year college tuition and fees (Congressional Budget Office, 2013). Further, the aid is only available to students *after* they apply and enroll in college, limiting its potential as a college access program. Instead of restoring the purchasing power or fundamentally reforming grant programs, federal student aid policy has chosen to expand IDR as a way to help borrowers manage growing loan payments. Within this context in mind, we explore strategies for evaluating the efficacy of existing IDR policies rather than the federal government's policy of financing college on credit.

“We take as given that the federal government prefers to fund college students via student loans rather than grants.”

We begin by considering the assumptions linking problems to policy actions (first question). Next, we provide a descriptive analysis, inventorying and comparing elements of IDR models in the United States and internationally (question two above). Then, we delve into the enabling legislation for U.S. IDR policies, using criteria of effectiveness, efficiency, and equity to surface embedded goals, objectives, and assumptions within the policies (question three). Finally, we conclude with recommendations for evaluation.

Assumptions about problems and policy solutions

IDR plans link the cost of attending college with students' future earnings and insure borrowers against two primary risks associated with managing student loan debt after college.¹ First, it protects against the risk of not having enough money during any given month to meet the minimal

repayment obligations (i.e., liquidity risk). If a borrower's income drops (or rises), then so does their loan payment. By pegging repayments to earnings, the federal government can guarantee borrowers will never pay more than a fixed percent of their earnings on student loans. Second, it protects against the risks of not earning sufficient income over the lifetime of the loan to pay it off in full (i.e., income risk). For this reason, IDR models often provide loan forgiveness or offers protections against compounding interest and negative amortization. We can think of IDR as an insurance policy against these liquidity and income risks, where the goal is to help borrowers make on-time repayments thus avoiding delinquency and default.

By addressing these risks, income-driven repayment also has the potential to help borrowers maintain their standard of living so loans do not interfere with other consumption activities or life milestones (e.g., homeownership). It may also encourage borrowers to pursue public sector and entrepreneurial careers with low expected future earnings. It could also help the federal government streamline the administration and collection of student loans if fewer borrowers get behind on their payments.

While there are several assumptions about the intended outcomes of IDR programs, many of these claims have gone untested. Although the idea of tying college expenses to future earnings has a long history in the higher education finance literature, there is little literature on the impacts in the U.S. (Johnstone, 1972). Because of this, much of the current discussion about IDR in the U.S. is based on ideology, speculation, or examples drawn from international contexts, rather than being based on what we know about existing programs.

Inventory and comparison of IDR repayment models

In the U.S., there are three² income-driven programs currently in operation: Income Contingent Loans (ICL), Income Based Repayment (IBR), and Pay As You Earn (PAYE). Each program shares a similar goal of easing the repayment burden for borrowers, but there are five key design features that differentiate one program from the next. First, each program has different *loan eligibility* criteria, where only certain loans are allowed to be repaid via income-driven repayment. Second, each program has a different *income threshold* that borrowers must meet in order to participate. Third, programs vary according to their *repayment caps*,

where monthly repayment burdens (i.e., share of earnings) and lifetime repayment burdens (i.e., loan forgiveness) vary according to each program. Fourth, *interest rate* subsidies differ where some programs offer more generous protection against unpaid interest than others. And fifth, there are *administrative* differences in the programs that shape the way borrowers participate in the program. Discussing these design features allows us to focus on specific policy instruments that could be changed in an effort to make existing programs more efficient, effective, and equitable.

Loan Eligibility

Currently, 26.2 million borrowers participate in the federal Direct Loan program, carrying \$626.5 billion in outstanding debt. The other loan program, Federal Family Education Loan Program (FFELP), can no longer originate student loans but they continue to service debts for 20.6 million borrowers who carry \$417.1 billion in outstanding loans (U.S. Department of Education, 2014a). Together, the two programs account for more than \$1 trillion in student loan debt for more than 40 million borrowers (see Figure 1).

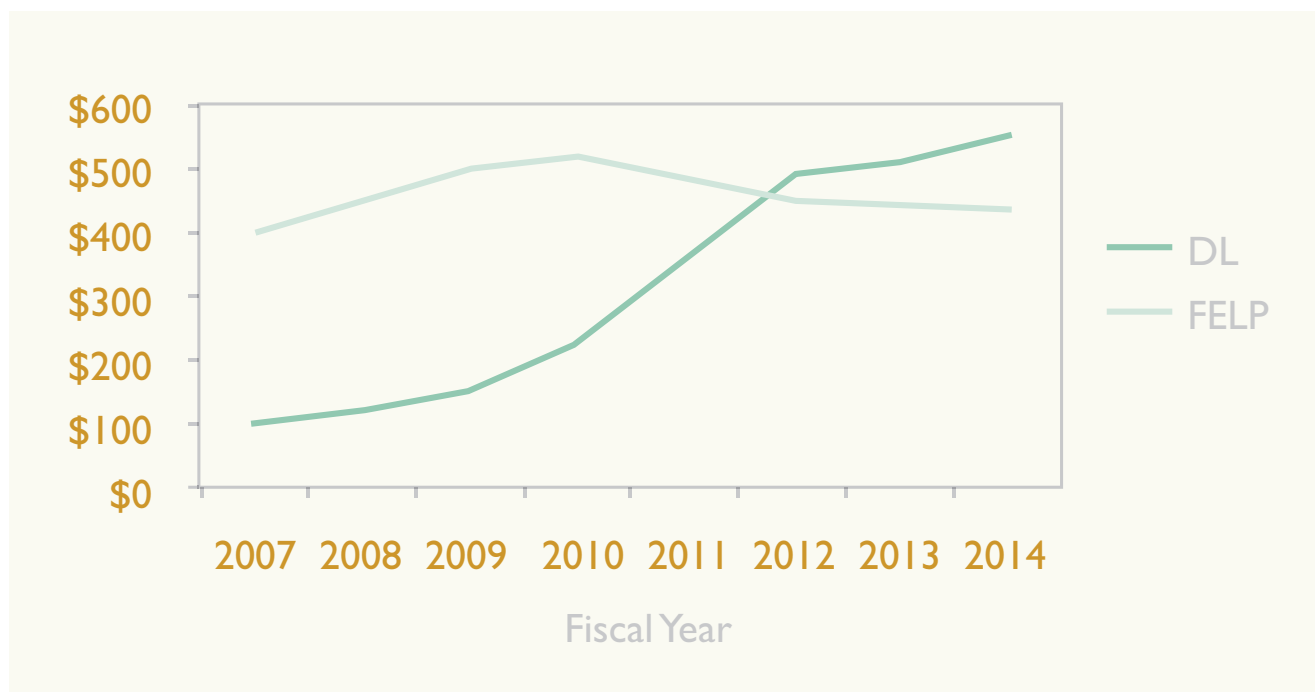
To be eligible for all ICR, IBR, or PAYE, borrowers must participate in the Direct Loan program. Since all new federal student loans are originated via the Direct Loan program,

this means all new federal loans qualify borrowers for participating in any of the three income-driven programs. But if a borrower participates in FFELP, then they are only eligible for income-driven repayment via IBR. In the event a FFELP borrower wants to participate in ICR or PAYE, rather than IBR, they must consolidate into the Direct Loan program to be eligible. Importantly, defaulted loans that have been “rehabilitated” can only be repaid under the ICR program after they have been consolidated. So, each program has different requirements for “which” types of loans are eligible to be repaid via income-driven plans with Direct Loans being treated differently than FFELP loans.

Income Thresholds

Each repayment plan is restricted to borrowers who meet certain income thresholds. This rationing technique allows the federal government to target benefits to borrowers who face the greatest financial hardships. Under IBR and PAYE, borrowers must face “partial financial hardship” which is a term that means different things under each program. For IBR, it is when the annual amount owed under a standard 10-year repayment plan⁴ exceeds 15% of a borrower’s discretionary income. Here, discretionary income is defined as a borrower’s adjusted gross income that is beyond 150% of the federal poverty line.⁵ Under PAYE, the debt burden is 10% (rather than 15%) of a borrower’s discretionary income. For ICR, eligibility is determined in by taking the lesser of two values: 20% of discretionary income or the amount owed under a 12-year repayment plan

Figure 1:
Outstanding principal and interest of Direct Loan (DL) and Federal Family Education Loan Programs (FFELP), in billions.³



(multiplied by a formula accounting for family size, income, and cumulative debt). Here, discretionary income is different than that used under IBR or PAYE: it takes the borrowers adjusted gross income minus 100% (rather than 150%) of the poverty threshold.

Interestingly, only ICR incorporates cumulative debt levels into these formulas; the other programs rely on an income-to-debt ratio and no program sets a minimum (or maximum) amount of debt that a borrower must carry to be eligible. Currently, most borrowers in income-driven plans participate in IBR and this program accounts for nearly three-quarters of total outstanding income-driven debt in the Direct Loan program (see Table 1).

Table 1:
Program participation for Direct Loan IDR plans (2014, Q1)⁶

	Outstanding balance (\$ bil.)	Recipients (mil.)	Average debt (\$ thsd.)
IBR	\$67.9	1.21	\$56.1
ICR	\$19.2	0.58	\$33.1
PAYE	\$4.1	0.11	\$37.3
Total	\$91.2	1.90	\$48.0

Repayment Caps

Repayment caps operate in conjunction with income thresholds. While income thresholds are used to ration these programs to eligible borrowers, repayment caps set the maximum percentage of income that is required for repayment each month. Under PAYE, borrowers never repay more than 10% of their monthly earnings, while the cap is slightly higher at 15% and 20% for IBR and ICR, respectively. Capping payments is a way the federal government insures borrowers against *liquidity risk*, where participants are guaranteed their monthly obligations will never account for more than a certain share of their earnings. But repayment caps are also used to insure against income risk, or the risk of never having enough money over a lifetime to clear the outstanding balance of a loan. Here, time is the most important factor in repayment, so each program forgives loan balances after a certain period of time. ICR and IBR offer loan forgiveness after 25 years of eligible payments, while PAYE is slightly shorter at 20 years. In accordance with the federal tax code, forgiven debts may be counted as income, thus borrowers could be taxed on their forgiven debts.

Interest Rates

Under each program, the federal government has different benefits for helping borrowers cover unpaid interest. Interest typically does not affect whether a borrower is able to make on-time payments, but interest accumulates over the lifetime of a loan and can make it difficult for borrowers to fully repay their principal *and* interest. In the ICR program, unpaid interest is added to a loan's principal balance (i.e., it is "capitalized") but is capped at 10% of the original loan amount. In PAYE, interest does not capitalize on subsidized loans while a borrower faces "partial financial hardship." The federal government will also cover unpaid interest (for up to three years) when monthly payments fail to cover the charged interest. IBR handles interest subsidies much like PAYE, except for one important feature. PAYE caps the amount of interest that must be repaid at 10% of the original loan volume, while IBR does not. In this regard, interest rates under PAYE are more similar to the ICR program.

Administration

Borrowers must opt-in to one of the three income-driven repayment plans. Neither the federal government nor loan servicers automatically enroll borrowers, nor does the federal government collect payments via taxes or employer withholdings. Therefore, borrowers are responsible for applying to the program and submitting annual documentation (to their loan servicer) to ensure continued eligibility. For Direct Loans, the federal government requires another step prior to application: borrowers must first submit a request form before they can apply to one of these three repayment plans (U.S. Department of Education, 2014b). The federal government spends approximately \$864 million per year administering the Direct Loan program; \$34 million (4%) of this is spent on collecting defaulted loans (Government Accountability Office, 2014).

The final three columns of Table 2 display the design features of the most commonly cited international IDR programs (i.e., Australia, United Kingdom, New Zealand) as points of comparison. These programs are held up as potential exemplars for the development and refinement of US IDR policies. We discuss these programs in more detail next, offering points of comparison and contrast.

Comparative Context

In 1989, the Australian government established its Higher Education Loan Program (HELP), the first student loan scheme in which borrowers in repayment are automatically

enrolled in an income-dependent repayment plan. Since the implementation of HELP, additional countries have followed suit and have established universal (i.e., automatic enrollment) income-dependent structures for student loan repayment, including: Chile, Ethiopia, Hungary, New Zealand, South Africa, Sweden, and the United Kingdom.⁹

Australia

Australia's HELP was developed in tandem with the Higher Education Contribution Scheme (HECS), a legislative cost-sharing policy that shifted costs to students through the introduction of student contribution fees (Jackson, 2002). All Australian citizens attending a Commonwealth supported institution are eligible for a HECS-HELP loan to cover "student contributions" (i.e., tuition and fees) in three progressively expensive bands.¹⁰ Students have the option to pay contribution fees upfront and receive a 10% discount, or procure a HELP loan. As of academic year 2012-2013, borrowers are not required to repay HECS-HELP student loan debt until they attain a minimum income threshold of \$49,095 Australian dollars (USD \$43,807) Annually, after which repayment varies on a sliding income-dependent scale. HELP student loan repayment is administered through the Australian Taxation Office (ATO); loan repayments are

automatically deducted, along with income tax, from paychecks but are charged zero real interest (Braithwaite & Ahmed, 2006; Study Assist, 2012).

New Zealand

Like Australia, prior to the late 1980s, higher education in New Zealand was "almost entirely financed by public funds" (Baxter & Birks, 2004). In 1991, the New Zealand government granted institutions of higher education the right to determine and collect student contribution fees, and one year later introduced The Student Loan Scheme, the second national income-contingent government student loan program (Chapman, 2006). Similar to Australia, under the New Zealand student loan scheme, repayment terms are dependent upon income and payments are collected by Inland Revenue via payroll deduction; unlike the Australian system, student loans in New Zealand cover tuition, fees, and cost of living expenses, and initially amassed interest upon the completion of study. The current minimum threshold for loan repayment (which is valid until March 2015) is \$19,084 New Zealand dollars (USD \$15,720) annually; students pay about 12 cents for every NZ dollar earned above the minimum income threshold and borrowers are not required to pay interest on student loan debt (Ministry of Education, 2013).

Table 2:
Summary of key design features of U.S. and international IDR models

Design Feature	U.S. Programs			International Programs		
	ICR	IBR	PAYE	UK	AUS ⁸	NZ
Loan eligibility	a. Includes both Direct and FFELP loans	No	Yes	No	N/A	N/A
	b. Includes defaulting loans ⁷	Yes	No	No	Yes	No
	c. Includes cost of living	Yes	Yes	Yes	Yes	No
	d. Contingent upon degree program	No	No	No	Yes	Yes
Income base	a. Restricted to income-eligible borrowers	Yes	Yes	Yes	No	No
	b. Adjusted for family size	Yes	Yes	Yes	No	No
	c. Based on current-year-income	No	No	No	Yes	Yes
	d. Low-earnings protection	Yes	Yes	Yes	No	Yes
Repayment	a. Repayment cap	20%	15%	10%	9%	8%
	b. Adjusted according to amount borrowed	Yes	Yes	No	No	No
	c. Repayment period until forgiven (years)	25	25	20	25-35	No
	d. Forgiveness taxed	Yes	Yes	Yes	No	N/A
Interest Rates	a. Charges zero real interest	No	No	No	No	Yes
	b. Capitalized interest cap	Yes	No	Yes	No	N/A
Administration	a. Automatic enrollment	No	No	No	Yes	Yes
	b. Collected via employer withholding	No	No	No	Yes	Yes

United Kingdom

Student loans were first introduced in the United Kingdom in the 1990s, initially developed as an interest-free means to help students cover living expenses. At the outset of its student loan program, loans were repaid by way of “mortgage-style” repayments and it was not until 1998 that the United Kingdom adopted an income-dependent repayment policy for all student loan borrowers (Bolton, 2014). Since 1998, the United Kingdom’s student loan repayment structure has remained generally the same – students pay 9% of income above a designated income threshold – although the income threshold has increased several times to adjust for inflation, and interest rates and variables have been modified on a near annual basis. The current repayment threshold for new student loans is £21,000 (USD \$34,268) and the interest rate for new loans in 2013–2014 is the Retail Price Index (RPI) plus 3%.

England, Scotland, Wales, and Northern Ireland have autonomy over their respective higher education financial systems, though all student loans in the United Kingdom are serviced by the non-profit Student Loans Company. There are two distinct types of student loans offered to U.K. students: (1) tuition fee loans, which are paid directly to higher education institutions and (2) maintenance loans to cover living expenses, which are paid directly to students. Student loan repayment collection is a “shared responsibility” between Inland Revenue (HMRC) and the Student Loans Company as repayments are linked to income and deducted directly from payroll. As of 2013, borrowers can cancel their outstanding debt after 30 years.

Broad Features and Departures

The above profiled countries are those with the most established, and consequently most examined income-contingent student loan programs. However, there is a growing body of literature that explores income-driven student loan programs in the context of smaller and/or developing nations. To expand comparisons beyond these three countries, we briefly highlight parallels and distinctions among seven nations that have national IDR programs currently in place: Australia, Chile, Ethiopia, Hungary, New Zealand, South Africa, Sweden, and the United Kingdom.

Programs across these countries differ in three primary ways: low-income protections, debt collection systems, repayment rates. In terms of low-income protection Chile, Ethiopia, Hungary, and Sweden, require borrowers to repay regardless of their income level, so long as they are employed. The total income percentage required for repayment ranges from a minimum of 5% in Sweden to 10% in Chile. Unlike UK, Australia, and New Zealand, not every nation has a debt collection system that links student loan with tax collection systems. In South Africa, for example, student loan debt is repaid directly to the lending institution and tax authority is only utilized as a “last resort.” In Hungary, the tax authority collaborates with the Hungarian Student Loans Company (HSLC) by providing income-level data for student loan debtors and the HSLC collects the debts. In Sweden, loans are collected through a distinct student loans office. In terms of repayment rates, every country seems to have challenges with ensuring borrowers repay their debts. Smaller countries

Table 3:
Comparative context for countries with IDR programs¹¹

Country	Total Population (in millions)	Number Enrolled in tertiary ed (in millions)	Outstanding student loan debt (in billions, USD)	Number of tertiary institutions	Median income (USD)
Australia	22.5	1.2	\$19.9	40	\$27,000
Chile	17.4	0.6	*	64	\$8,000
Hungary	9.9	0.4	*	90	\$9,000
New Zealand	4.4	0.4	\$10.8	42	\$21,000
South Africa	48.4	0.9	\$1.5	25	*
Sweden	9.7	0.3	\$29.8	36	\$23,000
United Kingdom	63.7	2.3	\$75.0	159	\$25,000
United States	318.9	20.9	\$1,200.0	4,352	\$31,000

Note: * data not available

tend to have higher rates of repayment; for example, in Hungary “more than 98 percent of the scheduled repayment cash flows have come in, while administration costs have stayed around 1 percent of the outstanding debt,” (Berlinger, 2009, p. 258). However, Australia and New Zealand have large shares of loans that are never expected to be repaid: Approximately \$6.2 billion of Australia’s \$26.3 billion outstanding student loan debt is categorized as “doubtful debt” (Trounson & Kerr, 2013).

There is a wide amount of diversity in international IDR models, making it difficult to compare across national contexts. The number of colleges and universities, the sheer size of the higher education enterprise, and the volume of outstanding student loan debt are but a few important ways to illustrate differences in scope and scale. It is not clear whether policies implemented in a country like Australia with just 40 higher education institutions is scalable for the United States. Similarly, the differences in national cultures and political systems pose challenges for evaluating and comparing programs from one country to the next. For example, existing research surrounding Australia’s implementation of HECS-HELP is both widely inconclusive and very much debated. As articulated by Braithwaite & Ahmed (2006, p. 3):

“Sixteen years on, while some argue convincingly for its economic credentials (e.g., Chapman & Ryan, 2002), the scheme continues to be unpopular (e.g., Lawrence, 2004) and has provoked heated discussion about the notion of tertiary education as a public good...”

Before a formal evaluation of IDR policies can be conducted, we must surface the latent goals and understandings of policymakers. Next, we discuss the embedded goals, objectives, and other elements of IDR policies.

Embedded policy goals, objectives and criteria

As mentioned above, evaluability assessments are concerned with analyzing the decision-making system that should benefit from the policy evaluation while clarifying goals, objectives, and other criteria against which policy performance is to be measured and valued (Dunn, 2009). Grounded in the notion of distributive justice, which is concerned with how benefits and burdens in society are distributed, we focused on the criteria of effectiveness, efficiency, and equity while attempting to surface the goals and objectives of the PAYE, ICR, and IBR.

Effectiveness is concerned chiefly with whether the stated policy goals were achieved. For example, questions about effectiveness would include whether the program prevented borrowers from defaulting or whether income-driven repayment options encouraged more students to go into public service. Efficiency is a commonly used term in political and academic debates about higher education. We consider the notion of *technical efficiency*, which refers to the ratio of inputs to outputs, where the goal is to “do more with less.” In addition, we focus on vertical equity. Vertical equity treats individuals in different circumstances differently, where least-advantaged individuals are made as well off as possible by equalizing opportunities or outcomes.

Method

To examine the embedded objectives and goals in domestic IDR policies, we conducted a textual analysis of the authorizing legislation and regulations for each policy (provided in references). A challenge in conducting an evaluability assessment is determining what constitutes the *official policy*. Policy documents are often evolving, incomplete, and leave implicit the rationale and purposes of the policy. As Biggs and Helms (2007) note, “Sometimes the trail of legislative authority contains significant omissions or contradictions. Legislatures regularly repackage policy authority to fill gaps or meet newly perceived policy problems,” (p. 177). Nonetheless, the use of enacting legislation and regulations is a reasonable place to begin. As Biggs & Helms (2007) note, legislative statutes may contain statements of findings and purposes for the law.

We coded text throughout each policy pertaining to goals, inputs, outputs, outcomes, criteria, and benefits. Inputs, outputs, outcomes and criteria are components of efficiency, effectiveness, and equity. Coding benefits and goals enabled us to identify which policies stated these explicitly and which left them latent. Once each document was coded, we conducted a two-stage analysis of the codes to synthesize our findings across the three policies. Our analysis focused on the extent to which goals and objectives are clearly specified; whether inputs, outputs, and outcomes were explicit, and whether assumptions about the linkage between policy actions and goals were clear. A detailed description of our method, including specific definitions, is provided in the methodological appendix.

Findings

Within the policies, we found that the goals, inputs, outputs/outcomes, criteria, and benefits for each of the three policies were fairly narrow in scope and in many cases vague, posing a challenge to their formal evaluation. Goals, which are essential

to evaluation of effectiveness, were most clearly stated in PAYE policy. In total, PAYE listed four goals (see Table 4), including supporting debt management and improving the process for applying for permanent and total disability considerations. No explicit goals were apparent for IBR and ICR.

“Considering IDR policies in the U.S. have been around for more than two decades, it is time to move beyond rhetoric and theoretical discussions about how IDR might affect students (and the institutions where they enroll) and start answering these questions empirically.”

Benefits, which can be considered policy objectives, were stated more clearly in each of the policies. These benefits include *loan forgiveness, reduction in the proportion of borrower’s income going to loan debt, and deferment of interest accrual*, as a few examples. These findings suggest that absent clearer articulation of the broad goals of these policies, evaluation of the programs’ effectiveness will need to focus on whether intended benefits have been realized by those who are eligible. Apparently, the effectiveness of PAYE is most evaluable relative to its stated goals. For example, analysis of whether or not borrowers are finding it easier to repay their federal student loans, or if IDR helps them avoid default, is possible.

With respect to technical efficiency criteria (i.e., inputs, outputs, outcomes), the policies lack clarity and specificity. Monetary costs are not listed across each of the policies, although PAYE states it will cost \$2.1 billion over nine years. Moreover, outputs and outcomes are inconsistently provided in the policies: PAYE provides an estimated savings per borrower (output), but neither IBR nor ICR do. Also, no outcomes were apparent for IBR and ICR. Taken together, this suggests that the evaluability of the technical efficiency of PAYE is currently greater than IBR and ICR.

These policies focus extensively on eligibility criteria (i.e., who qualifies for the benefits) more than stating actual policy goals or mechanisms for achieving them. Eligibility criteria focus on defining financial hardship and specifying which loans qualify for IDR plans. By design, these policies focus on vertical equity by offering relief for lower-income borrowers with respect to monthly payments. However, the policies are less clear about “how” they address issues of vertical equity in terms of repayment among groups. For example, women and African American students may be more challenged to repay their loans because of lower income, job market discrimination, or higher initial debt load, yet these policies offer no vertical equity in regard to race or gender inequality. Also, these policies are focused only on federal loans, ignoring private loan debt, which disproportionately affects borrowers from more disadvantaged groups (Consumer Financial Protection Bureau, 2012).

Overall, IDR policies are vague in their goals and opaque with respect to how the intended policy actions relate to desired policy outcomes. This presents a challenge to conducting a formal evaluation of them. Moreover, the policies offer little guidance about benefits across different groups, such as how students, tax payers, and governmental agencies are to be affected by these efforts. In some cases, IDR policies may be in conflict with other national goals related to college affordability. For example, debt relief for students may be perceived as unjust for taxpayers who financed the loans (Brody, 1994). Similarly, college graduates with above-average earnings would likely benefit most from participating in an IDR plan (Dynarski & Kreisman, 2013). The absence of clear goals and explicit assumptions or equity implications suggests the need understand the full range of consequences of adopting or expanding IDR in the U.S.

Given the lack of clear policy vision, and absent any evidence that IDR efforts operate in ways policymakers expect, we believe current IDR efforts are solutions to problems that remain implicitly held by policy makers and supporters of the policy. While it is possible that tying repayments to earnings could make student loan debts more manageable, or that this model is an improvement over the current system, these are strong assumptions to make given the lack of evidence and policy clarity. Unfortunately, we cannot have compelling arguments for or against this policy without basic evidence and information about current practices. Considering IDR policies in the U.S. have been around for more than two decades, it is time to move beyond rhetoric and theoretical discussions about how IDR “might” affect students (and the institutions where they enroll) and start answering these questions empirically.

Table 4:
Evaluability elements of US Income-Drive Repayment Models

	PAYE	IBR	ICR
Goals	<ul style="list-style-type: none"> • Support Administration’s goal of making it easier to repay Federal student loans. • Provide borrowers with maximum repayment options. • Support debt management. • Improve process for considering applications for disability discharges on Federal loans. 	<ul style="list-style-type: none"> • The stated goal was to create the IBR program itself. 	<ul style="list-style-type: none"> • The stated goal was to create the ICR program itself.
Inputs	<ul style="list-style-type: none"> • Estimated total cost over nine years: \$2.1 billion. • Increased costs due to paperwork and hourly work increases. 	<ul style="list-style-type: none"> • Inputs in the CCRA Act were not stated. 	<ul style="list-style-type: none"> • Cost to the Federal Government should not exceed current value (in 1993) of future payments by borrowers.
Outputs/ Outcomes	<ul style="list-style-type: none"> • Estimated cost savings per borrower: \$4,250. • Limited or no cost items in regard to changing certain financial hardship criteria. • Capitalization of interest accrual on loans. • Reduced monthly payments may allow greater participation in the economy. 	<ul style="list-style-type: none"> • The only stated output related to capitalized interest on loans. • No outcomes were apparent. 	<ul style="list-style-type: none"> • Balance of repayment and how it would be calculated.
Criteria	<ul style="list-style-type: none"> • Types of loans eligible for the program. • Financial hardship qualifications and definitions. • Conditions for staying active in the program. • Conditions for loan forgiveness through active repayment or public service. 	<ul style="list-style-type: none"> • Types of loans eligible for the program. • Financial hardship qualifications and definitions. • Conditions for staying active in the program. • Criteria did not mention any specific groups when outlining the program. 	<ul style="list-style-type: none"> • Identification of borrowers who must participate. • Eligibility based on income. • Deferment criteria.
Benefits	<ul style="list-style-type: none"> • Lower maximum percentage of income as payment. • Instances of interest paid on the borrower’s behalf. • Loan forgiveness. 	<ul style="list-style-type: none"> • Interest payments covered for the borrower. • Mobility within repayment programs. • Loan forgiveness. 	<ul style="list-style-type: none"> • Borrower information programs. • Interest accrual deferment.

Recommendations

To help create an infrastructure for evaluating existing IDR programs in the U.S., we offer three recommendations. An early step in any evaluative process must focus on collecting and analyzing basic data on the profile of participants in a given program. Without this information, one cannot claim that the programs are (or are not) meeting any of the efficiency, effectiveness, or equity considerations we presented in the previous section. While we focus our recommendations on the U.S. context, we believe international efforts will have similar needs related to their evaluation efforts.

1. Create an inventory of existing IDR relevant data sources to clarify what information is currently available to policymakers.

This first recommendation is for the U.S. Department of Education to meet minimal data expectations necessary for evaluating IDR programs. This is a reasonable first-step in any evaluation effort. Despite operating ICR for more than 20 years, and more recent efforts to expand participation in IBR and PAYE, the U.S. Department of Education provides very little public data regarding these programs. The best source of participation data is the quarterly participation and loan balance reports produced by the Office of Federal Student Aid. These reports only became publicly available online in 2013 and they provide data on each of the Direct Loan IDR plans (U.S. Department of Education, 2014a). From this quarterly data, it is possible to calculate an average loan burden for program participants (see Table 1) and to see how these national figures change over time. Unfortunately, the data is only for Direct Loan borrowers and does not display the number of participants (or dollar volume) for the 20.6 million FFELP borrowers who have more than \$417 billion outstanding federal student loan debt.

The second source of data comes from National Student Loan Data System (NSLDS) data that is matched with National Center for Education Statistics (NCES) postsecondary surveys. Currently, only the Baccalaureate and Beyond survey contains this matched data, where there is a variable denoting borrowers' repayment plans.¹² This variable indicates whether the respondent was repaying their loans contingent upon their income (as of the 2009 interview). Approximately 9% of the survey respondents reported participating in an income-driven repayment plan, though it provides no additional detail about which plan they participate in, how long they have been in it, or any other features beyond simply participating. It is possible to connect

the NSLDS data with other NCES postsecondary surveys such as the Beginning Postsecondary Students survey or longitudinal surveys like High School and Beyond or the Education Longitudinal Study.

Both the quarterly reports and national surveys use NSLDS data, so we recommend that either the Office of Federal Student Aid or an independent research group should report on the specific data elements that are available in NSLDS pertinent to IDR. For what years is this data available? What is the quality of this data? How often is it reported? How is it verified? After this basic information is ascertained, then descriptive reports should answer how much debt they accumulated, for what level of education (graduate, professional, or undergraduate), and in what sector (public, nonprofit, proprietary) they were last enrolled.

When updating IDR policies, officials should pay much more attention to the specific data elements that are necessary for evaluating the efficacy of these programs. These should be written into existing policies to make explicit the data elements that are minimally required to monitor and evaluate IDR efforts. Similar to how the U.S. Department of Education publishes annual "End of Year" reports for the Pell Grant, similar reports should be available for IBR, ICR, and PAYE. Ideally, these reports would answer the aforementioned questions and include basic socio-demographic data about the income, race/ethnicity, gender, and age of borrowers participating in these programs. Requiring the Office of Federal Student Aid to disaggregate this data by IDR program type, the institution where the student last attended, and their outstanding loan amounts would be a useful first step in evaluating these programs.

2. Identify how state-level data systems can link with existing federal repayment records.

In addition to NSLDS, statewide longitudinal educational data systems (SLEDS) can be used to layer additional data on IDR participation trends. While the NSLDS data provide some baseline information related to student demographics and indebtedness, a full-scale evaluation would require additional information about students' academic experiences and detailed aid packages from the colleges they attended while accumulating their debts.

For example, SLEDS that follow students from colleges into the workforce could allow policymakers to link income data with NSLDS loan repayment data to calculate debt-to-income ratios for borrowers who participate in IDR programs. That the federal government operates three

“income-driven repayment” plans *without providing data on participants’ income* is problematic from an evaluative perspective because it does not allow us to assess whether eligible borrowers are underserved or if there are inequities with regard to “who” benefits from these programs. Similarly, advocates of IDR models believe these alternative repayment plans might help borrowers pursue public service careers and perhaps major in fields that do not necessarily have a high wage premium. Connecting NSLDS with SLEDS would allow us to provide some evidence to test this conventional wisdom.

These transactional databases are designed to help states conduct basic accountability and oversight functions in higher education, and they could provide an additional data source to aid in evaluating IDR programs. Unfortunately, these data systems often only include students enrolled in public institutions (not private non-profit or proprietary institutions) but they could provide richer detail than what is available in NSLDS. Additionally, the quality and analytical capacity of these SLEDS are not standardized across the states and the federal government has prohibited a national student unit record system, so any efforts to link NSLDS with SLEDS would have to be done on a state-by-state basis. Despite these challenges, we recommend conducting an exploratory analysis that takes advantage of these data sources in states that have more robust data systems like Texas, Florida, or West Virginia.

We recommend that federal policymakers promote the development of a state pilot program that links SLEDS and NSLDS data systems to connect academic and wage records with loan repayment records to maximize the usefulness of state longitudinal data systems. Researchers could use this observational data to conduct descriptive and quasi-experimental evaluations of IDR programs and would have richer information than what is available from solely relying on NSLDS data. Such data would help us begin to answer questions related to a wider range of efficiency, effectiveness, and equity concerns.

3. Conduct a longitudinal randomized control trial to evaluate the efficacy of ICR, IBR, and PAYE.

In none of the policy documents did we find reference to mandatory evaluations of existing IDR programs. More worrisome is that existing policies do not prioritize the role of data or evidence in testing many of the assumptions related to repayment reforms. Because of this, there is a large data gap that could be filled by utilizing existing data (Recommendation #1) or by merging existing data systems

(Recommendation #2). While these would certainly be improvements over what we currently know about IDR, we would still not have enough information to evaluate the full extent of IDR programs.

“Good public policy is not based solely on assumptions and anecdotes; rather, it should be informed by rigorous research and evidence to support (or reject) various claims.”

To address this shortcoming, we recommend undertaking an experiment either through the U.S. Department of Education’s Experimental Sites Initiative or through sponsored research (Institute for Education Statistics or private foundation). Such an experiment would randomly assigned borrowers to treatment and control groups, where the treatment group would participate in IDR programs while the control group would participate in standard repayment plans. There are various ways to design such an experiment, but the main purpose would be to generate strong enough evidence to make causal claims about the effectiveness of IDR programs. This would be extremely valuable because it would test the assumptions that advocates have argued for decades regarding the efficacy of IDR programs. Does the program improve consumption smoothing? Does it limit liquidity and income risks? Does it help borrowers avoid delinquency or default? Does it impact career decisions or one’s ability to repay their debts? That these questions have gone unanswered is a serious policy concern, especially in light of ongoing efforts to expand these programs. Good public policy is not based solely on assumptions and anecdotes; rather, it should be informed by rigorous research and evidence to support (or reject) various claims.

Recent advances in social science methods and data systems should help the research and policy community begin to evaluate the efficacy of these efforts; *however, we have found no strong or convincing empirical evidence regarding the efficacy of IDR programs, domestically or abroad.* The current research on IDR debate lags behind developments in other areas of financial aid policy (e.g., impacts of aid on enrollment,

the benefits of information and early intervention, etc.) and a longitudinal experiment of this kind would help policymakers determine whether IDR efforts are truly more advantageous over traditional 10-year repayment plans. To date, we have not seen a study that meets basic social science criteria for making causal arguments on the impacts of income-driven repayment plans. A new era of research on IDR should take advantage of the latest advancements in social science research design and we recommend including rigorous evaluations into existing IBR, ICR, and PAYE policies to ensure these efforts are indeed producing the outputs and outcomes expected in the stated policy goals.

“We have found no strong or convincing empirical evidence regarding the efficacy of IDR programs, domestically or abroad.”

Conclusion

In this paper, we set out to determine whether IDR can be an efficient, effective, and equitable policy for student loan reform. What we found left us far short of that goal. We found that it is nearly impossible to answer these questions because of ambiguities and lack of clarity in the policies themselves, and due to the lack of available data to answer basic participation questions. In the absence of this

information, policymakers may be inclined to learn from the experiences of other countries, but we noted several cautions of taking such an approach.

Instead, federal policymakers should take a close look at existing policy language and documents in existing domestic IDR policies. Our analysis of IDR authorizing legislation found that existing ICR, IBR, and PAYE policies primarily focus on determining “who” is eligible to participate in the programs and “what” benefits they will receive by participating. Specific details about the inputs, outputs/outcomes, and policy goals are largely absent from these documents. As a result, it is unclear why having three different IDR programs in the U.S. is the federal government’s preferred solution for dealing with student loan repayment problems.

To help guide future policy conversations, we offer a set of evaluation concepts and questions that, when addressed, should help policymakers consider new avenues to take with existing IDR efforts. We also provide specific recommendations related to data and research needs that are currently absent from ongoing IDR debates. By utilizing existing data (Recommendation 1), expanding data capabilities (Recommendation 2), and conducting longitudinal studies using rigorous research designs (Recommendation 3) we hope to offer a pathway that can guide future evaluation efforts. The history of student aid policy in the U.S. has long been criticized for being unnecessarily complicated, duplicative, weak on evidence, and in need of a strong unifying agenda for federal student aid. We hope this paper offers constructive steps for improving the quality of federal student aid policy, and for taking necessary steps for evaluating whether IDR is an efficient, effective, and equitable policy option.

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Endnotes

- 1 We thank Kevin James in Congressman Petri's Office for thoughtful feedback on this discussion.
- 2 Technically, there are four with Income Sensitive Repayment (ISR), but this is an obscure program that enrolls very few students, so we will only focus on the three primary programs in this paper.
- 3 *Source:* (U.S. Department of Education, 2014a, 2014b)
- 4 This is based on either the amount owed on eligible loans when the borrower initially entered repayment, or the amount owed at the time of opting into IBR or PAYE. The larger number of the two is what is used for this calculation.
- 5 The poverty level is also adjusted for family size and the state where borrowers live.
- 6 *Source:* (U.S. Department of Education, 2014a)
- 7 We do not display FEE-HELP, VET-HELP, SA-HELP, or OS-HELP here. Only HECS-HELP.
- 8 In the U.S., this is only possible after consolidation.
- 9 This is not an exhaustive list and 'universal' means borrowers are automatically enrolled into an IDR plan.
- 10 These bands are as follows, listed lowest contribution to highest: 1) Humanities, behavioral science, social studies, education, clinical psychology, foreign languages, visual and performing arts, and nursing; 2) mathematics, statistics, computing, built environment, other health, allied health, science, engineering, surveying, agriculture; and 3) law, accounting, administration, economics, commerce, dentistry, medicine, and veterinary science.
- 11 These are derived from various sources: International Comparative Higher Education and Finance at the University of Buffalo; Norton, A. (2012). Mapping Australian Higher Education, 2010; New Zealand Ministry of Education. (2012). Profile & Trends, New Zealand's Tertiary Education; Statistics on Post-School Education and Training in South Africa: 2011; Parliament of Australia "Trans-Tasman Differences in Student Loans;" Swedish Universities Annual Report, 2012; Higher Education Statistics Agency (UK); National Center for Education Statistics; New Zealand Ministry of Education Student Loan Scheme Annual Report 2012/2013; Bolton (2014); and OECD iLibrary.
- 12 The income-driven repayment variable name is "BIFORGI" in this survey.

Methodological Appendix

Two members of the research team used Hyper Research qualitative analysis software to review and code data. Data was retrieved from legislation enacting IBR, ICR, and PAYE which acted as our primary documents. Hyper Research allowed team members to code and retrieve data in an iterative and collaborative fashion.

Our codes were defined as follows. Inputs refer to all resources explicitly described in the authorizing legislation required for the program. Outputs and outcomes differ in strict definitions. The former refers to concrete, measurable, and often-time immediate results, whereas the later may refer to ambiguous and longer-term results of a program, such as human capital attainment. For our purposes, we found that little distinction is made between outputs and outcomes and therefore we include them together. Criteria refer to the eligibility metrics necessary for receiving the benefit. Benefits refer to the good being distributed. Finally, we also list the explicit program goals.

To guide this process we used etic codes derived from the literature review and theoretical frameworks (Maxwell, 2005). Two team members first coded each of the three primary documents independently based upon an initial understanding of the etic codes. The two coders then reviewed each other's decisions and critically reflected upon coding for consistency of constructs. Following this collaborative discussion documents were re-coded guided by a shared understanding of our etic codes. This second group of codes was used to identify themes within and across documents and ultimately to inform our analysis of effectiveness, efficiency, and equity in the context of income driven repayment models.

Through examination of the enacting legislation of the three income-related repayment methods, the research team aimed to determine if current documentation allowed for the successful use of the 3E measurement tool. Each piece of enacting legislation was examined and coded for the elements of the 3E framework. Each document was coded separately to see what emerged from each piece of legislation.

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